17. Archive Procedures

Archive processing procedures support and maintain the process by which the Data Server Subsystem (DSS) manages persistent storage of earth science and related data, and through which the DSS provides search and retrieval access to the data. Through archive processing, data products that have been ingested into the system or produced by data processing on previously stored data are archived to tape for permanent storage and distributed to users via hard media (tape or disk) or electronic means. The DAAC Archive Manager's job entails working with the Science Data Specialist, the Science Coordinator, and the Resource Manager, as well as providing direction for the Data Ingest Technician. The physical archive is one or more StorageTek (STK) Powderhorn Model 9310 Automated Cartridge System tape storage towers, providing a mass storage system of jukeboxes for removable media (tape cartridges). The File Storage Management System (FSMS) software, hosted on a Silicon Graphics Inc. (SGI) Origin 2000, is the Archival Management and Storage System (AMASS), a product of Advanced Digital Information Corporation (ADIC). AMASS is a UNIX file system that manages files, volumes (media), drives and jukeboxes. The *AMASS System Administrator's User Guide* can be viewed using Adobe Acrobat and is available electronically on **drg** servers (e.g., g0drg01, e0drg11, l0drg01, n0drg01) in directory **/usr/amass/books**.

Archive processing activities include operating functions associated with the AMASS software, managing and operating the physical archive, and using ECS custom software for monitoring archive functions and maintaining the stored data. The Archive Manager may also work with the Automated Cartridge Storage Library System (ACSLS) software and the AMASS Graphical User Interface (GUI). Finally, the Archive Manager conducts archive troubleshooting and problem resolution procedures.

Subsequent sections related to Archive Processing address procedures for the following functions:

- Section 17.1 Starting and Stopping AMASS.
- Section 17.2 Loading, removing, and managing archive media.
- Section 17.3 Monitoring and managing the archive with ECS custom GUIs.
- Section 17.4 Deleting granules from the archive.
- Section 17.5 Backing up and restoring AMASS.
- Section 17.6 Backing up and restoring archived data.
- Section 17.7 Archive troubleshooting.
- Section 17.8 ACSLS procedures.
- Section 17.9 Using the AMASS GUI.
- Section 17.10 Data Pool Maintenance Tasks.

For each set of functions, an **Activity Checklist** table provides an overview of the tasks to be completed. The outline of the Activity Checklist is as follows:

Column one - ***Order*** shows the order in which tasks could be accomplished.

Column two - ***Role*** lists the Role/Manager/Operator responsible for performing the task.

Column three -***Task*** provides a brief explanation of the task.

Column four - ***Section*** provides the Procedure (P) section number or Instruction (I) section number where details for performing the task can be found.

Column five - ***Complete?*** is used as a checklist to keep track of which task steps have been completed.

17.1 Starting and Stopping AMASS

To start AMASS, the Archive Manager or System Administrator first ensures that the physical storage system is powered up and then enters commands at the FSMS server host (e.g., e0drg11, g0drg01, l0drg01, n0drg01) to start AMASS. Stopping AMASS is accomplished by killing the required daemons. Rebooting AMASS involves killing the daemons and then restarting the application.

Table 17.1-1 provides an Activity Checklist for Starting and Stopping AMASS.

Table 17.1-1. Starting and Stopping AMASS - Activity Checklist

Order	Role	Task	Section	Complete?
1	System Administrator or Archive Manager	Starting the AMASS Application	(P) 17.1.1	
2	System Administrator or Archive Manager	Shutting Down AMASS Tape Archive System	(P) 17.1.2	
3	System Administrator or Archive Manager	Rebooting AMASS	(P) 17.1.3	

17.1.1 Starting the AMASS Application

Starting the AMASS FSMS requires actions to ensure that the STK Powderhorn storage system is powered up as well as actions at the SGI FSMS host. Powering up the STK requires actions at its control panels, including the Library Management Unit (LMU) and Library Control Unit (LCU) [the Library Storage Module (LSM) is powered through the LCU]. *Note*: Preconditions include that 1) the FDDI network is up and running and 2) power to all units is functional and available.

Table 17.1-2 presents the steps required to start the AMASS application. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Make sure power switches for the StorageTek LCU and LMU are **ON**.
- The LCU should be the last unit powered up, but otherwise there are no dependencies within the group.

2 If it is not already running, boot the FSMS SGI host (workstation ***x*0drg##**) normally.
- The ***x*** in the workstation name will be a letter designating your site: **g** = GSFC, **m** = SMC, **l** = LaRC, **e** = EDC, **n** = NSIDC, **o** = ORNL, **a** = ASF, **j** = JPL; the **##** will be an identifying two-digit number (e.g., **n0drg01** indicates an FSMS SGI host at NSIDC).
- There are no dependencies on other hosts, COTS or custom software.
- AMASS normally starts automatically on bootup. If it does, go to Step 5. If it does not, or if you are restarting AMASS after a shutdown, go to Step 3.

3 At the FSMS SGI host, log in as **root**.

4 Type **/usr/amass/tools/amass_start** and then press the **Return/Enter** key.
- The AMASS application starts.

5 To verify that AMASS has started correctly, type **/usr/amass/bin/amassstat -c** and then press the **Return/Enter** key.
- The message **FILESYSTEM IS ACTIVE** is displayed.

Table 17.1-2. Starting AMASS

Step	What to Do	Action to Take
1	Power switches **ON**.	**Observe/set switches**
2	Boot FSMS SGI host	Normal workstation boot
3	Log in as **root**	**press Return/Enter**
4	**amass_start**	**press Return/Enter**
5	**amassstat -c**	**press Return/Enter**

17.1.2 Shutting Down AMASS Tape Archive System

Table 17.1-3 presents the steps required to shut down AMASS. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in as **root** (system administrator) at the FSMS SGI host (workstation ***x*0drg##**).

- The ***x*** in the workstation name will be a letter designating your site: **g** = GSFC, **m** = SMC, **l** = LaRC, **e** = EDC, **n** = NSIDC, **o** = ORNL, **a** = ASF, **j** = JPL; the **##** will be an identifying two-digit number (e.g., **n0drg01** indicates an FSMS SGI host at NSIDC).

2 Type **/usr/amass/tools/killdaemons** and then press the **Return/Enter** key.

- A message is displayed indicating that all daemons have been terminated.

Table 17.1-3. Shutting Down AMASS

Step	What to Do	Action to Take
1	Log in as **root**	**press Return/Enter**
2	**killdaemons**	**press Return/Enter**

17.1.3 Rebooting AMASS

The AMASS file system may need to be rebooted during certain anomalous conditions (e.g., system "hang," interruption of communication between AMASS and ACSLS, a required daemon is down). AMASS needs to have the following daemons running at all times: amassmain, daemons/lm_ip -a fslock, klogd, amass_iocomp, qset, libsched, libio_tape,. To verify they are running, simply search for the AMASS processes (refer to Section 17.7.1.1, **Checking Daemons and Using *healthcheck***). To check the health of AMASS while it is still running, execute the **healthcheck** command (refer to Section 17.7.1.1).

In order to reboot AMASS you must have root privileges. The following procedure demonstrates the steps to reboot AMASS. Table 17.1-4 presents the steps required to follow the reboot process. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in as **root** (system administrator) at the FSMS SGI host (workstation ***x*0drg##).**

- The ***x*** in the workstation name will be a letter designating your site: **g** = GSFC, **m** = SMC, **l** = LaRC, **e** = EDC, **n** = NSIDC, **o** = ORNL, **a** = ASF, **j** = JPL; the **##** will be an identifying two-digit number (e.g., **n0drg01** indicates an FSMS SGI server at NSIDC).

2 To kill the daemons, type **killdaemons** and then press the **Return/Enter** key.

- A message is displayed indicating that all daemons have been terminated.

3 If you want to test AMASS before restarting, go to Step 4; otherwise, type **amass_start** and then press the **Return/Enter** key.
- The AMASS application starts.

4 To test the AMASS filesystem prior to starting AMASS type: **install_tests**, and press the **Return/Enter** key.
- Tests the operation jukebox operation and cache partitions, then restarts AMASS.

Table 17.1-4. Rebooting AMASS

Step	What to Do	Action to Take
1	Log in as **root**	**press Return/Enter**
2	**killdaemons**	**press Return/Enter**
3	**amass_start**	**press Return/Enter**
4	**install_tests**	**press Return/Enter**

17.2 Loading, Removing, and Managing Archive Media

For the STK storage facility, each Powderhorn is equipped with a 21-tape Cartridge Access Port (CAP). In automatic mode, tapes may be placed in the CAP for automatic loading. Tapes are also ejected through the CAP when identified for ejection using a command at the host for the STK Automated Cartridge System Library Software (ACSLS). It is also possible to bypass the CAP and manually load media directly into the library bins, typically only done at the initial load of the system or if it is otherwise necessary to load large numbers of volumes. Newly loaded volumes may need to be placed online and formatted. It is also necessary to ensure the ready availability of drive cleaning cartridges in the specially designated volume group for that purpose.

Table 17.2-1 provides an Activity Checklist for Loading, Removing, and Managing Archive Media.

Table 17.2-1. Loading, Removing, and Managing Archive Media - Activity Checklist

Order	Role	Task	Section	Complete?
1	Archive Manager	Automatically Loading Archive Media	(P) 17.2.1	
2	Archive Manager	Manually Loading Archive Media	(P) 17.2.2	
3	Archive Manager	Formatting a Volume	(P) 17.2.3	
4	Archive Manager	Removing Archive Media	(P) 17.2.4	

17.2.1 Automatically Loading Archive Media

Automatic loading of media is appropriate when there are relatively small numbers of media to be loaded. Up to 21 volumes at a time may be loaded through the Cartridge Access Port (CAP). With automated loading, AMASS assigns each cartridge a unique volume number, enters the volumes in its database, and marks the volumes Online in the database.

Table 17.2-2 presents the steps required for automated media loading. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in as **amass** or **root** at the FSMS SGI host (workstation ***x*0drg##**).

2 The ***x*** in the workstation name will be a letter designating your site: **g** = GSFC, **m** = SMC, **l** = LaRC, **e** = EDC, **n** = NSIDC, **o** = ORNL, **a** = ASF, **j** = JPL; the **##** will be an identifying two-digit number (e.g., **n0drg01** indicates an FSMS SGI server at NSIDC).

3 At the FSMS host, type **/usr/amass/bin/bulkinlet SP** and then press the **Return/Enter** key.

- The Cartridge Access Port (CAP) door unlocks (audible unlatching sound).
- ***Note***: If you have removed an existing volume and are re-inserting it, do not use the **SP** option, which puts the volume in the general space pool. Instead type **/usr/amass/bin/bulkinlet <*volgrp*>**, where **<*volgrp*>** is the volume group from which the volume was removed. This will put the volume back where it was before removal.

4 Write down or note the bar code number(s) on the label(s) of the cartridge(s), open the recessed latch on the CAP door and insert the tape(s), solid black side up, with the bar code label facing you, and close the door.

- The robot scans all the volumes.
- Data for the newly inserted media are displayed, including bar codes, associated volume numbers, and, in the **flag** column, the letters **IUO**, indicating that the volumes are inactive (**I**), unformatted (**U**), and offline (**O**).

5 For any newly inserted media, it is necessary to issue a formatting command. For the new 9940 tapes, type **/usr/amass/bin/volformat -b 256k ###**, where **###** is the volume number, and then press the **Return/Enter** key. You can enter more than one, separating each number from the preceding one with a space.

- A message requests confirmation that you wish to continue.

6 Type **y** and then press the **Return/Enter** key.

- A message is displayed requesting further confirmation, stating that **The following volumes will be formatted:** and listing volume numbers, followed by **(Y-N)**.

7 Type **y** and then press the **Return/Enter** key.
- After a few minutes, a message **Completed formatting all volumes** is displayed.

8 To verify that the volume(s) are inserted, type **/usr/amass/bin/vollist** and then press the **Return/Enter** key.
- Data for the media are displayed; the **flag** column shows that the newly formatted volumes are inactive (**I**).

9 To activate the media for use, type **/usr/amass/bin/volstat** and then press the **Return/Enter** key.
- Data for the media are displayed; the **flag** column shows that the volumes are now active (**A**).

Table 17.2-2. Automatically Loading Archive Media

Step	What to Do	Action to Take
1	Log in as **amass** or **root**	**enter text; press Return/Enter**
2	**bulkinlet SP** (unless re-inserting removed volume)	**press Return/Enter**
3	Place cartridge(s) in CAP	**close door**
4	**volformat -b 256k < *volumenumber* >**	**press Return/Enter**
5	**y** (to continue)	**press Return/Enter**
6	**y** (to confirm/continue)	**press Return/Enter**
7	**Vollist**	**press Return/Enter**
8	**Volstat**	**press Return/Enter**

17.2.2 Manually Loading Archive Media

Media may be introduced into volume groups in the storage facility without AMASS initial monitoring and assignment. This may be done using the CAP, as illustrated in the following procedure, or it may be done during an initial loading of the system. For such an initial loading, large numbers of cartridges may be placed directly in storage slots without using the CAP (i.e., with the Powderhorn library door open before the system is powered up). Manual loading uses an AMASS command different from that used for automatic loading; the command used here enables AMASS to determine what media have been placed in the library and convey the information to its database.

Table 17.2-3 presents the steps required for manual media loading. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 To manually insert a tape into the Powderhorn, login to the control software (ACSLS) using the **acssa** account at an ACSLS workstation (e.g., e0drs03, g0drs03, l0drs02, n0drs03).

2 Type **enter 0,0,0** and then press the **Return/Enter** key.

- The Cartridge Access Port (CAP) door unlocks (audible unlatching sound).

3 Write down or note the bar code number(s) on the label(s) of the cartridge(s), open the recessed latch on the Cartridge Access Port (CAP) door and insert the tape(s), solid black side up, with the bar code label facing you, and close the door.

- The robot scans all the volumes.

4 At the AMASS host, type **/usr/amass/bin/bulkload -s SP** and then press the **Return/Enter** key.

- The AMASS database is populated with data for the volumes in the library, including bar codes, associated volume numbers, and status -- inactive (**I**), unformatted (**U**), and offline (**O**). The data may be reviewed using the **vollist** command.
- *Note*: If you are loading a very large number of volumes, such as at initial load, and choose to bypass the CAP and place the volumes directly in the library slots, data about the volumes will not be immediately available to ACSLS for communication to AMASS. You will first have to use the ACSLS **audit** command to initiate an audit of the library, a process that may take several hours.

Caution

Inactivate AMASS before using the following command.

5 To view a list of media in the library, type **/usr/amass/utils/medialist -3**, and then press the **Return/Enter** key.

- The **-3** option indicates the STK Powderhorn.
- The utility reads the library element status stored in the library, and information about the library contents, including the status (**FULL** or **EMPTY**) of the elements.

Table 17.2-3. Manually Loading Archive Media

Step	What to Do	Action to Take
1	Log in as **acssa**	**enter text; press Return/Enter**
2	**enter 0,0,0**	**press Return/Enter**
3	Place cartridge(s) in CAP	**close door**
4	**bulkload –s SP**	**press Return/Enter**
5	**medialist -3**	**press Return/Enter**

17.2.3 Formatting a Volume

To format a volume, it must be online. A volume is placed online using the **volloc** command. For a tape cartridge, you must first set the tape length using the **tapelength** command. Formatting a volume destroys any files on that volume. Before formatting a volume, check to make sure it does not have any files that should be saved. Table 17.2-4 presents the steps required to follow the formatting process. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 To put the volume online, at the FSMS host, type **/usr/amass/bin/volloc -n *###***, and then press the **Return/Enter** key.
- *###* is the number of the volume.

2 To verify there are no files on volume, type **/usr/amass/bin/volfilelist <*Vol. No.*>** , and then press the **Return/Enter** key.
- No files are displayed.
- If a list of files is returned, indicating that the volume is not empty, before proceeding verify that you have the correct volume and that it is to be formatted.

3 To format the volume, type **/usr/amass/bin/volformat -b 256k *###***, and then press the **Return/Enter** key.
- *###* is the number of the volume.

4 To verify status of the volume, type **/usr/amass/bin/volprint -a *####***, and then press the **Return/Enter** key.
- *###* is the number of the volume.

Table 17.2-4. Formatting a Tape Volume

Step	What to Do	Action to Take
1	**volloc -n *volnumber***	**press Return/Enter**
2	**volfilelist *volnumber***	**press Return/Enter**
3	**volformat -b 256k *volnumber***	**press Return/Enter**
4	**volprint -a *volnumber***	**press Return/Enter**

17.2.4 Removing Media

Table 17.2-5 presents the steps required to remove media from the STK Powderhorn. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in as **amass** or **root** at the FSMS SGI host (workstation ***x*0drg##**).

- The ***x*** in the workstation name will be a letter designating your site: **g** = GSFC, **m** = SMC, **l** = LaRC, **e** = EDC, **n** = NSIDC, **o** = ORNL, **a** = ASF, **j** = JPL; the **##** will be an identifying two-digit number (e.g., **n0drg01** indicates an FSMS SGI server at NSIDC).

2 Determine which volumes you want to remove by utilizing the volume number. If necessary to review volume numbers and other information, at the FSMS host, type **/usr/amass/bin/vollist** and then press the **Return/Enter** key.

- A list of volumes is displayed.

3 If there are only a few volumes to remove, for each volume to be removed type **/usr/amass/bin/voloutlet *###***, where ***###*** is the volume number, and then press the **Return/Enter** key.

- AMASS marks the volume off-line and the volume is transferred to the CAP.

4 Open the recessed latch on the Cartridge Access Port (CAP) door and remove the tape(s).

Table 17.2-5. Removing Media from the Storage Library

Step	What to Do	Action to Take
1	Log in as **amass** or **root**	**enter text; press Return/Enter**
2	**vollist**	**press Return/Enter**
3	**voloutlet *volumenumber***	**press Return/Enter**
4	Remove tape(s) from CAP	**open CAP latch**

17.3 Monitoring and Managing the Archive with ECS Custom GUIs

Custom Graphical User Interfaces (GUIs) in the ECS software can provide helpful information concerning the relationship between physical storage archives (Library Storage Modules, or LSMs) and the Archive Server software applications at the site. For example, a data repository identified as DRP1 is served by the software application EcDsStArchiveServerDRP1.

Subdivisions within LSMs (e.g., for storage of different data types) are reflected in the Storage Management database, where each Volume Group (a logical group of volumes in the archive) has its own path. Each path maps to an AMASS volume group, and thus to a physical volume group in the archive.

Information concerning archive servers and the logical volume groups served may be obtained from the Storage Management Control GUI. The Storage Configuration tab on the Storage Management GUI permits display of server information and access to related status information.

Table 17.3-1 provides an Activity Checklist for Monitoring and Managing the Archive with ECS Custom GUIs.

Table 17.3-1. Monitoring and Managing the Archive - Activity Checklist

Order	Role	Task	Section	Complete?
1	Archive Manager	Launching DSS GUIs	(P) 17.3.1	
2	Archive Manager	Using Storage Management GUIs to Display Archive Path Information	(P) 17.3.2	
3	Archive Manager	Monitoring Archive Requests using the Storage Management GUI	(P) 17.3.3	
4	Archive Manager	Monitoring Distribution Requests using the Data Distribution GUI	(P) 17.3.4	
5	Archive Manager	Setting Checksum Calculation	(P) 17.3.5	

17.3.1 Launching DSS GUIs

The following software applications are associated with DSS:

- Science Data Server (SDSRV).
- Storage Management (STMGT) Servers.
  - Request Manager Server.
  - Staging Disk Server.
  - Cache Manager Server.
  - Archive Server.
  - Request Manager Server.
  - FTP Server.
  - D3/9940 Tape Server.
  - 8mm Tape Stacker Server.
- Data Distribution (DDIST) Server.
- DDIST Graphical User Interface (GUI).
- STMGT GUIs.
- Science Data Server GUIs.

Access to Storage Management, Data Distribution (DDIST), and other GUIs is gained through the use of UNIX commands. The procedure for launching the GUIs begins with the assumption that the applicable servers are running and that the operator (Archive Manager or System Administrator) has logged in.

Table 17.3-2 presents the steps required to launch DSS GUIs using UNIX commands. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Access the command shell.

- The command shell prompt is displayed.

NOTE: Commands in Steps 2 through 9 are typed at a UNIX system prompt.

2 Type **setenv DISPLAY *clientname*:0.0** and then press the **Return/Enter** key.

- Use either the terminal/workstation IP address or the machine-name for the ***clientname***.

3 Start the log-in to the DDIST client server by typing **/tools/bin/ssh *hostname*** (e.g., **e0dis02, g0dis02, l0dis02, or n0dis02**) and then press the **Return/Enter** key.

- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 4.
- If you have not previously set up a secure shell passphrase; go to Step 5.

4 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>**' appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 6.

5 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.

6 To change directory to the directory containing the startup scripts for DSS, type **cd /usr/ecs/<*MODE*>/CUSTOM/utilities** and then press the **Return/Enter** key.

- The <***MODE***> will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 or TS2 (for testing).
- Note that the separate subdirectories under /usr/ecs apply to different operating modes.

7 To launch the Storage Management Control GUI, type the following command: **EcDsStmgtGuiStart <*MODE*>**, where **<*MODE*>** is the one selected in Step 6, and then press the **Return/Enter** key.

- The Storage Management Control GUI, used for review of storage events and status of devices, is displayed.

8 To launch the Data Distribution GUI, use a similar procedure and type the following command: **EcDsDdistGuiStart <*MODE*>**, where **<*MODE*>** is the one selected in Step 6, and then press the **Return/Enter** key.

- The Data Distribution GUI is displayed.

9 To launch the **DSS Science Data Server** GUI, log in to the host for Science Data Server (e.g., **e0acs05, g0acs03, l0acs03**, or **n0acs04**). Use a similar procedure and type the following command: **EcDsSdSrvGuiStart <*MODE*>** and then press the **Return/Enter** key.

- The Science Data Server Operator GUI is displayed.

Table 17.3-2. Launching DSS GUIs

Step	What to Do	Action to Take
1	Access command shell	
2	**setenv DISPLAY *clientname*:0.0**	**enter text, press Return/Enter**
3	**/tools/bin/ssh *hostname***	**enter text, press Return/Enter**
4	***Passphrase*** (or, if none, go to Step 5)	**enter text, press Return/Enter**
5	***Password***	**enter text, press Return/Enter**
6	**cd /usr/ecs/<*MODE*>/CUSTOM/utiliites**	**press Return/Enter**
7	**EcDsStmgtGuiStart <*MODE*>** (for STMGT GUI)	**press Return/Enter**
8	**EcDsDdistGuiStart <*MODE*>** (for DDIST GUI)	**press Return/Enter**
9	**EcDsSdSrvGuiStart <*MODE*>** (for SDSRV GUI)	**press Return/Enter**

17.3.2 Using Storage Management GUIs to Display Archive Path Information

If requested to provide archive path information for a particular Earth Science Data Type (ESDT) stored in the archive, the Storage Management GUI can be used to obtain the needed information. Table 17.3-3 presents the steps required to use the Storage Management GUIs to Display Archive Path information. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DSS Storage Management GUI using UNIX commands (see Section 17.3.1, **Launching DSS GUIs)**.

- The DSS Storage Management GUI is displayed.

2 Click on the **Storage Config.** tab to ensure that the Storage Configuration display is available.

- The **Storage Config.** tab is displayed.

3 In the field listing **Server Type**, click on the **ARCHIVE** line to highlight it.
- The selected line is highlighted and the **Server Name** and **Status** of archive servers are displayed in the field listing **Server Name**.

4 Click on the **Vol Grp Config.** tab.
- The **Volume Group Information** is displayed showing volume groups and their current paths.

5 If it is desirable to display the path history for a data type, on the **Vol Grp Config.** tab, click on the **Data Type Name** entry for the specific data type for which path history information is desired.
- The selected line is highlighted.

6 Click on the **Display History** button.
- A **Volume Group History** window is displayed showing the path history for the highlighted data type.

Table 17.3-3. Using Storage Management GUIs to Display Archive Path Information and History

Step	What to Do	Action to Take
1	Launch the DSS Storage Management GUI	Use procedure in Section 17.3.1
2	Select **Storage Config.** tab	**single-click**
3	Highlight **Archive** in Server Type field	**single-click**
4	Select **Vol Grp Config.** tab	**single-click**
5	Highlight a selected data type line	**single-click**
6	Activate **Display History** button	**single-click**

17.3.3 Monitoring Archive Requests Using the Storage Management GUI

A primary GUI tool for monitoring of archive processing is the **Request Status** window, accessible from the **Storage Management Control** GUI. Using the **Request Status** tab the Archive Manager or Distribution Technician can detect stalled requests or servers that appear to be idle.

The **Request Status** window displays the following information:

- **Operation** is the type of operation represented by the request.
- **Request ID** is a unique identifier for the request.
- **Progress** is the stage of processing on which the request is currently working (may include a numeric progress indication).
- **Status** provides information about processes attempted and the outcome (e.g., DsEStDRExecuteFailed, DsEStARPathSearchExhausted, OK, . . .WriteFailed, . . .).

- **Priority** is **Xpress**, **Very High**, **High**, **Normal**, or **Low**.
- **When Submitted** is the time and date when the request was received by the Storage Management server that is responsible for the request.
- **Last Updated** is the time and date when the status was last updated for the request.

The operator can reduce the displayed list of requests by clicking on the **Filtering** pull-down menu just above the **Request Status Information** list on the window. This permits filtering on four areas or filter types selectable from the pull-down menu:

- **Server** controls what activity is displayed by limiting the list to the requests being/having been serviced by a specific server. Selecting **All** displays all requests throughout Storage Management. Other selections include the individual archive servers, cache manager servers, ftp servers, request manager server, and staging disk servers.
- **Operation** allows the operator to focus on a specific type of operation. The list of operations is dynamically generated to reflect those operations for which requests are currently in queue (e.g., **All**, **CMLink**, **ArStore**, **ArRetrieve**, **FtpPull**, **FtpPush**).
- **Processing State** allows the operator to differentiate among requests that are being actively processed; have been completed, either successfully or to a retryable error state; or have been suspended and are awaiting the outcome of another event. The following selections are available: **All**, **Processing**, **Suspended**, **Completed**.
- **Submitter** allows the Distribution Technician to see the status of requests submitted by a specific client process. The list of possible clients is dynamically generated to reflect the list of clients with outstanding requests (e.g., **All**, **DSDD**, **HDFC**, **SDSV**, **this**, **[various servers]**).

Table 17.3-4 presents the steps required to monitor archive requests using the Storage Management Control GUI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **DSS Storage Management Control** GUI using UNIX commands (see Section 17.3.1, **Launching DSS GUIs**).

- The **DSS Storage Management Control** GUI is displayed.

2 Click on the **Request Status** tab.

- The **Request Status** tab is displayed.

3 Observe information displayed on the **Request Status** tab of the **Storage Management Control** GUI.

- The **Request Status Information** table displays the following information:
  - Operation.
  - Request ID.
  - Progress.
  - Status.

  - Priority.
  - When Submitted.
  - Last Updated.
- By default all storage management server requests for the last 24 hours are shown in the **Request Status Information** table of the **Request Status** tab.
- Clicking on any of the column headers of the **Request Status Information** table causes the listed requests to be sorted in order by the column selected.
  - For example, clicking on the **Last Updated** column header causes requests to be listed in order from the least recently updated to the most recently updated.
- The **Operator Messages** field at the bottom of the GUI displays messages concerning events occurring in storage management operations.
- Note that storage management servers control virtually all data inserted into or retrieved from the archive; the resulting large amount of activity on the **Request Status** tab may make it useful to restrict the number of requests displayed by applying a filter (see next step).

4 To filter the list of requests, use the **Filtering** pull-down menu above the top left corner of the **Request Status Information** table, selecting as desired to display requests associated with a particular **Server, Operation, Processing State**, or Submitter.

- The list of requests displayed in the **Request Status Information** table is restricted by the filtering choice.

5 Observe the Storage Management requests displayed in the **Request Status Information** table.

- The **Progress** and **Status** column entries in the table may provide indication for particular requests of potential problems or conditions requiring attention.

6 Repeat Steps 4 and 5 as necessary to monitor Storage Management requests.

7 To **exit**, follow menu path **File→Exit**.

Table 17.3-4. Monitoring Archive Requests Using the Storage Management GUI

Step	What to Do	Action to Take
1	Launch the DSS Storage Management Control GUI	Use procedure in Section 17.3.1
2	Select **Request Status** tab	**single-click**
3	Observe listed request information	**read text**
4	Select **Filtering** option	**click-hold and drag cursor** or **execute three clicks**
5	Observe selected (filtered) requests	**read text**
6	Repeat Steps 4 and 5 as necessary	
7	**File→Exit** (if necessary/desirable)	**single-click**

17.3.4 Monitoring Distribution Requests Using the Data Distribution GUI

Distribution requests result from orders for ECS data, placed by users or subscriptions, and by requests for data by internal ECS processes (e.g., those related to data processing). As ECS responds to these requests, the Archive Manager or other operators can monitor the progress of the distribution requests. Table 17.3-5 presents the steps required to monitor distribution requests using the Data Distribution GUI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **DDIST GUI** using UNIX commands (see Section 17.3.1, **Launching DSS GUIs**).
- The **Data Distribution GUI** tool is displayed.

2 Click on the **Distrib'n Requests** tab.
- The **Distribution Requests** window is opened.
- A list of requests is displayed.

3 Follow menu path **View→Filter**.
- The **Distribution Filter Requests** window opens.
- Three filter types are displayed in a radio box at the top of the **Distribution Filter Requests** window: **Request ID**, **Requester**, and **All Requests**.

4 In the radio box at the top, click on one of the radio buttons to select filtering by **Request ID**, **Requester**, or **All Requests** as desired.
- The selection is indicated by the radio button depressed appearance.
- If the selection is **Request ID** or **Requester**, the cursor moves to the text entry field to the right of the selected button.

5 If the selection is **Request ID** or **Requester**, enter the request ID or requester's name, respectively, in the appropriate text entry field.

6 In the **Media Type**: area of the **Distribution Filter Requests** window, click on the **All** button or click on one of the entries in the **Media Type:** field to select for filtering on **FtpPull** or **FtpPush** (because of the incorporation of the Product Distribution System to handle media distributions, any media distribution requests are reflected as FtpPush distribtions to the Product Distribution System).
- Selected entries in the **Media Type:** window show as highlighted.

7 In the **State:** area, click on the **All** button to select all states, or click on one or more radio buttons to select one or more states for the filtering.
- Any selected **State:** toggle buttons show as depressed.

8 **Click** on the **OK** push button, located at the bottom of the window.

- The other push buttons located at the bottom of the window are **Apply**, **Cancel**, and **Help**.
- The **Filter Requests** window is closed.
- The **Distribution Requests** screen shows any requests that meet the filter criteria in the **Data Distribution Requests** field.

9 If necessary, use the scroll bar at the bottom of the **Data Distribution Requests** field to scroll horizontally to view the state of the selected request(s).

Table 17.3-5. Monitoring Distribution Requests Using the Data Distribution GUI

Step	What to Do	Action to Take
1	Launch the DSS Data Distribution GUI	Use procedure in Section 17.3.1
2	Select **Distrb'n Requests** tab	**single-click**
3	**View→Filter**	**single-click**
4	Select **Filtering** type	**single-click**
5	Enter any required information for **Filtering** type	**enter text**
6	Select **Media Type:** filtering option(s)	**click** to **highlight**
7	Select **State:** filtering option(s)	**click** to **select**
8	Click **OK** to apply filters and close **Distribution Filtering Requests** window	**single-click**
9	Observe filtered Distribution Request(s) list, scrolling as necessary	**read text**

17.3.5 Setting Checksum Calculation

The system design for ECS incorporates calculation of a checksum when a granule is inserted into the archive. If such a checksum is calculated, it can then be used as an indicator to determine if there is data corruption within the archive. Comparison of the original checksum with one calculated, for example, when the granule is retrieved (e.g., for processing or distribution) can detect whether the inserted file and the retrieved file are the same. If the checksums do not match, then the operator can investigate (refer to Section 17.7.4, **Diagnosing/Investigating Read Errors**). The checksums are set in the configuration for the archive server, with variables that set calculation on granule insert and calculation on retrieval. The Storage Management GUI provides an easy way to set these configuration parameters. The settings are available from the **Storage Config.** tab, by highlighting the Archive Server and clicking on the **Modify Server** button. This opens the **Archive Server Configuration** window. The window includes option buttons to **Enable Checksumming On Store:** and **Enable Checksumming On Retrieve:**

Calculation of checksums can be time consuming. System throughput may be significantly improved if checksum calculation on granule insert is turned off, and therefore the default reflects checksum calculation turned off. Unfortunately, turning checksums off compromises the ability to detect data corruption in the archive. This problem may be alleviated somewhat by calculating a checksum when a granule is first retrieved from the archive and storing that checksum to be compared with one calculated upon a later retrieval. However, this approach will not guard against the possibility of data corruption on initial insertion (e.g., through I/O errors). If it becomes necessary to enable calculation (e.g., for troubleshooting), use the Storage Management GUI. Table 17.3-6 presents the general steps required for setting checksum calculation. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Storage Management GUI using UNIX commands (refer to Section 17.3.1, **Launching DSS GUIs**).
- The DSS Storage Management GUI is displayed.

2 Click on the **Storage Config.** tab to ensure that the Storage Configuration display is available.
- The **Storage Config.** tab is displayed.

3 In the field listing **Server Type**, click on the **ARCHIVE** line to highlight it.
- The selected line is highlighted and the **Server Name** and **Status** of archive servers are displayed in the field listing **Server Name**.

4 In the field listing **Server Name**, click on the archive server (e.g., **EcDsStArchiveServerDRP1**) for which the checksum variables are to be set.
- The selected line is highlighted.

5 Click on the **Modify Server** button.
- The **Archive Server Configuration** window is displayed showing configuration data for the selected archive server.

6 Click on the option button in the **Enable Checksumming On Store:** block.
- A pop-up display offers the choice of **Yes** or **No**.

7 Click on the desired choice to enable (**Yes**) or disable (**No**) checksumming when a granule is stored.
- The pop-up display is closed and the selected choice appears as the label on the option button.

8 Click on the option button in the **Enable Checksumming On Retrieve:** block.
- A pop-up display offers the choice of **Yes** or **No**.

9 Click on the desired choice to enable (**Yes**) or disable (**No**) checksumming when a granule is retrieved.

- The pop-up display is closed and the selected choice appears as the label on the option button.

10 Click on the **OK** button.

- The **Archive Server Configuration** window is closed and the changes take effect.

Table 17.3-6. Setting Checksum Calculation

Step	What to Do	Action to Take
1	Launch the DSS Storage Management GUI	Use procedure in Section 17.3.1
2	Select **Storage Config.** tab	**single-click**
3	Select **ARCHIVE** server type	**single-click** to **highlight**
4	Select archive server for which to set checksumming	**single-click** to **highlight**
5	Select **Modify Server** button	**single-click**
6	Display options for **Enable Checksumming on Store:**	**single-click**
7	Select **Yes** to enable or **No** to disable	**single-click**
8	Display options for **Enable Checksumming on Retrieve:**	**single-click**
9	Select **Yes** to enable or **No** to disable	**single-click**
10	Select **OK** button	**single-click**

17.4 Deleting Granules

The **Granule Deletion** capability allows operators to delete products on demand. There are several circumstances that may require deletion on demand, such as:

- New PGE versions have been created and are used to reprocess large amounts of past data, creating new ESDT versions. As reprocessing progresses, Operations deletes the granules for the old ESDT versions from the archive and inventory.
- It is determined that certain lower-level (e.g., Level 2) products are of little or no interest to the science or public user community. In concert with the science teams, DAAC operations personnel decide to remove these products from the inventory. Since the products are still referenced by higher-level products as inputs, the DAAC decides to keep the inventory records for production history purposes.
- One or more granules were found defective and were reprocessed on an individual basis. When the reprocessing is complete, the operator wishes to delete the old, defective granule(s) from the inventory.

- A DAAC has extended ECS with subsetting services. The subsetted products are produced outside ECS, but are then inserted into the ECS archive to take advantage of the ECS distribution capability. The DAAC writes a script to delete the subsetted products on a regular basis.

The Science Data Server provides an application programming interface (API) for deleting granules from the archive, or from both the archive and inventory since earlier releases, but the Granule Deletion capability adds a front-end command-line utility that provides several ways for selecting granules for deletion. Confirmation is generally required so that granules are not inadvertently deleted. However, the confirmation may be suppressed so that operators can run regularly scheduled deletion scripts using background execution. This suppression possibility presents an opportunity for inadvertent loss of data and so must be used with care and only after thorough testing of any deletion script.

The Science Data Server captures deletions and related errors in the application log. Operators may also specify a separate and independent delete log for immediate analysis of the success or failure of a delete operation.

Deletion Sequence. The deletion of granules from the archive involves three elements, and therefore actually occurs in stages. Two of the elements are parts of the Science Data Server (SDSRV), and the third is a part of the Storage Management (STMGT) software and Graphical User Interface (GUI).

- *Logical Deletion*: For the first stage, a command-line delete utility specifies selection criteria for deletion of granules and "logically" deletes from the inventory those granules that meet the criteria. These granules are flagged as 'deleted' and can no longer be accessed, but their inventory entries are not yet removed. The logical 'deletion' may specify, via command line input, removal of granule files from the archive (*Deleted From Archive*, or DFA) only, leaving the inventory record, or it may specify *Physical Deletion*, which entails removal of the inventory record as well as removal of the files from the archive. The deletion flag consists of records in the SDSRV database. Specifically, in the DsMdGranules table, the value of the DeleteFromArchive entry is changed from **N** to **Y**, and the granule is entered in the DsMdDeletedGranules table with a time stamp recording the logical deletion time.
- *Physical Deletion*: The second stage is actual deletion from the inventory of those granules marked for physical deletion (not DFA only), which occurs when the operations staff runs the physical deletion cleanup utility script. For Physical Deletion, the script removes all inventory rows for granules that were flagged as 'deleted,' including rows referencing related information (e.g., QA data). The script writes to the STMGT database (and therefore must be run under a log in by ***sdsrv_role*** with authorization to write to that database), creating entries in the DsSdPendingDelete table for granules to be deleted. This includes entries for granules that are to be physically deleted, as well as those designated DFA only. The operations staff controls the lag time between logical deletion and physical deletion. That lag time is entered into the physical deletion script, which deletes only inventory entries for granules that have been logically deleted prior to that time period.

- *Deleted from Archive (DFA)*: STMGT provides a GUI screen that allows the operator to initiate the removal from the archive of the files listed its deletion table (populated by SDSRV). STMGT creates requests to the archive servers to delete files. The STMGT GUI can be used to look at the state of the deletion requests. Files that are successfully deleted have their associated rows removed from the STMGT database table.

Periodically, as sufficient data removal from the archive makes it appropriate, operations may elect to reclaim the tape space and recycle archive tapes. The AMASS software commands (*volcomp*, *volclean*, *volformat*, *volstat*) are used for that purpose.

Table 17.4-1 provides an Activity Checklist for Deleting Granules from the Archive.

Table 17.4-1. Deleting Granules from the Archive - Activity Checklist

Order	Role	Task	Section	Complete?
1	Archive Manager/Database Administrator	Resetting the Lock on the DsMdDeletedGranules table	(P) 17.4.1	
2	Archive Manager	Selecting Granules for Deletion	(P) 17.4.2	
3	Archive Manager	Selection by ESDT ShortName, Version, and Granule Time Coverage	(P) 17.4.2.1	
4	Archive Manager	Selection by ESDT ShortName, Version, and Granule Insert Time Range	(P) 17.4.2.2	
5	Archive Manager	Selection Using a Separate Input File	(P) 17.4.2.3	
6	Archive Manager/ Data Base Administrator	Deleting Granules from the Inventory and Archive (Physical Deletion)	(P) 17.4.3	
7	Archive Manager	Deleting Granules from the Archive	(P) 17.4.4	

17.4.1 Resetting the Lock on the DsMdDeletedGranules Table

The DsMdDeletedGranules table may become locked during execution of the Deletion Cleanup task if there is a need to restart the Science Data Server or if there is a problem with Sybase. The lock can prevent granules being marked for deletion upon subsequent runs of the Granule Deletion utility, and it is therefore necessary to reset the lock. This is accomplished using a Perl script, **EcDsResetLock.pl**. Table 17.4-2 presents the steps required to run the EcDsResetLock.pl script. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the SDSRV host (e.g., e0acs05, g0acs03, l0acs03, n0acs04) with an ID authorized with permissions to execute the EcDsResetLock.pl script.

2 To change directory to the directory containing the script, type **cd /usr/ecs/<*MODE*>/CUSTOM/utilities** and then press the **Return/Enter** key.

- The <***MODE***> will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 or TS2 (for testing).
- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/utilities**.

3 To execute the script, type **EcDsResetLock.pl** and then press the **Return/Enter** key.

- The script prompts **Enter Mode of Operation:**.

4 To identify the mode in which the script is to be run, type **OPS**, **TS1**, **TS2**, or other **<*MODE*>**, and then press the **Return/Enter** key.

- The script prompts **Enter Log File name:**.

5 Type **ResetLock.log** or another name of your choosing for the log, and then press the **Return/Enter** key.

- The script prompts **Enter Sybase User Name:**.

6 Type **sdsrv_role** and then press the **Return/Enter** key.

- The script prompts **Enter Sybase password:**.

7 Type the Sybase **<*password*>** (may require input from Database Administrator) and then press the **Return/Enter** key.

- The script prompts **Enter Sybase SQL Server Name:**.

8 Type ***x*0acs0*n*_srvr** and then press the **Return/Enter** key.

- The ***x*** will be **g** for GSFC, **e** for EDC, **l** for LaRC**,** or **n** for NSIDC. The ***n*** will be a number identifying the Sybase SQL Server (may require input from the Database Administrator).
- The script prompts **Enter SDSRV's database name:**.

9 Type **EcDsScienceDataServer1_<*MODE*>**, and then press the **Return/Enter** key.

- The script attempts to access the locked table, generating a number of errors, before resetting the lock so that marking for deletion can proceed.

Table 17.4-2. Resetting the Lock on the DsMdDeletedGranules Table

Step	What to Do	Action to Take
1	Log in to SDSRV host	**enter text**
2	**cd /usr/ecs/<*MODE*>/CUSTOM/utilities**	**enter text; press Return/Enter**
3	**EcDsResetLock.pl**	**enter text; press Return/Enter**
4	**<*MODE*>**	**enter text; press Return/Enter**
5	**ResetLock.log**	**enter text; press Return/Enter**
6	**sdsrv_role**	**enter text; press Return/Enter**
7	**<*password*>**	**enter text; press Return/Enter**
8	***x*0acs0*n*_srvr**	**enter text; press Return/Enter**
9	**EcDsScienceDataServer1_<*MODE*>**	**enter text; press Return/Enter**

17.4.2 Selecting Granules for Deletion

Selecting granules for deletion consists of running the Granule Deletion Command line tool to accomplish *logical deletion*, or marking (by entries in the SDSRV inventory database) of granules for deletion. It specifies either DFA only, leaving the inventory record, or Physical Deletion, which will result in removal of the inventory record as well as removal of the files from the archive.

17.4.2.1 Selection by ESDT ShortName, Version, and Granule Time Coverage

Table 17.4-3 presents the steps required to select granules for deletion using the ESDT ShortName, version, and granule time coverage. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the SDSRV host (e.g., e0acs05, g0acs03, l0acs03, n0acs04) with an ID authorized with permissions to execute the Granule Deletion utility.

2 To change directory to the directory containing the script, type **cd /usr/ecs/<*MODE*>/CUSTOM/utilities** and then press the **Return/Enter** key.

- The <***MODE***> will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 or TS2 (for testing).
- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/utilities**.

3 Type the command to run the Granule Deletion utility specifying ESDT ShortName, ESDT version, and granule time coverage (granule beginning date and time, and granule ending date and time), and specifying DFA or physical deletion, and then press the **Return/Enter** key.

- For deletion from archive only, the command is:
- **EcDsGranuleDeleteClientStart <*MODE*> -name <*ShortName*> -version <*version no.*> -BeginDate <*granbegdate/time*> -EndDate <*granenddate/time*> -log /usr/ecs/<*MODE*>/CUSTOM/logs/GranDel<*n*>.log -DFA**.
- For physical deletion, the command is:
- **EcDsGranuleDeleteClientStart <*MODE*> -name <*ShortName*> -version <*version no.*> -BeginDate <*granbegdate/time*> -EndDate <*granenddate/time*> -log /usr/ecs/<*MODE*>/CUSTOM/logs/GranDel<*n*>.log -physical**.
- The utility executes and displays the number of granules for deletion, and prompts the user **Do you want to continue [y/n]?**.
- ***Note***: It is possible to suppress the continuation prompt by including the argument **-noprompt** with the command.

4 Type y and then press the **Return/Enter** key.

- The process continues to completion.
- ***Note***: The deletion actions are displayed in the Deletion log and in the Science Data Serve ALOG, including information on the user ID of the requester, the ShortName, VersionID, and granule coverage time of the request. It is also possible to view the SDSRV database to verify the granule tagging for deletion; the granule should appear in the database with values depending on whether the deletion request specified **-DFA** or **-physical** (see matrix below).

	DsMdGranules Table		DsMdDeletedGranules Table	
Request Type	**DeleteEffective Date**	**DeleteFromArchive**	**Transaction Time**	**DFA Flag**
-DFA	NULL	Y	Current Time	1
-physical	Current Time	N	Current Time	0

Table 17.4-3. Selection by ESDT ShortName, Version, and Granule Time Coverage

Step	What to Do	Action to Take
1	Log in to SDSRV host	**enter text**
2	**cd /usr/ecs/<*MODE*>/CUSTOM/utilities**	**enter text; press Return/Enter**
3	Run **Granule Delete** utility	Execute Step 3 of Section 17.4.2.1
4	**y** (at continuation prompt **y/n?**)	**enter text; press Return/Enter**

17.4.2.2 Selection by ESDT ShortName, Version, and Granule Insert Time Range

Table 17.4-4 presents the steps required to select granules for deletion using the ESDT ShortName, version, and granule insert time range. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the SDSRV host (e.g., e0acs05, g0acs03, l0acs03, n0acs04) with an ID authorized with permissions to execute the Granule Deletion utility.

2 To change directory to the directory containing the script, type **cd /usr/ecs/<*MODE*>/CUSTOM/utilities** and then press the **Return/Enter** key.

- The <***MODE***> will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 or TS2 (for testing).
- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/utilities**.

3 Type the command to run the Granule Deletion utility specifying ESDT ShortName, ESDT version, and granule insert time range (insert beginning date and time, and insert ending date and time), and specifying DFA or physical deletion, and then press the **Return/Enter** key.

- For deletion from archive only, the command is:
- **EcDsGranuleDeleteClientStart <*MODE*> -name <*ShortName*> -version <*version no.*> -insertbegin <*insbegdate/time*> -insertend <*insenddate/time*> -log /usr/ecs/<*MODE*>/CUSTOM/logs/GranDel<*n*>.log -DFA**.
- For physical deletion, the command is:
- **EcDsGranuleDeleteClientStart <*MODE*> -name <*ShortName*> -version <*version no.*> -insertbegin <*insbegdate/time*> -insertend <*insenddate/time*> -log /usr/ecs/<*MODE*>/CUSTOM/logs/GranDel<*n*>.log -physical**.
- The utility executes and displays the number of granules for deletion, and prompts the user **Do you want to continue [y/n]?**.
- ***Note***: It is possible to suppress the continuation prompt by including the argument **-noprompt** with the command.

4 Type **y** and then press the **Return/Enter** key.

- The process continues to completion.
- ***Note***: The deletion actions are displayed in the Deletion log and in the Science Data Serve ALOG, including information on the user ID of the requester, the ShortName, VersionID, and granule insert time of the request. It is also possible to view the SDSRV database to verify the granule tagging for deletion; the granule should appear in the database with values depending on whether the deletion request specified **-DFA** or **-physical** (see matrix below).

	DsMdGranules Table		DsMdDeletedGranules Table	
Request Type	**DeleteEffective Date**	**DeleteFromArchive**	**Transaction Time**	**DFA Flag**
-DFA	NULL	Y	Current Time	1
-physical	Current Time	N	Current Time	0

Table 17.4-4. Selection by ESDT ShortName, Version, and Insert Time Range

Step	What to Do	Action to Take
1	Log in to SDSRV host	**enter text**
2	**cd /usr/ecs/<*MODE*>/CUSTOM/utilities**	**enter text; press Return/Enter**
3	Run **Granule Delete** utility	Execute Step 3 of Section 17.4.2.2
4	**y** (at continuation prompt **y/n?**)	**enter text; press Return/Enter**

17.4.2.3 Selection Using a Separate Input File

The tool permits referencing a list of granules in a file created for the purpose of providing that list as input to the tool. The desired deletion is achieved by creating a file containing identifying information for the granule(s) to be deleted. The file can list multiple granules. Several options are available for identifying granules, and for controlling how the utility executes:

- the input file can specify SDSRV Granule IDs (geoIDs).
- the input file can specify logical, or "local," Granule IDs.
- the command to execute the Granule Deletion utility can include the **-display** argument, which results in a listing of the geoID and logical ID of each granule selected for deletion.
- by default, the number of granules selected for deletion is displayed and the operator is prompted to confirm the deletion, but the command to execute the Granule Deletion utility can include a **-noprompt** argument, which suppresses the confirmation prompt.
- the operator can choose whether selected granules are to be deleted from the archive and the inventory or from the archive only.

- by default, any BROWSE, QA, and PH granules associated with physically deleted granules are deleted if no longer referenced otherwise, but the command to execute the Granule Deletion utility can include a **-noassoc** argument, which suppress deletion of these associated granules.

Table 17.4-5 presents the steps required to select granules for deletion using a separate input file. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the SDSRV host (e.g., e0acs05, g0acs03, l0acs03, n0acs04) with an ID authorized with permissions to execute the Granule Deletion utility.

2 To change directory to the directory containing the script, type **cd /usr/ecs/<*MODE*>/CUSTOM/utilities** and then press the **Return/Enter** key.

- The <***MODE***> will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 or TS2 (for testing).
- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/utilities**.

3 Type the command to run the Granule Deletion utility specifying an input file type and file name, a granule deletion log file path, type of deletion (DFA or physical), omission of prompt (if prompt is not desired), argument to suppress deletion of associated BROWSE, QA, and PH granules (if deletion of those associated granules is not desired), and then press the Return/Enter key.

- The form of the command is:

  EcDsGranuleDeleteClientStart <*MODE*> [-geoidfile <*geoidfilename*>] [-localgranulefile <*localfilename*>] -log /usr/ecs/<*MODE*>/CUSTOM/logs/ GranDel<*n*>.log -DFA [-noprompt] [-noassoc]

  OR

  EcDsGranuleDeleteClientStart <*MODE*> [-geoidfile <*geoidfilename*>] [-localgranulefile <*localfilename*>] -log /usr/ecs/<*MODE*>/CUSTOM/logs/ GranDel<*n*>.log -physical [-noprompt] [-noassoc].

- The utility executes and displays the number of granules for deletion, and, unless the command included the **-noprompt** option, prompts the user **Do you want to continue [y/n]?**. If the **-noprompt** option was used, the process continues to completion (see ***Note*** under Step 4).

4 If prompted at the end of Step 3, type **y** and then press the **Return/Enter** key.

- The process continues to completion.
- ***Note***: The deletion actions are displayed in the Deletion log and in the Science Data Serve ALOG, including information on the user ID of the requester, the ShortName,

VersionID, and granule insert time of the request. It is also possible to view the SDSRV database to verify the granule tagging for deletion; the granules should appear in the database with values depending on whether the deletion request specified **-DFA** or **-physical** (see matrix below). By default, if there are any BROWSE, QA, and PH granules associated with the science data granules to be deleted and these associated granules are not referenced by other granules, the associated granules will also be tagged for deletion. However, the command may include the **-noassoc** argument to suppress deletion of these associated granules.

	DsMdGranules Table		DsMdDeletedGranules Table	
Request Type	**DeleteEffective Date**	**DeleteFromArchive**	**Transaction Time**	**DFA Flag**
-DFA	NULL	Y	Current Time	1
-physical	Current Time	N	Current Time	0

Table 17.4-5. Selection Using a Separate Input File

Step	What to Do	Action to Take
1	Log in to SDSRV host	**enter text**
2	**cd /usr/ecs/<*MODE*>/CUSTOM/utilities**	**enter text; press Return/Enter**
3	Run **Granule Delete** utility	Execute Step 3 of Section 17.4.2.3
4	If prompted, **y** (at continuation prompt **y/n?**)	**enter text; press Return/Enter**

17.4.3 Deleting Granules from the Inventory and Archive (Physical Deletion)

Once granules are marked for deletion, the operator runs the Deletion Cleanup Utility, a Perl script, **EcDsDeletionCleanup.pl**. This script identifies those granules that were marked for deletion to the STMGT database for removal from the archive. In addition, if the granules were marked for physical deletion in the SDSRV database, they are deleted from the SDSRV database. A lag time, specified as a number of days, is used so that the operator can request that not all the granules marked for deletion are immediately deleted -- i.e., the Deletion Cleanup Utility deletes granules marked for deletion a specified number of days prior to the current date. A lag time of 0 may be used to implement immediate deletion. The script also asks for entry of a batch size, by which the operator specifies the increments for transfer of files from the SDSRV database to the STMGT database. For large numbers of deletions, a large batch size may be specified (up to a maximum of 10,000).

Table 17.4-6 presents the steps required to delete granules from the inventory and archive. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the SDSRV host (e.g., e0acs05, g0acs03, l0acs03, n0acs04) with an ID authorized with permissions to execute the **Deletion Cleanup** utility.

2 To change directory to the directory containing the script, type **cd /usr/ecs/<*MODE*>/CUSTOM/utilities** and then press the **Return/Enter** key.

- The <***MODE***> will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 or TS2 (for testing).
- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/utilities**.

3 To run the **Deletion Cleanup Utility**, type **EcDsDeletionCleanup.pl** and then press the **Return/Enter** key.

- The script prompts **Enter lag time in days:**.

4 Type **<*n*>**, where ***n*** is the lag time in days specifying a number of days prior to the current date during which granules marked for deletion are not yet to be deleted, and then press the **Return/Enter** key.

- ***Note***: Use a lag time of 0 to indicate immediate deletion of all marked granules.
- The script prompts **Enter mode of operation:**.

5 Type **<*MODE*>**, where **<*MODE*>** is the mode in which you are making the deletion (typically **OPS**, **TS1**, or **TS2**) and then press the Return/Enter key.

- The script prompts **Enter log file name:**.

6 Type **DelCleanup1.log** and then press the **Return/Enter** key.

- The script prompts **Enter Sybase User:**.

7 Type **sdsrv_role**, and then press the **Return/Enter** key.

- The script prompts **Enter Sybase User Password:**.

8 **Type <*password*>**, where **<*password*>** is the Sybase password (***Note***: This step may require input by the Database Administrator).

- The script prompts **Enter sql server:**.

9 Type **<*x*>0acg<*nn*>_srvr** (**e0acg11_srvr** at EDC, **g0acg01_srvr** at GSFC, **l0acg02_srvr** at LaRC, or **n0acg01_srvr** at NSIDC) and then press the **Return/Enter** key.

- The script prompts **Enter DBName:**.

10 Type **EcDsScienceDataServer1_<*MODE*>**, where **<*MODE*>** is the mode in which you are making the deletion (typically **OPS**, **TS1**, or TS2) and then press the **Return/Enter** key.

- The script prompts **Enter STMGT DBName:**.

11 Type **stmgtdb1_<*MODE*>**, where **<*MODE*>** is the mode in which you are making the deletion (typically OPS, TS1, or TS2) and then press the Return/Enter key.

- ***Note***: If you do not know the STMGT DB Name, contact the Database Administrator.
- The script prompts **Enter Batch size:**.

12 Type **<*n*>** where ***n*** is the batch size specifying the increments for transfer of files from the SDSRV database to the STMGT database (maximum 10,000), and then press the **Return/Enter** key.

- The script prompts **Do you wish to continue deleting these granules?:**

13 Type **y** and then press the **Return/Enter** key.

- The Deletion Cleanup Utility script displays the number of granules to be deleted from the archive (DFA) and physically deleted, with a confirmation prompt. If the lag time was specified as 0, all granules in the DeletedGranules table are displayed.

14 Type **y** (response to the confirmation prompt) and then press the **Return/Enter** key.

- Execution of the Deletion Cleanup Utility script completes.
- ***Note***: In the SDSRV database, the SDSRV Staging table (DsMdStagingTable) can be observed for transfer of data to the STMGT database (in increments of the specified batch size); when the transfer is complete, the table is empty. In the STMGT database, the STMGT Pending Delete table (DsStPendingDelete) can be observed for receipt of the data; all granules specified in the delete request are received. The Deletion Cleanup log displays messages about the actions, indicating that information is placed in the STMGT database in increments of the specified batch size.

Table 17.4-6. Deleting Granules from the Inventory and Archive

Step	What to Do	Action to Take
1	Log in to SDSRV host	**enter text**
2	**cd /usr/ecs/<*MODE*>/CUSTOM/utilities**	**enter text; press Return/Enter**
3	**EcDsDeletionCleanup.pl**	**enter text; press Return/Enter**
4	**<*n*>** (lag time, in days)	**enter text; press Return/Enter**
5	**<*MODE*>**	**enter text; press Return/Enter**
6	**DelCleanup.log**	**enter text; press Return/Enter**
7	**sdsrv_role**	**enter text; press Return/Enter**
8	**<*password*>**	**enter text; press Return/Enter**
9	***x*0acg0*nn*_srvr**	**enter text; press Return/Enter**
10	**EcDsScienceDataServer1_<*MODE*>**	**enter text; press Return/Enter**
11	**stmgtdb1_<*MODE*>**	**enter text; press Return/Enter**
12	**<*n*>** (increments for transfer of files, maximum 10,000)	**enter text; press Return/Enter**
13	**y** (to continue)	**enter text; press Return/Enter**
14	**y** (to confirm/continue)	**enter text; press Return/Enter**

17.4.4 Deleting Granules from the Archive

Once the STMGT database receives the data on the granules to be deleted (reflected in the STMGT Pending Delete table, DsStPendingDelete), the operator uses the Storage Management GUI to initiate the removal from the archive of the listed files. This completes the physical deletion for those granules selected for removal from the archive and inventory, and accomplishes the removal from the archive of those granules selected for Deletion from the Archive (DFA) only. Table 17.4-7 presents the steps required to delete granules from the archive. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DSS Storage Management GUI using UNIX commands (see Section 17.3.1 **Launching DSS GUIs**).

- The DSS Storage Management GUI is displayed.

2 On the STMGT GUI, to view the ESDTs with granules targeted for deletion, follow menu path **Delete→Batch Delete**.

- The **Batch Delete** window is displayed, listing the granules tagged for deletion as ESDT/Version pairs with numbers of files in the **Granule Deletion Information** field.

3 To select data for deletion from the archive, click on an ESDT/Version pair.

- The selected ESDT/Version pair is highlighted.

4 Click the **Delete** button.

- A confirmation Delete Warning prompt asks **Are you sure you want to delete the selected files?**

5 To confirm the deletion, click the **OK** button.

- The delete request continues to completion and the ESDT/Version pair is removed from the list of granules tagged for deletion in the **Granule Deletion Information** field of the **Batch Delete** window.
- ***Note***: The delete actions can be tracked via messages in the Archive Server log files (EcDsStArchiveServer.ALOG, EcDsStArchiveServerDebug.log)

Table 17.4-7. Deleting Granules from the Archive

Step	What to Do	Action to Take
1	Launch the DSS Storage Management GUI	Use procedure in Section 17.3.1
2	**Delete→Batch Delete**	**single-click**
3	Select an ESDT/Version pair	**single-click**
4	Activate **Delete** button	**single-click**
5	Click **OK** (to confirm deletion)	**single-click**

17.4.5 Undelete Capability

In the event that it is desirable to restore granules that have been marked for deletion (although not yet actually removed physically from the archive), the Granule Deletion Tool provides an undelete capability. This is implemented by command line options for use with the command **EcDsGranuleDeleteClientStart** and its selected options as follows:

- **-undelphysical** to undelete granules marked logically deleted by the **-physical** option;
- **-undelDFA** to undelete granules marked logically deleted by the **-DFA** option;
- **-displayUndelPhysical** to display granules that will be undeleted with the **-undelphysical** option and other selected options (*Note*: the number of granules returned with this option is limited by MaxGeoidFileLines and MaxCollectorSize parameters in the EcDsGranuleDelete.CFG file and/or the DBMAXRESULTS parameter for the Science Data Server);
- **-displayUndelDFA** to display granules that will be undeleted with the **-undelDFA** option and other selected options (*Note*: the number of granules returned with this option is limited by MaxGeoidFileLines and MaxCollectorSize parameters in the EcDsGranuleDelete.CFG file and/or the DBMAXRESULTS parameter for the Science Data Server).

These options are used in conjunction with other command line options of the Granule Delete tool. For example, it is possible to undelete or display granules using the command line options

for selection by ESDT short name, version, and granule time coverage, or to undelete or display granules using the command line option to specify a separate input file.

17.5 Backing Up and Restoring AMASS

A key responsibility of the Archive Manager is to guard against loss of the AMASS database and functioning. This is achieved through creation of backups that can be used to restore functioning in the event of database corruption or other failure. The archive storage format used by AMASS is a proprietary format designed to optimize storage and retrieval speed. The command **vgexport -q** can be used to create a text file, storable on magnetic media, which can be used with the AMASS format archive tapes and the command **vgimport** to recover from the loss. This command exports the AMASS database for a specified volume group to standard out (**stdout**), a file containing the directory structure and media attributes (e.g., media type, ownership, timestamp) for the volume group. The file is located in **/usr/amass/filesysdb** and is exported as standard ASCII text.

Table 17.5-1 provides an Activity Checklist for activities related to backing up and restoring AMASS.

Table 17.5-1. Activity Checklist for Backing Up and Restoring AMASS

Order	Role	Task	Section	Complete?
1	Archive Manager/ System Administrator	Creating a Backup for AMASS	(P) 17.5.1	
2	Archive Manager/ System Administrator	Replacing the AMASS Database Backup Volume (Volume 1)	(P) 17.5.2	
3	Archive Manager/ System Administrator	Restoring the AMASS Database	(P) 17.5.3	

17.5.1 Creating a Backup for AMASS

Table 17.5-2 presents the steps required to create a backup for AMASS. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the FSMS host (e.g., e0drg11, g0drg01, l0drg01, or n0drg01) as **amass** or **root**.

2 Type **/usr/amass/bin/vgexport -q** and then press the **Return/Enter** key.

- A file named **stdout** is created in **/usr/amass/filesysdb**.

NOTE: The **stdout** file is useful only with the archive volumes represented in the AMASS database.

Table 17.5-2. Creating a Backup for AMASS

Step	What to Do	Action to Take
1	Log in as **amass** or **root**	**enter text; press Return/Enter**
2	**vgexport –q**	**enter text; press Return/Enter**

17.5.2 Replacing the AMASS Database Backup Volume (Volume 1)

The AMASS database backup is stored in the archive on Volume 1. "Volume 1," hard coded to be the backup volume, actually designates one of the last volumes in the StorageTek Library Storage Module, to prevent its inadvertent use as a data volume. Whenever **amassbackup** is run, AMASS issues an e-mail message with information on volume capacity and usage. It is also possible to issue the command **vollist 1** to display how much space is left on the volume, or **volprint 1** for still more detail. If the volume becomes full *during* a backup attempt, the backup will fail and it is necessary to initialize a new backup volume and perform a full backup as described in the following procedure. Table 17.5-3 presents the steps required to replace the AMASS database backup volume. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the FSMS host (e0drg11, g0drg01, l0drg01, or n0drg01) as **amass** or **root**.

2 Type **/usr/amass/bin/voloutlet 1** and then press the **Return/Enter** key.
- The LSM robot places the Backup Volume in the CAP.

3 Open the recessed latch on the CAP door; remove the Backup Volume tape and store it in a safe place.

4 Physically designate the new Backup Volume tape so that it can be easily discriminated from other volumes (e.g., write “Backup Volume” on the tape, color code the tape, or make and display a note of its home storage slot or preprinted barcode).

5 Note the pre-printed number on the volume label (e.g., 112102), insert the new Backup Volume in the CAP, and close the door.
- The robot scans the volume.

6 At the AMASS host, type **/usr/amass/bin/bulkinlet -u** and then press the **Return/Enter** key.
- AMASS assigns the Backup Volume a unique volume number.

- AMASS marks the volume **ONLINE** in the AMASS database.
- AMASS assigns the Backup Volume to the last barcode position in the library.
- AMASS gives the volume a **BACKUP VOLUME** label.

7 Type **/usr/amass/bin/vollist 1**, and then press the **Return/Enter** key.

- AMASS displays the following:

```
VOL  VOL  JUKE  POS   VOL      FLAGS  USED  AVAIL  DEAD  ERRS
NUM  GRP  NUM         LABEL            (MB)  (MB)   (%)
1     0    1     BACKUP-VOLUME  I      0     20000  0      0
```

8 To change the Volume Label field from **BACKUP-VOLUME** to the preprinted media number (e.g., 112102), type **/usr/amass/bin/vollabel 1 112102** and then press the **Return/Enter** key.

9 Type **/usr/amass/bin/vollist 1**, and then press the **Return/Enter** key.

- AMASS displays the following:

```
VOL  VOL  JUKE  POS  VOL      FLAGS  USED  AVAIL  DEAD  ERRS
NUM  GRP  NUM        LABEL            (MB)  (MB)   (%)
1     0    1        112102     I      0     20000  0      0
```

10 Type **/usr/amass/bin/volformat -u** and then press the **Return/Enter** key.

- A message requests confirmation that you wish to continue.

11 Type **y** and then press the **Return/Enter** key.

- A message is displayed requesting further confirmation, stating that **The following volumes will be formatted: 1 (Y-N)**.

12 Type **y** and then press the **Return/Enter** key.

- After a few minutes, a message **Completed formatting all volumes** is displayed.

13 To verify that the volume is inserted, type **/usr/amass/bin/vollist 1** and then press the **Return/Enter** key.

- Data for the media are displayed; the **flag** column shows that the newly formatted volume is inactive (**I**).

14 Type **/usr/amass/bin/amassbackup -fv** and then press the **Return/Enter** key.

- AMASS performs a full backup with the verbose option of the AMASS database and transaction logs.

Table 17.5-3. Replacing the AMASS Database Backup Volume

Step	What to Do	Action to Take
1	Log in as **amass** or **root**	**enter text; press Return/Enter**
2	**voloutlet 1**	**enter text; press Return/Enter**
3	Remove Backup Volume	**open CAP door**
4	Physically designate Backup Volume	**mark volume**
5	Note pre-printed number on volume label	**read label**
6	**bulkinlet –u**	**enter text; press Return/Enter**
7	**vollist 1**	**enter text; press Return/Enter**
8	**vollabel 1** ***nnnnnn*** (number from Step 5)	**enter text; press Return/Enter**
9	**vollist 1**	**enter text; press Return/Enter**
10	**volformat –u**	**enter text; press Return/Enter**
11	**Y** (to continue)	**enter text; press Return/Enter**
12	**Y** (to confirm volume to be formatted)	**enter text; press Return/Enter**
13	**vollist 1**	**enter text; press Return/Enter**
14	**amassbackup –fv**	**enter text; press Return/Enter**

17.5.3 Restoring the AMASS Database

The AMASS database is restored manually by the System Administrator or the Archive Manager using the AMASS command **amassrestore**. This command restores the last full backup, the last partial backup, and all journal transactions that have occurred since the last backup. It creates a sub-directory under filesysdb called **journal**. All restored files are copied to the **journal** directory. The following restore procedure uses a backup volume or tape device. Table 17.5-4 presents the steps required to restore the AMASS database. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the FSMS host (e0drg11, g0drg01, l0drg01, or n0drg01) as **amass** or **root**.

Caution

Do not use the **amassrestore** command when AMASS is running. To shutdown AMASS, refer to the Special Shutdown Procedures in the AMASS technical documentation *Installing AMASS*.

2 To inactivate the AMASS file system, type **/usr/amass/bin/amassstat -i**.

- The AMASS file system is inactivated.

3 Make sure the backup drive is available.

- If there is another volume in the drive, return it to its home slot by entering **/usr/amass/daemons/amassrecovery -s** (the option **-s** prevents system startup and performs file recovery).

4 Type **/usr/amass/bin/amassrestore -v -L <*barcodelabel*>** and then press the **Return/Enter** key.

- If you do not know the barcode label number for the backup volume, it can be obtained by entering **/usr/amass/bin/vollist 1**.
- The AMASS database is restored from the backup volume.

Table 17.5-4. Restoring the AMASS Database

Step	What to Do	Action to Take
1	Log in as **amass** or **root**	**enter text; press Return/Enter**
2	**amassstat –l**	**enter text; press Return/Enter**
3	Ensure backup drive is available (if necessary, **/usr/amass/daemons/amassrecovery -s**)	**enter text; press Return/Enter**
4	**amassrestore -v -L <*barcodelabel*>**	**enter text; press Return/Enter**

17.6 Backing Up and Restoring Archived Data

The ECS archive design incorporates programmed backups of archived data. System requirements specify that a percentage of archived data be duplicated for local and offsite storage to provide for data safety. However, the large volume of ECS archived data merits finding alternatives to complete backup of all volumes in the libraries. Selection of data for backup is based on assessment of the feasibility of recovery in the event of data loss.

It is imperative to back up data that would be irretrievable if lost. Such data are saved to the archive, saved to local backup, and saved to offsite backup. Many data elements that will be archived, however, could be retrieved in the event of loss. For example, in the event of loss of a higher level product that is an output of processing a lower level product, it would be possible to restore the higher level product by reprocessing the lower level product. As another example, ECS will often archive a lower level product from a data provider, but that product may also be retained in the archives of the data provider, as is the case with EDOS, where there are maintained archives of Level 0 products that are also provided to ECS. If the product were lost from the ECS archive, it would be possible to ingest it again from the data provider, using appropriate Ingest procedures. Also, ECS archives can provide replacement for lost Level 0 data at EDOS.

Thus, when unique data are inserted into the archive (e.g., through Ingest, from Processing), up to three copies of the data may be created, reflecting different types of data use:

- the active archive copy, available for distribution or other use (volume group is specified in the *Archive ID*).
- a copy to be retained for local backup (volume group is specified in the *Backup ID*).
- a copy to be sent to offsite backup storage (volume group is specified in the *Offsite ID*).

The Archive Manager has the responsibility for ensuring and managing necessary backups of archived data and, in the event of loss, executing or supporting efforts to recover lost data. Table 17.6-1 provides an Activity Checklist for backing up and restoring archived data.

Table 17.6-1. Activity Checklist for Backup and Restoration of Archived Data

Order	Role	Task	Section	Complete?
1	Archive Manager/ Science Data Specialist	Creating Offsite Backups	(P) 17.6.1.1	
2	Archive Manager/ System Administrator	Creating Replacement Backups Manually from Existing Archives	(P) 17.6.1.2	
3	Archive Manager	Manual Data Recovery from Local Backup Tapes	(P) 17.6.2.1	
4	Archive Manager	Manual Data Recovery from Offsite Backup Tapes	(P) 17.6.2.2	
5	Archive Manager	Manual Data Recovery from Damaged Cartridge	(P) 17.6.2.3	
6	Archive Manager	Data Recovery for Known Files	(P) 17.6.2.4	
7	Archive Manager	SDSRV Retrieval of File Location Metadata	(P) 17.6.2.5.1	
8	Archive Manager	SDSRV Retrieval of Granule Production History Metadata	(P) 17.6.2.5.2	

17.6.1 Backups for Archive Data

The paths for creation of the data copies are specified for each ESDT when it is loaded. The Archive ID (for the archive copy) and the Backup ID (for the local backup copy) should reflect different archives if possible (i.e., different Library Storage Modules), to spread the risk of loss. The Offsite ID will not be a remote site path, but rather a local path for making copies to be sent for offsite storage. The requirements to implement creation of offsite backups include:

- creating a subdirectory and volume group for offsite backups.
- using the **Vol Grp Config.** tab of the Storage Management GUIs to add the volume group to the appropriate archive server and set the offsite ID to be the three-character specification for the local site (e.g., EDC, GSF, LAR, NSC).
- adding volumes to the volume group as needed.

17.6.1.1 Creating Offsite Backups

Each site is responsible for arranging its own secure offsite storage. The offsite backup cartridges are removed from the archive storage facility using procedures already described (see Section 17.2.4). For local and/or offsite storage of specific archive data, the Archive Manager generates or directs the generation of a list of selected data. At the time the files are archived, they are written to specific and separate volume groups that correspond to the three data usage types identified previously (i.e., active archive, local backup, offsite backup). Only files belonging to the data usage type are written to the tapes in a specific volume group. The Archive Manager or Science Data Specialist sets up these volume groups when an Earth Science Data Type (ESDT) is installed. Table 17.6-2 presents the steps required to create offsite backups. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DSS Storage Management GUI using UNIX commands (see Section 17.3.1 **Launching DSS GUIs**).
- The DSS Storage Management GUI is displayed.

2 Click on the **Vol Grp Config.** tab to display the Volume Group information.
- The **Vol Grp Config.** tab information is displayed.

3 Click on the **Add** . . . button below the Volume Group Information field.
- The **Add Volume Group** window is displayed.

4 In the **Add Volume Group** window, click in the **Data Type.Version:** field.
- The cursor moves to the **Data Type.Version:** field.

5 Type the ESDT ***ShortName*** and ***Version*** (e.g., MOD01.001) of the data type for which the volume group is to be created.
- The typed entry appears in the **Data Type.Version:** field.

6 In the **Add Volume Group** window, click on the pull-down arrow at the end of the **HWCI**: field.
- A pull-down menu displays designators of the hardware configuration items available for storing data.

7 Click on the designator for the hardware configuration item where the archive copies of data for the ESDT are to be stored.
- The selected designator is displayed in the **HWCI:** field.

8 In the **Add Volume Group** window, click in the **Volume Group Path:** field.
- The cursor moves to the **Volume Group Path:** field.

9 Type the full path identification for the storage of active archive data for the ESDT (typically, the path will be of the form **dss_stk*n*/<*MODE*>/*xxxxx***, where *n* is a number designating a StorageTek Library Storage Module, ***MODE*** is **OPS**, **TS1**, or **TS2**, and ***xxxxx*** is a short identifier for what is being stored; e.g., **dss_stk1/OPS/modl0**).

- The typed entry appears in the **Volume Group Path:** field.

10 In the **Volume Group Type:** radio box, click on the **PRIMARY** button.

- The button depressed appearance indicates selection of **PRIMARY**, signifying that the volume group being created is for primary storage for active archive use.

11 Click on the **Save and Add Next VG** button at the bottom of the **Add Volume Group** window.

- The volume group is created for display in the **Volume Group Information** field on the **Vol Grp Config.** tab of the Storage Management GUI.

12 In the **Add Volume Group** window, click in the **Volume Group Path:** field.

- The cursor moves to the **Volume Group Path:** field.

13 Change the data entered at Step 9 to identify the full path for the storage of local backup data for the ESDT.

- ***Note***: This step is only for those ESDTs that require local backup.
- The typed entry appears in the **Volume Group Path:** field.

14 In the **Volume Group Type**: radio box, click on the **BACKUP** button.

- The button depressed appearance indicates selection of **BACKUP**, signifying that the volume group being created is for storage for local backup use.

15 Click on the **Save and Add Next VG** button at the bottom of the **Add Volume Group** window.

- The volume group is created for display in the **Volume Group Information** field on the **Vol Grp Config.** tab of the Storage Management GUI.

16 In the **Add Volume Group** window, click in the **Volume Group Path:** field.

- The cursor moves to the **Volume Group Path:** field.

17 Change the data entered at Step 13 to identify the full path for the creation and initial storage of offsite backup data for the ESDT.

- ***Note***: This step is only for those ESDTs that require offsite backup.
- The typed entry appears in the **Volume Group Path:** field.

18 In the **Volume Group Type:** radio box, click on the **OFFSITE** button.

- The button depressed appearance indicates selection of **OFFSITE**, signifying that the volume group being created is for creation and initial storage for offsite backup use.

19 Click on the **Save and Exit** button at the bottom of the **Add Volume Group** window.

- The volume group is created for display in the **Volume Group Information** field on the **Vol Grp Config.** tab of the Storage Management GUI.
- Data stored in the volume group for OFFSITE backup can be safeguarded by removing tapes that have data stored on them (see Section 17.2.4) and transporting the tapes to a secure offsite storage location.

Table 17.6-2. Creating Offsite Backups

Step	What to Do	Action to Take
1	Launch the DSS Storage Management GUI	Use procedure in Section 17.3.1
2	Select **Vol Grp Config.** tab	**single-click**
3	Click **Add . . .** button	**single-click**
4	**Data Type.Version** field	**single-click**
5	Enter ESDT ***ShortName*** and ***Version***	**enter text**
6	Display **HWCI:** pull-down menu	**single-click**
7	Select **HWCI:**	**single-click**
8	**Volume Group Path:** field	**single-click**
9	Identify active archive path	**enter text**
10	Select **PRIMARY** volume group type	**single-click**
11	Activate **Save and Add Next VG** button	**single-click**
12	**Volume Group Path:** field	**single-click**
13	Identify local backup path	**enter text**
14	Select **BACKUP** volume group type	**single-click**
15	Activate **Save and Add Next VG** button	**single-click**
16	**Volume Group Path:** field	**single-click**
17	Identify offsite backup path	**enter text**
18	Select **OFFSITE** volume group type	**single-click**
19	Activate **Save and Exit** button	**single-click**

17.6.1.2 Creating Replacement Backups Manually from Existing Archives

If loss of data necessitates obtaining and inserting backup data from local or offsite storage, it is necessary to create replacement data to be returned to backup storage. Table 17.6-3 presents the steps required to create replacement backups manually from existing archives. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the FSMS host (e0drg11, g0drg01, l0drg01, or n0drg01) as **amass** or **root**.

2 Type **/usr/amass/bin/volcopy -c <*source*> < *destination* >** (where **<*destination*>** is the volume number of the destination volume and <*source*> is the volume number of the source volume), and then press the **Return/Enter** key.

- The **-c** option specifies copy of the source to the destination.
- A bit for bit copy of the source (the cartridge to be copied) is made at the destination (an available, unused cartridge). Because the copy procedure depends on the amount of data on the source cartridge, the process can take as long as an hour to complete.
- *Note*: After starting a **volcopy** procedure, do not attempt to kill the process with the **kill -9** command.

3 A hardcopy/softcopy list of the files backed up should be created and kept for future file restoration operations.

4 Remove the backup volume(s) and send to offsite storage area, as appropriate.

Table 17.6-3. Creating Replacement Backups Manually from Existing Archives

Step	What to Do	Action to Take
1	Log in as **amass** or **root**	**enter text; press Return/Enter**
2	**volcopy -c <*source*> <*destination*>**	**enter text; press Return/Enter**
3	Add to list of backed up files for future reference	**print list**
4	Send backup to secure offsite storage	

17.6.2 Restoring Archive Data

Although the Archive hardware is highly reliable, errors due to tape or drive failure must be expected to occur, though at an extremely low rate, as a function of the archived data volume. Where errors have occurred and data has been lost from the archive and cannot be restored from backup there may exist the potential to recover and re-archive equivalent data by one of the following means:

- copying from backup onto the original or a new primary.
- replacing damaged or corrupted volumes with vendor restored or backup volumes.
- re-generation by reprocessing.
- obtaining replacement data from the original external provider.

If a backup volume is available and contains the data that were lost or corrupted on the primary copy, the data can be copied using standard UNIX commands. If the backup volume must be obtained from offsite storage, it must then be inserted into the archive and brought on line. The procedures for loading archive media were addressed under a preceding topic. The requirements then entail:

- using the **Storage Config.** tab of the Storage Management GUIs to view the volume groups of the appropriate archive server and to find the files in the primary and backup volume groups.

- using the UNIX copy command (**cp** or **dd**) to copy the lost or corrupted file from the backup version to the primary version.
- as appropriate (i.e., if the recovery is one of a set of files to be restored, for example, because they were lost from a damaged tape), removing the names of the files recovered from the list of files to be recovered by other means.

If an entire volume is to be copied, perform the procedure to create replacement backups (see Section 17.6.1.2); if recovery is from offsite, send the backup back to secure offsite storage.

17.6.2.1 Manual Data Recovery from Local Backup Tapes

The procedure for manual data recovery from local backup tapes assumes that the tape is on-line and in the Powderhorn Library Storage Module. Volume groups and tapes are transparent to the automated file and storage management system. As long as the AMASS database is aware of the files, the operator moves data using standard UNIX commands.

Table 17.6-4 presents the steps required for manual data recovery from local backup tapes. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DSS Storage Management GUI using UNIX commands (see Section 17.3.1).
- The DSS Storage Management GUI is displayed.

2 Click on the **Vol Grp Config.** tab to display volume group information.
- The **Vol Grp Config.** tab is displayed.

3 Click in the **Find Next** field under the **Volume Group Information** field.
- The cursor moves to the **Find Next** field.

4 Type the first three letters of the ESDT short name for the data type with missing or corrupted/damaged files on its primary storage tape.
- The typed entry is displayed in the field.

5 Click on the **Find Next** button.
- In the **Volume Group Information** field, the volume group information for the first volume group containing the three letters specified in Step 4 is highlighted.

6 As necessary, scroll further through the list of entries in the **Volume Group Information** field to locate the **Current Volume Group Path** for the primary and backup storage for the data type with missing or corrupted/damaged files on its primary storage tape; note or record the paths.

7 In a UNIX window, at the command line prompt, type **cp <*backuppath/filename*> <*primarypath/filename*>** and press the **Return/Enter** key.
- The backup file is copied to the primary tape.

8 Repeat Step 7 as needed until all missing or corrupted/damaged files are restored from the backup tape to the primary tape.

9 Remove the file(s) restored in Steps 7 and 8 from any list of files to be recovered.

Table 17.6-4. Manual Data Recovery from Local Backup Tapes

Step	What to Do	Action to Take
1	Launch the DSS Storage Management GUI	Use procedure in Section 17.3.1
2	Select **Vol Grp Config.** tab	**single-click**
3	**Find Next** field	**single-click**
4	Specify search token	**enter text**
5	Activate **Find Next** button to start search	**single-click**
6	Locate and record primary and backup paths	**click and drag to scroll; read text**
7	**cp <*backuppath/filename*> <*primarypath/filename*>**	**enter text; press Return/Enter**
8	Repeat Step 7 (as necessary)	
9	Remove restored files from list of files to be recovered	

17.6.2.2 Manual Data Recovery from Offsite Backup Tapes

Each site has its own arrangements for managing data requiring secure offsite backup storage. In the event of loss of data on primary and local backup tapes, recovery may be possible using offsite backup tapes. Table 17.6-5 presents the steps required for manual data recovery from local backup tapes. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DSS Storage Management GUI using UNIX commands (see Section 17.3.1).
- The DSS Storage Management GUI is displayed.

2 Click on the **Vol Grp Config.** tab to display volume group information.
- The **Vol Grp Config.** tab is displayed.

3 Click in the **Find Next** field under the **Volume Group Information** field.
- The cursor moves to the **Find Next** field.

4 Type the first three letters of the ESDT short name for the data type with missing or corrupted/damaged files on its primary and local backup storage tapes.

- The typed entry is displayed in the field.

5 Click on the **Find Next** button.

- In the **Volume Group Information** field, the volume group information for the first volume group containing the three letters specified in Step 4 is highlighted.

6 As necessary, scroll further through the list of entries in the **Volume Group Information** field to locate the **Current Volume Group Path** for the primary and offsite storage for the data type with missing or corrupted/damaged files on its primary and local backup storage tapes; note or record the paths.

7 Log in at the FSMS SGI host (workstation ***x*0drg##**).

- The ***x*** in the workstation name will be a letter designating your site: **g** = GSFC, **m** = SMC, **l** = LaRC, **e** = EDC, **n** = NSIDC, **o** = ORNL, **a** = ASF, **j** = JPL; the **##** will be an identifying two-digit number (e.g., **n0drg01** indicates an FSMS SGI server at NSIDC).

8 To identify the offsite volume ID where a known file to be recovered is stored, on the FSMS host, at the command line prompt in a UNIX window, type **/usr/amass/utils/fileprint <*filepathname/filename*>**, where ***filepathname/filename*** is the path and name of the file, and press the **Return/Enter** key.

- AMASS returns database information for each location where the file is stored. For example, if the input filepathname and filename for a lost or damaged file is /dss_stk1/aster/:Science:AST_L1BT:2137:1.EOSHDF, the output returned by AMASS should look similar to the following:

```
FILE :Science:AST_L1BT:2137:1.EOSHDF :
        rid       =    5993
        prid      =    4749
        size      =    5410105 (0x528d39)
        start blk =    37750397
        vol       =    18
        ltvol     =    18
        mode      =    81a4
        links     =    1
        ncrc      =    4195
        flags     =    0
```

- This indicates that the file should be on volume 18. Similar output should be returned for each volume involved in storage of the file.

9 To determine if the offsite volume is in the archive, on the FSMS host, at the command line prompt in a UNIX window, type **/usr/amass/bin/vollist <*volumenumber*>**, where ***volumenumber*** is the volume ID returned in Step 8, and press the **Return/Enter** key.

- AMASS returns information about the requested volume. This step can be repeated for each volume ID returned in Step 8. If the return is similar to the following:

```
VOL   VOL   JUKE  POS  VOL      FLAGS  USED  AVAIL  DEAD  ERRS
NUM   GRP   NUM       LABEL            (MB)  (MB)   (%)
18    700     1   NET  SD2102     IO  35589    0     35      0
```

- the **IO** in the **FLAGS** column indicates that the volume is inactive and offline -- i.e., the volume is not in the Library Storage Module. The offsite backup volume will have this status if it is not in the archive and needs to be retrieved from offsite storage.

10 Retrieve the volume from offsite storage and insert it in the Library Storage Module (see Section 17.2.1), using the command **/usr/amass/bin/bulkinlet <*volgrp*>**, where ***volgrp*** is the identifier in the **VOL GRP** column of the return in Step 9.

- The CAP door unlocks (audible unlatching sound).

11 Open the recessed latch on the CAP door and insert the tape(s), solid black side up, with the bar code label facing you, and close the door

- The robot scans the volume(s) and makes the insertion into the volume group specified in Step 10.

12 To recover a file from the newly inserted offsite backup volume, in a UNIX window, at the command line prompt, type **cp <*offsitepath/filename*> <*primarypath/filename*>** and press the **Return/Enter** key.

- The backup file is copied to the primary tape.

13 Repeat Step 12 as needed until all missing or corrupted/damaged files are restored from the offsite tape to the primary tape.

14 Remove the file(s) restored in Steps 12 and 13 from any list of files to be recovered.

Table 17.6-5. Manual Data Recovery from Offsite Backup Tapes (1 of 2)

Step	What to Do	Action to Take
1	Launch the DSS Storage Management GUI	Use procedure in Section 17.3.1
2	Select **Vol Grp Config.** tab	**single-click**
3	**Find Next** field	**single-click**
4	Specify search token	**enter text**
5	Activate **Find Next** button to start search	**single-click**
6	Locate and record primary and offsite backup paths	**click and drag to scroll; read text**
7	Log in at FSMS host	**enter text; press Return/Enter**

Table 17.6-5. Manual Data Recovery from Offsite Backup Tapes (2 of 2)

Step	What to Do	Action to Take
8	**/usr/amass/utils/fileprint <*filepathname/filename*>**	**enter text; press Return/Enter; read text**
9	**/vollist <*volumenumber*>**	**enter text; press Return/Enter; read text**
10	**bulkinlet <*volgrp*>** volume retrieved from offsite	**enter text; press Return/Enter**
11	Insert the tape in the CAP	**close door**
12	**cp <*offsitepath/filename*> <*primarypath/filename*>**	**enter text; press Return/Enter**
13	Repeat Step 12 as needed	
14	Remove restored files from list of files to be recovered	

17.6.2.3 Manual Data Recovery from Damaged Cartridge

In the course of operations it is possible for a tape to become physically damaged or accidentally overwritten. Some indications of a damaged tape may be AMASS read/write errors, or AMASS may determine that the volume is unreadable and mark it inactive. In that event that a tape volume is damaged, a manual recovery of data from the cartridge must be attempted.

Because of the technical complexity of data recovery from a damaged cartridge, it will be performed by STK personnel. However, the Archive Manager can support and prepare for the process by listing all the files on the tape and their associated start block numbers and providing the list to the recovery personnel. The list is generated by using a *Perl* utility script. The utility will generate three ASCII files that must be provided to the STK recovery personnel along with the damaged tape. The files are: **filelist_<*volnumber*>**, **start_block_listing_*volnumber*>**, and **README_<*volnumber*>**, where ***volnumber*** is the volume number of the requested tape volume.

The script utility, **EcDsStFilesPerTapeUtility**, is located in the directory **/usr/ecs/<*MODE*>/CUSTOM/utilities**. The script produces directory information followed by three files.

The directory information output should be similar to the following example:

```
/data1/data/:BR:Browse.001:1170:1.BINARY
/data1/data/:BR:Browse.000:1170:1.BINARY
/data1/data/:SC:MOD00:65001:1.CCSDS
/data1/data/:SC:MOD00:65002:1.CCSDS
/data1/data/:SC:MOD00:20001:1.CCSDS
/data1/data/:PH:PH.001:2000000076:1.BINARY
/data1/data/:PH:PH.000:2000000076:1.BINARY
/data1/data/:QA:QA.001:1003:1.ASCII
/data1/data/:QA:QA.001:1004:1.ASCII
/data1/data/:QA:QA.001:1005:1.ASCII
/data1/data/:OR:OR.001:2100:1.ASCII
/data1/data/:OR:OR.001:2101:1.ASCII
/data1/data/:OR:OR.001:2102:1.ASCII
```

```
/data1/data/:OR:OR.001:2103:1.ASCII
/data1/data/:AN:AN.001:3100:1.ASCII
/data1/data/:AN:AN.001:3101:1.ASCII
/data1/data/:AN:AN.001:3102:1.ASCII
/data1/data/:AN:AN.001:3103:1.ASCII
```

The information in the file **filelist_<*volnumber*>** is in ASCII format with one file name per line, as in the following example:

```
/dss_stk2/joel/TestStdSeq6_0_10.wrt
/dss_stk2/joel/TestStdSeq6_0_10.wrt
/dss_stk2/joel/TestStdSeq6_0_10.wrt
/dss_stk2/joel/TestStdSeq6_0_10.wrt
/dss_stk2/joel/TestStdSeq6_0_10.wrt
```

Table 17.6-6 presents the steps required for manual data recovery from a damaged cartridge. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in as **amass** or **root** at the FSMS SGI host (workstation ***x*0drg##**, **xacg##**, or ***x*wkg##**).

- The ***x*** in the workstation name will be a letter designating your site: **g** = GSFC, **m** = SMC, **l** = LaRC, **e** = EDC, **n** = NSIDC, **o** = ORNL, **a** = ASF, **j** = JPL; the **##** will be an identifying two-digit number (e.g., **n0drg01** indicates an FSMS SGI server at NSIDC).

2 To verify that AMASS is running, **type /usr/amass/bin/amassstat -c** and press the **Return/Enter** key.

- The message **FILESYSTEM IS ACTIVE** should be displayed. If it is not, restart AMASS using Section 17.1.1.

3 To identify the volume ID where a known file to be recovered is stored, on the FSMS host, at the command line prompt in a UNIX window, type /usr/amass/utils/fileprint **<*filepathname/filename*>**, where ***filepathname/filename*** is the path and name of the file, and press the **Return/Enter** key.

- AMASS returns database information for each location where the file is stored. For example, if the input filepathname and filename for a lost or damaged file is /dss_stk1/aster/:Science:AST_L1BT:2137:1.EOSHDF, the output returned by AMASS should look similar to the following:

```
FILE :Science:AST_L1BT:2137:1.EOSHDF :
        rid       =    5993
        prid      =    4749
        size      =    5410105 (0x528d39)
        start blk =    37750397
        vol       =    18
        ltvol     =    18
        mode      =    81a4
        links     =    1
        ncrc      =    4195
        flags     =    0
```

- This indicates that the file should be on volume 18. Similar output should be returned for each volume involved in storage of the file.

4 Remove the volume from the archive (see Section 17.2.4).

5 Inspect the physical cartridge and tape for damage. Any creasing, scratches, snapping, or stretching of the tape may warrant keeping the volume offline and sending it to STK for replacement.

6 If the cartridge is damaged and to be returned to STK for recovery of data, run the script **EcDsStFilesPerTapeUtility** script; to start the utility script, type the command: **/usr/ecs/<*MODE*>/CUSTOM/utilities/EcDsStFilesPerTapeUtility** and press the **Return/Enter** key.

- The script runs and prompts for input of the volume number, as follows:

```
You have invoked an ECS utility script.

 This script supports file recovery from an AMASS tape volume
 by generating two listings of the files located on that volume.
 The listings are ASCII files and can be viewed.

 AMASS must be running in order to generate one of the listings.
 If a .fileprint. use error messages result, make sure AMASS is
 running, and you have AMASS privileges, before invoking this
 utility again.

 Please enter the AMASS volume number,
 for which you wish to generate listings

 -->
```

7 Type the volume ID determined in Step 3 and press the **Return/Enter** key.

- The script runs and a message is displayed to indicate generation of the information and completion of the run. The two ASCII files are **filelist_<*volnumber*>** and **start_block_listing_*volnumber*>**. There is also a **README_<*volnumber*>** file.

8 Send the volume to STK along with the files generated by the perl utility.

- STK copies all uncorrupted data to a new tape and inserts filler data blocks to replace the lost data.
- The filler data is inserted using the original block sequence so that the remaining data can be accessed by AMASS.
- After copying of the data to a new cartridge, it is returned to the DAAC with the original volume label and a report indicating which data blocks were replaced with filler data.

9 After receiving the recovered tape back from STK, insert the tape into the library (see Section 17.2.1), using the command **/usr/amass/bin/bulkinlet <*volgrp*>**, where ***volgrp*** is the volume group number. (***Note*:** If you do not know the volume group number, you can determine it by using the **vollist** command with the volume ID obtained in the return from Step 3).

- AMASS reads the volume label and places the volume in its home slot.

10 To put the volume **online**, type **volloc -n <*volumenumber*>**, where ***volumenumber*** is the volume ID obtained in the return from Step 3, and press the **Return/Enter** key.

- The volume is marked **O** (online) in the database.

11 To activate the volume, type the command **/usr/amass/bin/volstat -a <*volumenumber*>**, where ***volumenumber*** is the volume ID obtained in the return from Step 3, and press the **Return/Enter** key.

- The volume is marked **A** (active) in the database.

12 Using the report provided by STK, determine which files have had data blocks replaced with filler and delete those files from AMASS using standard UNIX commands. All such files must be recorded on a list of non-recovered files. To delete a file, type the command **rm *filepathname/filename*** where ***filepathname/filename*** is the path and name of the file, and press the **Return/Enter** key.

- The file is removed.

13 To assess dead space on the tape, type **/usr/amass/bin/vollist <*volumenumber*>**, where ***volumenumber*** is the volume ID, and press the **Return/Enter** key.

- AMASS returns information about the requested volume similar to the following example:

```
VOL  VOL  JUKE  POS  VOL     FLAGS  USED  AVAIL  DEAD  ERRS
NUM  GRP  NUM       LABEL           (MB)  (MB)   (%)
18   700    1   NET  SD2102    A  35589    0     85      0
```

- If the amount of dead space created on the tape exceeds the allowed threshold, the files can be copied to another volume within the volume group and the tape can be reformatted (see "Recycle a Volume" in the *AMASS System Administrator's Guide*).

14 Retrieve the file location metadata to recover the ArchiveID and any checksum for each file (see Section 17.6.2.5.1).

- The system design incorporates calculation of a checksum when a granule is inserted into the archive. However, calculation of checksums can be time consuming, and therefore to improve system performance checksums are only calculated for a small percentage of granules on a random basis.

15 For files with a non-zero checksum returned by SDSRV (Step 14), to validate the checksum of the recovered file type **cksum <*filepathname/filename*>**, where ***filepathname/filename*** is the path and name of the recovered file.

- The system returns one line with three parameters per input file, similar to the following example:

```
cksum :Science:MOD29:2498:1.EOSHDF
1295913534  10892630  :Science:MOD29:2498:1.EOSHDF
```

- The first parameter is the checksum (the second is the number of octets, and the third is the filename). If this returned checksum does not match the SDSRV-generated checksum (from Step 14), repeat Step 12 to delete the file.

16 For files with a checksum of zero returned by SDSRV (Step 14), it may be possible to have a Science Data Specialist use a viewing tool (e.g., EOSView) to exercise some validation on the files. It may also be possible to use information supplied be STK identifying corrupt blocks on the tape, in conjunction with the data in the **start_block_listing_*volnumber*** file, to determine specific files that are corrupt and recover the remaining files. The conservative approach is to assume that all zero-checksum files are corrupt and repeat Step 12 to delete them.

17 Add non-recovered files to the list of files to be recovered by other means (see Section 17.6.2.4).

Table 17.6-6. Manual Data Recovery from Damaged Cartridge (1 of 2)

Step	What to Do	Action to Take
1	Log in at FSMS host as **amass** or **root**	**enter text; press Return/Enter**
2	**amassstat -c**	**enter text; press Return/Enter**
3	**/usr/amass/utils/fileprint <*filepathname/filename*>**	**enter text; press Return/Enter**
4	Remove the volume from the archive	Use procedure in Section 17.2.4
5	Inspect the cartridge and tape for damage	**observe**
6	**EcDsStFilesPerTapeUtility**	**enter text; press Return/Enter**
7	Volume ID (from Step 3)	**enter text; press Return/Enter**
8	Send volume and file information to STK	
9	**bulkinlet <*volgrp*>** volume returned from STK	**enter text; press Return/Enter**
10	**volloc -n <*volumenumber*>**	**enter text; press Return/Enter**
11	**volstat -a <*volumenumber*>**	**enter text; press Return/Enter**
12	**rm *filepathname/filename***	**enter text; press Return/Enter**
13	**vollist <*volumenumber*>**	**enter text; press Return/Enter**
14	Retrieve file location metadata	Use procedure in Section 17.6.2.5.1
15	**cksum <*filepathname/filename*>** (files with non-zero checksum from SDSRV); delete files with non-match)	**enter text; press Return/Enter**
16	Other validation for files with zero checksum (e.g., EOSVIEW, recover non-corrupt files), or delete	

Table 17.6-6. Manual Data Recovery from Damaged Cartridge (2 of 2)

Step	What to Do	Action to Take
17	Add non-recovered files to list of files to be recovered by other means	See procedure in Section 17.6.2.4

17.6.2.4 Data Recovery for Known Files Not Backed Up in ECS

For any set of known files to be recovered (e.g., a list of files that were on a damaged tape and could not be recovered by Section 17.6.2.3, and were not available in local or offsite backups), data recovery can be attempted through procedures such as re-ingest, obtaining the data from another DAAC that was the original source, or regeneration. Each of these potential recovery approaches is addressed in a separate procedure.

The results of file or granule recovery are slightly different depending on whether the lost files are recovered from backup, or the corresponding lost granule had to be re-archived after re-ingest or re-generation by PDPS. Files which are recovered within the Archive/STMGT procedures are re-archived under the same name, so that the affected granule(s) are restored as they were before the failure.

Where file recovery within STMGT control is not possible, granule recovery through re-ingest or re-generation results in the insertion of a new granule. This new granule has a new Universal Reference (UR) and a new 'Production Date and Time'. Particularly where granule re-generation is required, exact re-production of the original granule (data byte-for-byte) is not guaranteed.

17.6.2.4.1 Re-Ingest of Lost Data

Table 17.6-7 presents the steps required for re-ingest of lost data. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Identify the source for each of the lost granules that were ingested.

2 If you have not already done so, retrieve the file location metadata for each file (see Section 17.6.2.5.1).

3 With reference to the applicable Interface Control Document (ICD) and using the granule metadata retrieved in Step 2, initiate the required data re-supply requests as defined in the ICD for those data suppliers able to re-supply data.

- To re-order Level 0 production data sets (PDSs) from EDOS, the DAACS use the ESDIS-sponsored EOS Data Reorder Web Tool. Steps 4 through 26 address use of the tool to submit a re-order request.

- EDOS furnishes L0 replacement data to the GSFC Earth Sciences (GES) DAAC on DTF-2 tapes. A tape may contain multiple granules and files, a subset of which are needed to replace the lost granule(s). Steps 27 through 54 address recovery of the lost data.
- EDOS furnishes L0 replacement data to other DAACs that do not have DTF-2 tape drives. In this case, EDOS transfers the necessary PDS(s) to ECS in the automated Ingest process for polling with delivery record, monitored by the Ingest Technician using the **Monitor/Control Ingest Requests** procedure (see Chapter 16). The re-order is accomplished as specified in Steps 4 through 26; the only other necessary steps in this procedure are Steps 45, 48, and 49.

NOTE: Some data suppliers (e.g., Landsat-7) do not support re-supply of data.

NOTE: Steps 4 through 8 are to access and launch browser software.

4 At the UNIX command shell prompt, type **setenv DISPLAY *clientname*:0.0** and then press the **Return/Enter** key.
- For ***clientname***, use either the local terminal/workstation IP address or its machine name.

5 Start the log-in to a Netscape host by typing **/tools/bin/ssh *hostname*** (e.g., g0ins02, e0ins02, l0ins02, n0ins02) at the UNIX command shell prompt, and press the **Return/Enter** key.
- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 6.
- If you have not previously set up a secure shell passphrase; go to Step 7.

6 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 8.

7 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.
- You are logged in and a UNIX command shell prompt is displayed.

8 Type **netscape &** and then press the **Return/Enter** key.
- The Netscape web browser is displayed.

9 Click in the **Netsite:** or **Location:** field.
- The field is highlighted.

10 Type the Universal Resource Locator (URL) for the End-to-End Data Tracking System (http://edts1.gsfc.nasa.gov:8080/index.html) and then press the **Return/Enter** key.
- The **End-to-End Data Tracking System** index page is displayed, offering access to various reports and related links.

11 Under **Related Links**, click on the appropriate Data Reorder link.
- There are links for various satellite platforms (e.g., Terra, Aqua).
- The appropriate **Data Reorder Request** page for the selected Data Reorder link is displayed.

12 On the **Data Reorder Request** page, click on the **Add New Request** link.
- The **Add New Request** page is displayed.

13 On the **Add New Request** page, click in the **Requestor's Name** field.
- The cursor is displayed in the field.

14 Type the name of the person making the request.
- The typed entry is displayed in the field.

15 Single-click on the pull-down arrow at the end of the **Requestor's Organization** field and then single-click on the name of the requesting organization to select it, or, if the requesting organization is not displayed in the pull-down menu, select **Other**.
- The choices are **LaRD DAAC**, **LaTIS**, **GSFC DAAC**, **EDC**, **EDOS**, **FOT**, **ESDIS**, **ASTER GDS**, and **Other**.
- The selected choice is displayed in the field.

16 In the **Requested Data (UTC)** block of the page, single-click on the pull-down arrow at the end of the **Year** field and then single-click on the year for the missing data to select it.
- The selected choice is displayed in the field.

17 In the **Requested Data (UTC)** block of the page, single-click on the pull-down arrow at the end of the **DOY** (Day of Year) field and then single-click on the day of the year for the missing data, first scrolling with the scroll bar if necessary to display the desired day.
- The selected choice is displayed in the field.

18 In the **Requested Data (UTC)** block of the page, single-click on the pull-down arrow at the end of the **Start time** field and then single-click on the hour representing the start of a two-hour time window for the missing data.
- The choices are in even two-hour time intervals beginning with **0000** and proceeding to **2200**.

- The selected choice is displayed in the field.

19 In the **Requested Data (UTC)** block of the page, single-click on the pull-down arrow at the end of the **Stop time** field and then single-click on the hour representing the end of a two-hour time window for the missing data.
- The choices are in even two-hour time intervals beginning with **0200** and proceeding to **2400**.
- The selected choice is displayed in the field.

20 In the **Request Reason** block of the page, click on the appropriate radio button to indicate the reason for the request, specifying that the dataset is **Missing** or **Partial**.
- The selected button is filled to indicate its selection.

21 For any data priority other than **3**, click on the pull-down arrow at the end of the **Priority** field and then click on the appropriate priority for the request.
- The choices are **1** (critical data needed within 24-48 hours), **2** (important data observation or activity, such as a target of opportunity), and **3** (all other data needs). The default is **3**, and this step may be skipped if that is the priority for the request.
- The selected choice is displayed in the field.

22 Click in the applicable check boxes in the **Data type(s)** block of the page to specify the desired **FDS** or Flight Dynamics System information (Carry-out and APID1 or satellite housekeeping data, Attitude, and Replacement Ephemeris), **Low Rate** information, and instrument (e.g., **MODIS**, **ASTER**, **CERES**, **MOPITT**, and **MISR**) application process identifiers (APIDs).
- The selected check boxes each display a checkmark to indicate selection.

23 If it is desirable to enter any comments concerning the request, click in the **Comments** field; otherwise, go to Step 25.
- The cursor is displayed in the field.

24 Type any comments to be submitted with the request.
- The typed entry is displayed in the field.

25 In the Actionee Org block of the page, click on the appropriate radio button to identify the actionee for the request, specifying **EDOS** or **FOT**.
- The selected button is filled to indicate the selection (in this case, **EDOS**).

26 Click on the **Submit** button at the bottom of the form.
- Following confirmation, the request submittal is acknowledged with a request ID.

27 If the replacement data are on a DTF-2 tape from EDOS, load the tape into a DTF-2 drive, using the **Perform DTF-2 Drive Loading** procedure (see Chapter 16).

- The tape is loaded.

28 Access a terminal window logged in to the appropriate host (e.g., Distribution Server).

- Examples of Distribution Server host names include **e0dis02**, **g0dis02**, **l0dis02**, and **n0dis02**.

29 Type **cd *path*** and then press the **Return/Enter** key.

- ***path*** represents the directory path to the location where the data from the EDOS archive tape should be copied.
- Using an empty directory would help identify the data from the tape.

30 Type **tar xvf *device*** and then press the **Return/Enter** key.

- ***device*** is the DTF-2 drive device name (e.g., /dev/rmt/2n) as it is known to the shell.
- For example:

  tar xvf /dev/rmt/2n

- As files are read from the tape the file names, file sizes (in bytes), and number of blocks are listed on the screen.
  - For example:

    x DZ9ZA49.MDR, 17393 bytes, 34 tape blocks

31 Type **pg *PPMUDR_name*** and then press the **Return/Enter** key.

- ***PPMUDR_name*** represents the file name of the PDS Physical Media Unit Delivery Record (PPMUDR).
  - The PPMUDR file name has a **.MDR** extension.
  - The PPMUDR is the first item on the EDOS archive tape.
- For example:

  pg DZ9ZA49.MDR

- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view, more**) can be used to review the log file.

32 Observe the contents of the PPMUDR to identify the PDS(s) to be archived.

- Packet date/time ranges in the PPMUDR can be used to determine which PDS(s) is (are) to be archived.
  - In the PPMUDR the PDSs on the tape are listed in file groups, which represent data sets [i.e., science data file(s) and corresponding metadata file].
  - Each file group (data set) includes the date/time range of the data specified as FIRST_PACKET_TIME and LAST_PACKET_TIME.

- For example (extract from a PPMUDR):

  OBJECT = FILE_GROUP
  DATA_SET_ID = P0420064AAAAAAAAAAAAAA03101231459600
  DATA_TYPE = MOD000
  FIRST_PACKET_TIME = 2003-04-10T00:00:00.000000Z
  LAST_PACKET_TIME = 2003-04-10T01:59:59.999999Z
  PACKET_COUNT = NOT USED
  OCTET_COUNT = NOT USED
  TEST_FLAG = F
  APID_COUNT = 1
  OBJECT = APID_SPEC
  APID_IN_PDS = 64
  END_OBJECT = APID_SPEC
  FILE_COUNT = 2
  OBJECT = FILE_SPEC
  DIRECTORY_ID = NOT USED
  FILE_ID = P0420064AAAAAAAAAAAAAA03101231459600.PDS
  FILE_TYPE = METADATA
  FILE_SIZE = 384
  END_OBJECT = FILE_SPEC
  OBJECT = FILE_SPEC
  DIRECTORY_ID = NOT USED
  FILE_ID = P0420064AAAAAAAAAAAAAA03101231459601.PDS
  FILE_TYPE = DATA
  FILE_SIZE = 108000
  END_OBJECT = FILE_SPEC
  END_OBJECT = FILE_GROUP

- In the preceding example one data set is defined (as a "FILE_GROUP").
  - The data type for the set is MOD000.
  - The data were collected on April 10, 2003 between midnight GMT (00:00:00.000000Z) (FIRST_PACKET_TIME) and just before 2:00 A.M. GMT (01:59:59.999999Z) (LAST_PACKET_TIME).
  - There are two files in the data set (FILE_COUNT = 2).
  - One file (P0420064AAAAAAAAAAAAAA03101231459600.PDS) is a metadata file (in EDOS terminology, a "construction record").
  - The other file (P0420064AAAAAAAAAAAAAA03101231459601.PDS) is a data file.
  - Based on information embedded in the file names, the data set was created on April 11, 2003 at 11:14:59 P.M. (as described under the next bullet).
- The EDOS archive tape may contain both nominal and reprocessed PDSs but creation times in file names differentiate between the versions.
  - Ingest the latest (most recent) version if there is more than one version.

- PDS file names consist of 40 bytes (characters) and Bytes 23 through 33 specify the creation time of the file.
- For example, **03101231459** is the creation time in the following file name:

  P0420064AAAAAAAAAAAAA03101231459601.PDS

  03 indicates the year (2003).

  101 specifies the Julian day (April 11, the 101st day of the year).

  231459 is the time of file creation (11:14:59 P.M.).

- It is the Archive Manager's responsibility to resolve any questions concerning which PDSs should be archived (see Step 2).

33 Type **cp *filename1 filename2 [… filenameN] path*** and then press the **Return/Enter** key.

- ***filename1 filename2 [… filenameN*** represent the file names of the PDS files to be ingested.
  - Copy both the data and metadata files (as identified in the PPMUDR) for each data set.
- ***path*** is the directory path to the Ingest pollEDOS directory; i.e., the directory in which the ECS software for EDOS ingest routinely looks for EDOS delivery records and data.
  - The EDOS polling directory is specified as a parameter in the Registry database or in the configuration file for EDOS polling (e.g., EcInPolling.EDOS.CFG).
- For example:

  cp P0420064AAAAAAAAAAAAA03101231459600.PDS P0420064AAAAAAAAAAAAA03101231459601.PDS /usr/ecs/OPS/CUSTOM/icl/x0icg01/data/pollEDOS

NOTE: If a DAAC-unique script is available for creating delivery records and signal files and placing the files in the polling directory, use the script and skip Steps 34 through 44 (go to Step 45 after running the script). Otherwise, manually generate delivery records and signal files as described in Steps 34 through 44.

34 Type **cd *path*** and then press the **Return/Enter** key.

- ***path*** is the directory path to the Ingest pollEDOS directory.
- For example:

  cd /usr/ecs/OPS/CUSTOM/icl/x0icg01/data/pollEDOS

NOTE: Steps 35 through 39 describe how to use an old delivery record (PDR) as a template for generating a new PDR.

35 Type **cp *old_PDR_filename new PDR filename*** and then press the **Return/Enter** key.

- ***old_PDR_filename*** represents the file name of an old PDR that is being used as a template for creating a PDR for PDS files to be ingested.
- ***new_PDR_filename*** represents the file name of the new PDR that is being created for PDS files to be ingested.
  - Use the EDOS file-naming convention for PDRs (refer to the EDOS ICD, 423-ICD-EDOS/EGS):

    PDR file names consist of 38 bytes (characters).

    Byte 1 identifies the file as either a PDS Delivery Record ("X") or EDS Delivery Record ("Y").

    Bytes 2 through 8 identify the spacecraft ID (SCID) (three bytes) and first Applications Process Identifier (APID) (four bytes) in the data set (right-justified and, if necessary, zero-filled on the left).

    Bytes 9 through 15 identify the SCID and second APID in the data set (right-justified and, if necessary, zero-filled on the left), if applicable. If no second APID is present in the data set, this item has a value of "AAAAAAA".

    Bytes 16 through 22 identify the SCID and third APID in the data set (right-justified and, if necessary, zero-filled on the left), if applicable. If no second APID is present in the data set, this item has a value of "AAAAAAA".

    Bytes 23 through 33 identify the GMT/ZULU time when the data set was created.

    Byte 34 is a numeric identification in the range of "0" to "9" to aid in distinguishing the order of data set creation during the day and to provide uniqueness to the file name.

    Bytes 35 through 38 are the file name extension (i.e., ".PDR" or ".EDR")

    For example:

    X0420064AAAAAAAAAAAAAA031012314596.PDR

    X identifies the file as a PDS Delivery Record.

    0420064 identifies the SCID (**042** = Terra) and first APID (**0064 =** MOD000 data type) in the data set.

    AAAAAAA indicates that there is no second APID in the data set.

    AAAAAAA indicates that there is no third APID in the data set.

    03101231459 is the GMT/ZULU time when the data set was created [**03** indicates the year (2003); **101** specifies the Julian day (April 11, the 101st day of the year); **231459** is the time of data set creation (11:14:59 P.M.)].

6 is a numeric identifier (sixth data set of the day).

.PDR is the file-name extension for a PDS Delivery Record.

36 Type **vi *new_PDR_filename*** and then press the **Return/Enter** key.

- The PDR template file is opened (displayed by the vi text editor).
- Although this procedure has been written for the **vi** editor, any UNIX editor can be used to create the PDR.

37 Using vi editor commands modify the PDR file to specify ingest of one of the data sets to be ingested.

- Create a separate PDR for each data set [science data file(s) and corresponding metadata file – refer to the PPUDR "file group" example in Step 32].
- The following vi editor commands are useful:
  - **h** (move cursor left).
  - **j** (move cursor down).
  - **k** (move cursor up).
  - **l** (move cursor right).
  - **a** (append text).
  - **i** (insert text).
  - **r** (replace single character).
  - **x** (delete a character).
  - **dw** (delete a word).
  - **dd** (delete a line).
  - ***n*dd** (delete *n* lines).
  - **u** (undo previous change).
  - **Esc** (switch to command mode).

38 Press the **Esc** key.

39 Type **ZZ**.

- New PDR file is saved.
- UNIX prompt is displayed.

40 Type **vi *XFR_filename*** and then press the **Return/Enter** key.

- A new file with the specified ***XFR_filename*** is opened.
  - Use the EDOS file-naming convention for signal files (refer to the EDOS ICD, 423-ICD-EDOS/EGS):

    Signal file name is the corresponding PDR file name plus the signal file name extension (i.e., ".XFR").

For example:

X0420064AAAAAAAAAAAAAA031012314596.PDR.XFR

- The signal file indicates that the relevant data files and PDR have been put in the polling directory and are ready to be ingested.
- Although this procedure has been written for the **vi** editor, any UNIX editor can be used to create the signal file.

41 Using vi editor commands create a file that contains the name of the relevant PDR.
- A signal file contains the name of the relevant PDR only.
- For example:
- **X0420064AAAAAAAAAAAAAA031012314596.PDR**.

42 Press the **Esc** key.

43 Type **ZZ**.
- New signal file is saved.
- UNIX prompt is displayed.
- At the next polling occasion, the EDOS polling client should detect the signal file and initiate ingest of the data specified in the corresponding PDR.

44 Repeat Steps 34 through 43 as required to create delivery records and signal files for all remaining data sets (from the EDOS archive tape) to be ingested.

45 To monitor Ingest request processing (polling with delivery record), perform the **Monitor/Control Ingest Requests** procedure (see Chapter 16).

46 Remove the EDOS-provided tape from the DTF-2 drive, using the **Perform DTF-2 Drive Unloading** procedure (see Chapter 16).

47 Verify that the data have been inserted into the archive as described in the **Verify the Archiving of Ingested Data** procedure (see Chapter 16).

48 When insertion into the archive has been verified, the Archive Manager specifies "set delete" for the replaced data/metadata by using procedures for granule deletion to mark the data/metadata for deletion from the archive (see Section 17.4.2, **Selecting Granules for Deletion** and Section 17.4.2.3, **Selection Using a Separate Input File**).

49 When insertion into the archive has been verified, ensure that the EDOS archive tape is returned to the EDOS Level 0 Processing Facility (LZPF).

NOTE: Clean up (as described in Steps 50 through 54) the directory into which data were originally copied from the EDOS archive tape. If preferred, skip Steps 50 through 54 and use the script described in the **Clean the Polling Directories** procedure (see Chapter 16).

50 Type **cd *path*** and then press the **Return/Enter** key.

- ***path*** represents the directory path to the location where the data from the EDOS archive tape were first copied.

51 Type **ls** and then press the **Return/Enter** key.

- A listing of the files in the current directory is displayed.

52 Type rm ***filename1 filename2 [… filenameN]*** and then press the **Return/Enter** key.

- ***filename1 filename2 [… filenameN]*** represent the names of the files to be removed from the directory.
- A wildcard may be used if some of the files have common characteristics.
  - For example:

    rm *.PDS
- A prompt is displayed requesting whether or not a particular file should be removed.
  - For example:

    rm: remove DZ9ZA49.MDR (yes/no)?

53 Type **y** and then press the **Return/Enter** key.

- The specified file is deleted and (if applicable) a prompt is displayed requesting whether or not another particular file should be removed.

54 Repeat Step 53 as necessary.

Table 17.6-7. Re-Ingest of Lost Data (1 of 3)

Step	What to Do	Action to Take
1	Identify the source for each lost granule	
2	Retrieve file location metadata	Use procedure in Section 17.6.2.5.1
3	Initiate data re-supply with data provider	**read ICD**
4	**setenv DISPLAY *clientname*:0.0**	**enter text; press Return/Enter**
5	**/tools/bin/ssh *hostname***	**enter text; press Return/Enter**
6	***Passphrase*** (or Step 7)	**enter text; press Return/Enter**
7	***Password***	**enter text; press Return/Enter**
8	**netscape &**	**enter text; press Return/Enter**
9	Move cursor to **Netsite:** or **Location:** field	**single-click**
10	**http://*<URL>***	**enter text; press Return/Enter**

Table 17.6-7. Re-Ingest of Lost Data (2 of 3)

Step	What to Do	Action to Take
11	Select data reorder link from **Related Links**	**single-click**
12	On Data Reorder Request page, select **Add New Request**	**single-click**
13	Move cursor to **Requestor's Name** field	**single-click**
14	Type name of person making request	**enter text**
15	Pull down list and select **Requestor's Organization**	**clicks**
16	In **Requested Data (UTC)** block, pull down list and select **Year**	**clicks**
17	In **Requested Data (UTC)** block, pull down list and select **DOY**	**clicks**
18	In **Requested Data (UTC)** block, pull down list and select **Start Time**	**clicks**
19	In **Requested Data (UTC)** block, pull down list and select **Stop Time**	**clicks**
20	Select **Request Reason**	**single-click**
21	Pull down list and select **Priority**	**clicks**
22	In **Data type(s)** block, check-select appropriate APIDs	**click(s)**
23	Optional: Move cursor to **Comments** field	**single-click**
24	Optional: Enter comments	**enter text**
25	In **Actionee Org** block, select actionee	**single-click**
26	Activate **Submit** button	**single-click**
27	For tape from EDOS, load tape into DTF-2 drive	Use procedure in Section 16.3.3.4
28	Access terminal window logged in to appropriate host	
29	**cd *path*** (to location for copy of data)	**enter text; press Return/Enter**
30	**tar xvf *device*** (the DTF-2 drive device name)	**enter text; press Return/Enter**
31	**pg *PPMUDR_name*** (file name of PPMUDR)	**enter text; press Return/Enter**
32	Identify the PDS(s) to be archived	**read text**
33	**cp *filename1 filename2 [… filenameN] path*** (copy files to Ingest pollEDOS directory)	**enter text; press Return/Enter**
34	**cd *path*** (path to Ingest pollEDOS directory)	**enter text; press Return/Enter**
35	**cp *old_PDR_filename new PDR filename***	**enter text; press Return/Enter**
36	**vi *new_PDR_filename***	**enter text; press Return/Enter**
37	Use **vi** editor commands to modify PDR file to specify ingest of a data set to be ingested	
38	Place **vi** editor in command mode	**press Esc key**
39	Type **ZZ**	**enter text**
40	**vi *XFR_filename***	**enter text; press Return/Enter**
41	Use **vi** editor commands to create a signal file (file containing the name of the created PDR file	
42	Place **vi** editor in command mode	**press Esc key**
43	Type **ZZ**	**enter text**

Table 17.6-7. Re-Ingest of Lost Data (3 of 3)

Step	What to Do	Action to Take
44	Repeat Steps 34 through 43 as needed to create any additional delivery records and signal files for other data sets from the EDOS tape to be ingested	
45	Monitor Ingest request processing	Use procedure in Section 16.2.5
46	Remove EDOS tape from DTF-2 drive	Use procedure in Section 16.3.3.5
47	Verify that the data are inserted in the archive	Use procedure in Section 16.2.10
48	Mark the replaced data/metadata for deletion	Use procedure in Section 17.4.2.3
49	Return the EDOS tape to the LZPF	
50	**cd *path*** (location where the data from the EDOS tape were first copied)	**enter text; press Return/Enter**
51	**ls**	**enter text; press Return/Enter**
52	**rm *filename1 filename2 [… filenameN]***	**enter text; press Return/Enter**
53	**y**	**enter text; press Return/Enter**
54	Repeat Step 53 as necessary	

17.6.2.4.2 Recovery of Lost Data by Reprocessing

Table 17.6-8 presents the steps required for recovery of lost data by reprocessing. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 If you have not already done so, retrieve the granule Production History (PH) metadata for each file for the lost granules (see Section 17.6.2.5.2).

2 Pass the output of Step 1 to the procedure to **Re-Generate Granules Affected by Loss of Files from the Archive** (see Chapter 13).

Table 17.6-8. Recovery of Lost Data by Reprocessing

Step	What to Do	Action to Take
1	Retrieve granule Production History metadata	Use procedure in Section 17.6.2.5.2
2	Execute procedure to re-generate granules affected by loss of files from the archive	See Chapter 13

17.6.2.4.3 Recovering Granules from Another Producing Site

A special case for data recovery involves granules archived at a DAAC other than the producing DAAC or site and (generally) not archived at the producing DAAC or site. Ultimately, the recovery involves a re-ingest (see Chapter 16), but because the granules are not archived at the producing DAAC or site, they must first be generated through reprocessing. Table 17.6-9 presents the steps required for recovering granules from another producing site. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 If you have not already done so, retrieve the file location metadata for each file for the lost granules (see Section 17.6.2.5.1).

2 Identify which of the lost granules were ingested from DAACs or other sites where the granules were produced but not archived.
- These lost granules are known to the local SDSRV, but do not have an associated Production History (PH) granule (the PH granule is at the producing site).

3 Forward the granule metadata lists to the source DAAC or other site, where the metadata are used as input to the procedure to **Re-Generate Granules Affected by Loss of Files from the Archive** (see Chapter 13).

4 Once the granule is re-generated, it may be inserted at the DAAC where it was lost, either through an order or through cross-DAAC ingest (see Chapter 16).

Table 17.6-9. Recovering Granules from Another Producing Site

Step	What to Do	Action to Take
1	Retrieve file location metadata	Use procedure in Section 17.6.2.5.1
2	Identify lost granule(s) produced at another site	
3	Forward granule metadata to producing site	
4	Execute ingest procedure	See Chapter 16

17.6.2.4.4 Restoration of L0 Data to the EDOS Archive from the ECS

If EDOS discovers missing or corrupt L0 data files in its archive, the lost data may be recovered by obtaining L0 files from ECS. In the event of such loss, the EDOS Level 0 Processing Facility notifies the DAAC that archives the appropriate L0 data, either by telephone or, preferably, by e-mail. In the notification, EDOS identifies each requested Production Data Set by Application Process Identification (APID) and Start and Stop time. The notification also provides a host and directory path and any related information necessary for the DAAC operator to write the data, as

well as the priority of the request (high, medium, or low). The following procedure, referencing standard data ordering procedures (see Chapter 19), may be used to achieve the transfer.

1 Review the request notification from EDOS to obtain appropriate criteria to search the archive for the requested data and to specify the host and directory to which the data are to be pushed.

2 Use the **Search and Order Data using the EDG Search and Order Tool** procedure (see Chapter 19) to conduct a search for the data requested by EDOS, constraining the search with the criteria provided by EDOS in the request notification, and to order the data to be distributed by FTP Push to the provided host and directory path.

- The order is confirmed.

NOTE: If the request is for one or two files, it may be preferable to use a tool and method other than the EDG (e.g., the test tool **EcTsDsClientDriver**) to achieve the distribution.

17.6.2.5 SDSRV Procedures in Support of Data Recovery

There are two procedures described here that may be used to extract information from the SDSRV database to support the recovery of lost archive data. The first returns file metadata including file checksums for use with file recovery from backup tapes. The second generates granule metadata for use by the Planning subsystem (PLS) in re-creating granules from which files have been irrecoverably lost. The output "lists" from these procedures should be exchanged as electronic files (e.g., as email attachments) to facilitate subsequent use (e.g., to permit copying into input screens of GUIs for other procedures).

17.6.2.5.1 SDSRV Retrieval of File Location Metadata

The input to this procedure is a list of the unique file names of files in the archive affected by a tape failure (e.g., procedure 17.6.2.3 shows how the script **EcDsStFilesPerTapeUtility** may be used to generate file names for the list). The list may be called the *Affected File List* (AFL). The file names in the AFL will match the **internalFileName** column of the **DsMdFileStorage** table within the SDSRV metadata database.

The output of this procedure is a list of file metadata (archiveIDs and checksums) for each file named in the input. It may be called the *Affected File Metadata* (AFM) list. It is used to determine the backup locations, if any, of lost files and to verify the checksum of files restored through support of the tape drive vendor (StorageTek).

This procedure has the following dependencies:

- The operator is working on a machine from which SQL connections can be made to the SDSRV SQL server (e.g., e0acg11, g0acg01, l0acg02, n0acg01) and that server recognizes the Sybase account sdsrv_role.

- The UNIX account in use has execute permission on the required scripts, the 'path' shell variable set to include a directory where the command 'isql' is located and the SYBASE (Sybase 'home') environment variable set appropriately (e.g. setenv SYBASE /tools/sybOCv11.1.0).
- The operator knows the password for the SDSRV Sybase user **sdsrv_role**

Table 17.6-10 presents the steps required for SDSRV retrieval of file location metadata. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in at the SDSRV host (e.g., e0acs05, g0acs03, l0acs03, n0acs04).

2 Receive the Affected File List (AFL) (e.g., file list from output of script **EcDsStFilesPerTapeUtility**) as an electronic file; save a local copy of the file with an identifiable name (e.g., aflfile.txt).

3 To change directory to the location of the database scripts, type **cd /usr/ecs/<*MODE*>/CUSTOM/dbms/DSS** and press the **Return/Enter** key.
- The <***MODE***> will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 or TS2 (for testing).
- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/dbms/DSS**.

4 To execute the script for retrieval of file location metadata, type **DsDbSrFileLocMetadata *aflfile.txt aflmetadata.txt***, where ***aflfile.txt*** is the name of the input file with the list of affected files and ***aflmetadata.txt*** is the desired name of the output file, and then press the **Return/Enter** key.
- The script requires that certain environmental variables be set prior to execution. If you have not set them, the script returns an error message listing the variables that must be set and giving examples. To make the script execute properly, you may need to set environmental variables using the following commands and appropriate variable entries:

  setenv DSQUERY *x*0acg0*n*_srvr (e.g., e0acg11, g0acg01, l0acg02, n0acg01)

  setenv DBNAME EcDsScienceDataServer1_<*MODE*>

  setenv DBUSERNAME sdsrv_role

  setenv DBPASSWD <*password*>

  setenv SYBASE /tools/sybOCv11.1.1

- If the variables are set appropriately, the script uses the data in the input file to generate the named output file; during the execution it provides feedback similar to the following:

```
Using Login   : sdsrv_role
Using Server  : t1acg04_srvr
using Database: EcDsScienceDataServer1_TS2

Recovering the Effected Lost Files....

**** No errors found in DBoutfile_FileLocMetadata ***
```

5 To check that the output file is not empty (i.e., of zero length), type the command **ls -l *aflmetadata.txt***, where ***aflmetadata.txt*** is the name of the output file, and press the **Return/Enter** key.

- UNIX displays the file information in the following form:

```
-rw-r--r--   1 cmshared      293 Sep 25 15:25 aflmetadata.txt
```

- If the file is of zero length, either the input file was of zero length or an unexplained error occurred. Check the input file.

6 To visually inspect the file to verify the success of the command, type the command **view *aflmetadata.txt***, where ***aflmetadata.txt*** is the name of the output file, and press the **Return/Enter** key.

- The contents of the output file are in two sections: 1) the affected file metadata found within SDSRV inventory database; and 2) files not found within SDSRV database (this section is usually empty). UNIX displays the contents of the file in the following form (for this sample data, the input file contained only one filename):

```
InternalFileName_found_in_SDSRV_Inventory_Metadata_Database
Tue Sep 25 15:25:49 EDT 2001

    :SC:MOD000.001:19862:1.CCSDS
    "Aug 21 2001  3:34:17:000PM"  0  1670000364  SCMOD000.00119862


InternalFileName_not_found_in_SDSRV_Inventory_Metadata_Database
Tue Sep 25 15:25:50 EDT 2001
```

- To exit the view process, type **:q!** and press the **Return**/Enter key. (***Note***: This step specifies use of the **view** command to view the file, but the content can be viewed using other commands as well [e.g., **vi**, **pg**, **more**]).
- It is advisable, especially if there are large numbers of affected files, to check for errors in the output of the script, searching for occurrences of the strings 'msg' and 'error.' To execute a check for 'msg,' type the command **grep -i msg *aflmetadata.txt* | wc -l**, where ***aflmetadata.txt*** is the name of the output file, and press the **Return/Enter** key. To execute a check for 'error,' type the command **grep -i error *aflmetadata.txt* | wc -l** and press the **Return/Enter** key.
- If no errors occurred, UNIX returns an output of '0' (zero).

- Any other output means that there were errors in the process. If errors are found, they must be diagnosed based on the error message(s) and the procedure must be repeated after correction of the input file.

7 When the output file passes the tests of Step 7, it can be passed to the calling procedure.

Table 17.6-10. SDSRV Retrieval of File Location Metadata

Step	What to Do	Action to Take
1	Log in at SDSRV host	**enter text; press Return/Enter**
2	Save a local copy of the Affected File List	**name file, e.g., *aflfile.txt***
3	**cd /usr/ecs/<*MODE*>/CUSTOM/dbms/DSS**	**enter text; press Return/Enter**
4	**DsDbSrFileLocMetadata *aflfile.txt aflmetadata.txt***	**enter text; press Return/Enter**
5	**ls –l *aflmetadata.txt***	**enter text; press Return/Enter; read text**
6	**view *aflmetadata.txt***	**enter text; press Return/Enter: read text**
7	**grep -i msg *aflmetadata.txt* | wc -l** **grep -i error *aflmetadata.txt* | wc -l**	**enter text; press Return/Enter; read text**
8	Pass output file to calling procedure	

17.6.2.5.2 SDSRV Retrieval of Granule Production History Metadata

The input to this procedure is a list of files remaining to be recovered after as many files as possible are recovered from backup (see Sections 17.6.2.1 and 17.6.2.2) and/or from a damaged cartridge (see Section 17.6.2.3). The list may be referred to as the *Affected File List* (AFL). The output of this procedure serves as input to the PDPS/PLS procedure for granule regeneration, **Re-Generate Granules Affected by Loss of Files from the Archive**, in Chapter 13.

The goal of this procedure is to list PLS-required granule metadata for use by the local PDPS in re-generating lost granules. The procedure extracts valid Production History URs for the 'lost' granules from the local SDSRV database. It assumes that the Delivered Algorithm Package information has been inserted into the SDSRV for all associate datatypes in the process of Science Software Integration and Test (SSI&T), which is addressed in Chapter 26. There may be a period in the lifetime of a granule when this information is not populated, during which granule attributes PGEName and PGEVersion are not available to this procedure.

Output from this procedure is a file containing:

- "Granules for PDPS Re-generation" -- those found within SDSRV. These are passed to the PLS operators for re-generation using the procedure to **Re-Generate Granules Affected by Loss of Files from the Archive** (see Chapter 13).

- "Residual Granules to Recover" -- those not found within SDSRV inventory. This list may include granules that have been removed by the process for physical deletion from the archive and SDSRV inventory (see Section 17.4.3).

Table 17.6-11 presents the steps required for SDSRV retrieval of granule production history metadata. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in at the SDSRV host (e.g., e0acs05, g0acs03, l0acs03, n0acs04).

2 Receive the **Affected File List (AFL)** (e.g., file list from output of script **EcDsStFilesPerTapeUtility**) as an electronic file; save a local copy of the file with an identifiable name (e.g., aflfile.txt).

3 To change directory to the location of the database scripts, type **cd /usr/ecs/<*MODE*>/CUSTOM/dbms/DSS** and press the **Return/Enter** key.

- The <***MODE***> will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 or TS2 (for testing).
- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/dbms/DSS**.

4 To execute the script for retrieval of file location metadata, type **DsDbSrGranPHMetadata *aflfile.txt agrmetadata.txt***, where ***aflfile.txt*** is the name of the input file with the list of affected files and ***agrmetadata.txt*** is the desired name of the output file, and then press the **Return/Enter** key.

- The script requires that certain environmental variables be set prior to execution. If you have not set them, the script returns an error message listing the variables that must be set and giving examples. To make the script execute properly, you may need to set environmental variables using the following commands and appropriate variable entries:

  setenv DSQUERY *x*0acg*nn*_srvr (e.g., e0acg11, g0acg01, l0acg02, n0acg01)

  setenv DBNAME EcDsScienceDataServer1_<*MODE*>

  setenv DBUSERNAME sdsrv_role

  setenv DBPASSWD <*password*>

  setenv SYBASE /tools/sybOCv11.1.1

- If the variables are set appropriately, the script uses the data in the input file to generate the named output file; during the execution it provides feedback similar to the following:

```
Using Login   : sdsrv_role
Using Server  : t1acg04_srvr
```

```
using Database: EcDsScienceDataServer1_TS2


Recovering the Lost Files....

**** No errors found in DBoutfile_GranPHMetadata ***
```

5 To check that the output file is not empty (i.e., of zero length), type the command **ls -l *agrmetadata.txt***, where ***agrmetadata.txt*** is the name of the output file, and press the **Return/Enter** key.

- UNIX displays the file information in the following form:
  ```
  -rw-r--r--   1 cmshared      293 Sep 25 15:25 agrmetadata.txt
  ```
- If the file is of zero length, either the input file was of zero length or an unexplained error occurred. Check the input file.

6 To visually inspect the file to verify the success of the command, type the command **view *agrmetadata.txt***, where ***agrmetadata.txt*** is the name of the output file, and press the **Return/Enter** key.

- The contents of the output file are in two sections: 1) the granule metadata found within SDSRV inventory database; and 2) granule metadata not found within SDSRV database (residual granules to recover). For each of the files listed in the input file for which related granule metadata are found in the SDSRV, the script output should include the GeoID (partial UR), the UR of any available associated Production History granule, the ESDT shortname and versionID, the granule beginning date and time and ending date and time. UNIX displays the contents of the file in the following form:

```
Granule_metadata_found_within_SDSRV_Inventory_database Wed Sep 26
11:11:51 EDT 2001

:BR:Browse.001:1170:1.BINARY
0  1000  BRBrowse.0011170  PGEName  1         "None"  "None"  "NONE"
"NORMAL"
PH_Does_Not_Apply

:SC:MOD00:65001:1.CCSDS
0  1000  SCAST_04.00120001  PGEName  1
"Jan  1 1997 12:00:00:000AM"  "Jan  1 1997 12:00:00:000AM"  "Oct 10
1996 12:02:00:000AM"  "NORMAL"  2
NO_PH

:PH:PH.001:2000000076:1.BINARY
0  65536  PHPH.0012000000076  PGEName  1         "None"  "None"
"None"  "NORMAL"
PH_Does_Not_Apply

:QA:QA.001:1003:1.ASCII
0  0  QAQA.0011003  PGEName  1         "None"  "None"  "None"
"NORMAL"
PH_Does_Not_Apply
```

```
:OR:OR.001:2102:1.ASCII
0  0  OROR.0012102  PGEName  1          "None"  "None"  "None"
"NORMAL"
PH_Does_Not_Apply

:AN:AN.001:3100:1.ASCII
0  0  ANAN.0013100  PGEName  1          "None"  "None"  "None"
"NORMAL"
PH_Does_Not_Apply


Granule_metadata_not_found_within_SDSRV_Inventory_database Wed Sep 26
11:11:51 EDT 2001
```

- To exit the view process, type **:q!** and press the **Return**/Enter key. (***Note***: This step specifies use of the **view** command to view the file, but the content can be viewed using other commands as well [e.g., **vi**, **pg**, **more**]).

7 It is advisable, especially if there are large numbers of affected files, to check for errors in the output of the script, searching for occurrences of the strings 'msg' and 'error.' To execute a check for 'msg,' type the command **grep -i msg *agrmetadata.txt* | wc -l**, where ***agrmetadata.txt*** is the name of the output file, and press the Return/Enter key. To execute a check for 'error,' type the command **grep -i error *aflmetadata.txt* | wc -l** and press the **Return/Enter** key.

- If no errors occurred, UNIX returns an output of '0' (zero).
- Any other output means that there were errors in the process. If errors are found, they must be diagnosed based on the error message(s) and the procedure must be repeated after correction of the input file.

8 When the output file passes the tests of Step 7, it can be passed to the calling procedure (e.g., procedure to **Re-Generate Granules Affected by Loss of Files from the Archive** in Chapter 13).

- ***Note***: Granules for recovered files will, by definition, have a different granuleURs (dbIDs) than the files that were lost.

Table 17.6-11. SDSRV Retrieval of Granule Production History Metadata (1 of 2)

Step	What to Do	Action to Take
1	Log in at SDSRV host	**enter text; press Return/Enter**
2	Save a local copy of the Affected File List	**name file, e.g., *aflfile.txt***
3	**cd /usr/ecs/<*MODE*>/CUSTOM/dbms/DSS**	**enter text; press Return/Enter**
4	**DsDbSrGranPHMetadata *aflfile.txt agrmetadata.txt***	**enter text; press Return/Enter**
5	**ls –l *agrmetadata.txt***	**enter text; press Return/Enter; read text**
6	**view *agrmetadata.txt***	**enter text; press Return/Enter: read text**

Table 17.6-11. SDSRV Retrieval of Granule Production History Metadata (2 of 2)

Step	What to Do	Action to Take
7	**grep -i msg *agrmetadata.txt* | wc -l** **grep -i error *agrmetadata.txt* | wc -l**	**enter text; press Return/Enter; read text**
8	Pass output file to calling procedure	

17.7 Archive Troubleshooting

There are several troubleshooting tools provided with AMASS that can assist you in monitoring archive activity and in responding to fault notifications. The AMASS *System Administrator's Guide* (available electronically on **drg** servers [e.g., g0drg01, e0drg11, l0drg01, n0drg01] in directory **/usr/amass/books**) includes instructions on using these tools. Some of the most useful ones are addressed in this section. Table 17.7-1 provides an Activity Checklist for archive troubleshooting.

Table 17.7-1. Activity Checklist for Archive Troubleshooting

Order	Role	Task	Section	Complete?
1	Archive Manager	Checking daemons and using *healthcheck*	(P) 17.7.1.1	
2	Archive Manager	Using *sysperf* to Display the Status of AMASS I/O Activity	(P) 17.7.1.2	
3	Archive Manager	Using *vollist* to Display Volume Data	(P) 17.7.1.3	
4	Archive Manager	Using the *amass_log* Script to Display AMASS Errors	(P) 17.7.1.4	
5	Archive Manager	Using *quedisplay* to View What is in the AMASS Queue	(P) 17.7.1.5	
6	Archive Manager	Using *mediamove* to Establish Synchrony Between *quedisplay* and *medialist*	(P) 17.7.1.6	
7	Archive Manager	Checking Server Log Files	(P) 17.7.2.1	
8	Archive Manager	A Special Case: Checking the Request Manager Server Debug Log	(P) 17.7.2.2	
9	Archive Manager	Checking the tac Log File	(P) 17.7.2.3	
10	Archive Manager/ Database Administrator	Handling a Data Insertion Failure	(P) 17.7.2.4	
11	Archive Manager	Handling a Data Acquire Failure	(P) 17.7.2.5	
12	Archive Manager	Diagnosing/Investigating Write Errors	(P) 17.7.3	
13	Archive Manager	Diagnosing/Investigating Read Errors	(P) 17.7.4	

17.7.1 Using AMASS Commands, Utilities, and Scripts for Monitoring and Fault Response

The AMASS file system needs to have the following daemons running at all times:

- **amassmain**.
- **daemons/lm_ip -a fslock.**
- **qset**.
- **klogd**.
- **amass_iocomp**.
- **libsched** (one instance for each virtual library).
- **libio_tape** (at least one instance for each drive in each jukebox).

The UNIX process search provides an easy check for these daemons. If they are up, the AMASS **healthcheck** command provides a useful check on the health of AMASS while it is running.

A command provided to display the status of the AMASS I/O activity is **sysperf**. This command returns several items:

- the number of reads and writes that are outstanding.
- the number of volumes (for reads) or volume groups (for writes) that are going to be used by those reads and writes.
- the current volumes in the drives.
- the I/O rate in Kb per second since the last update. This value first appears as a zero. Then AMASS continues to update the information at intervals based on a value for *updateinterval* entered by the operator.

Sysperf can often show the first sign of trouble. For example, if there are reads and writes in process but throughput is always 0, a problem is indicated. The most common problems are volumes and drives that go off line and/or inactive.

Volumes are monitored using the **vollist** command. It returns information on the status of a specified volume or list of volumes in the archive. If the output of **vollist** indicates that the volume is inactivated (i.e., **I** appears in the **FLAGS** column), the **amass_log** script can help to determine the nature of the problem. The **amass_log** script displays AMASS messages from the system log file. This script can provide helpful information under several circumstances, such as when a command gives unexpected results or when AMASS appears not to be functioning properly in other ways.

Unless use of the **amass_log** script shows that there are many errors on a volume that has been inactivated, you can reactivate the volume using the command:

/usr/amass/bin/volstat -a <*volumenumber*>

where **<*volumenumber*>** is the volume ID for the volume to be activated.

Just as **vollist** provides information on the status of volumes, the command **drivelist** displays the status of drives available to AMASS. Active drives are noted by an **A**, and inactive drives are

noted by an **I**. The command is **/usr/amass/bin/drivelist**. If AMASS inactivates a drive, use the **amass_log** script as described previously. Unless there is a hardware problem and several attempts have been made to ready the drive, it is usually appropriate to reactivate the drive using the **drivestat** command. For example, to reactivate drive 1 in jukebox 1, type the command **/usr/amass/bin/drivestat -a 1 1**.

A useful library utility included with AMASS is **quedisplay**. This utility permits the operator to see what is in the queue, and to diagnose problems such as the following:

- During an attempt to write to a file, the drive light does not illuminate.
- The system is slowing down.
- An AMASS command does not complete.

The output of the **quedisplay** utility shows the queue, which consists of read and write requests, AMASS administration commands, and a list of libraries, drives, and what volumes they manage. An example of output from this utility might take the following form:

```
READQ rid=52696, fptr=0xf0227c5c, vol=3, fnode_flags=0x110
WRITEQ rid=79, fptr=0xc00eff54, vol=5, fnode_flags=0x8048844
ADMINQ:cmd=1, flags=0x6,vol=32, juke=1, pid=1047, ftype=0, err=0
JUKEBOX 1 DRIVE 1, vid=32, vflag=0x100, status=0
JUKEBOX 1 DRIVE 2, no volume in drive
```

If there are **READQ** or **WRITEQ** entries, the name(s) of the file(s) being processed can be determined by using the **filepath** command and the first number in the entry. For example, enter **/usr/amass/utils/filepath 52696** for the first file number in the sample output.

Occasionally, a robot may lose synchrony with AMASS concerning the location of media. The best way to verify this is to compare **quedisplay** and **medialist**. The **medialist** utility is a standalone program that communicates with the robot controller in the Library Storage Module to determine the robot's view of media and their slot locations. If the two programs disagree, you can bring the two programs into synchrony using **mediamove**. The following paragraphs provide step-by-step procedures for use of some of these commands and utilities.

17.7.1.1 Checking Daemons and Using *healthcheck*

If there is an indication or question of a potential problem with AMASS, an appropriate initial step is to check the status of the required daemons. If the check indicates that the daemons are up, then it is a reasonable next step to run the *healthcheck* command. Table 17.7-2 presents the steps required for checking daemons and using *healtcheck* to verify the status of AMASS. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in as **amass** at the FSMS host.

2 Type **ps -ef | grep amass** and press the **Return/Enter** key.

- UNIX returns running AMASS processes in a format similar to the following:

```
amass   7214464   7208385  0   Sep 19 ?      0:00 libio_tape 2 1
amass   7208385         1  0   Sep 19 ?     10:33 /usr/amass/daemons/amassmain
0
amass   7214747   7208385  0   Sep 19 ?      0:10 amass_iocomp
amass   7282853   7215637  0   Sep 20 ?      1:47 libio_tape 1 1
amass   7282868   7215637  0   Sep 20 ?      0:00 libio_tape 1 1
amass   6949087   7215637  0   Sep 20 ?      1:47 libio_tape 1 1
amass   7214915   7208385  0   Sep 19 ?      0:00 klogd
amass   7214972   7208385  0   Sep 19 ?     50:54 libio_tape 1 2
amass   5539722   7217884  0   Sep 20 ?      0:23 libio_tape 1 3
amass   7301726   7215964  0   Sep 20 ?      1:05 libio_tape 3 1
amass   7215313         1  0   Sep 19 ?      9:34 /usr/amass/daemons/lm_ip -a
fslock1 -u 128 -f 256 -q 128
amass   7357656   7216363  0   Sep 20 ?      0:00 libio_tape 3 3
amass   7215637   7208385  0   Sep 19 ?     84:10 libio_tape 1 1
amass   7215638   7208385  0   Sep 19 ?      2:43 libsched 3
amass   7277545   7214972  0   Sep 20 ?      0:41 libio_tape 1 2
amass   7215870   7208385  0   Sep 19 ?      2:52 libsched 1
amass   7215964   7208385  0   Sep 19 ?     109:25 libio_tape 3 1
amass   7216363   7208385  0   Sep 19 ?     84:16 libio_tape 3 3
amass   6950984   7217884  0   Sep 20 ?      0:23 libio_tape 1 3
amass   8175053   7212410  0   Sep 26 ?      0:00 libio_tape 1 4
amass   7340525   7217134  0   Sep 20 ?      1:19 libio_tape 3 2
amass   7278745   7217884  0   Sep 20 ?      0:23 libio_tape 1 3
amass   7216941   7208385  0   Sep 19 ?      0:32 qset
amass   7340710   7217134  0   Sep 20 ?      1:19 libio_tape 3 2
amass   7217134   7208385  0   Sep 19 ?     138:26 libio_tape 3 2
amass   7359550   7216363  0   Sep 20 ?      0:52 libio_tape 3 3
amass   7217388   7208385  0   Sep 19 ?      0:00 libio_tape 2 2
amass   7285477   7215637  0   Sep 20 ?      1:47 libio_tape 1 1
amass   7285537   7215637  0   Sep 20 ?      1:47 libio_tape 1 1
amass   7217884   7208385  0   Sep 19 ?     17:37 libio_tape 1 3
amass   7279821   7214972  0   Sep 20 ?      0:41 libio_tape 1 2
amass   6878049   7208385  0   Sep 19 ?      2:36 libsched 2
amass   7279907   7214972  0   Sep 20 ?      0:41 libio_tape 1 2
amass   7335573   7217134  0   Sep 20 ?      1:19 libio_tape 3 2
  .
  .
  .
```

- If the running processes do not include **amassmain**, **daemons/lm_ip -a fslock**, **qset**, **klogd**, **amass_iocomp**, **libsched**, and **libio_tape**, it may be necessary to restart AMASS (refer to Section 17.1.3, **Rebooting AMASS**).

3 To check the AMASS database integrity, check the availability of write resources FNODEs and cache blocks, and to verify cache partitions, type **/usr/amass/bin/healthcheck -viwc** and press the **Return/Enter** key.

- AMASS returns information on its health in format similar to the following:

```
--- STARTING DATABASE INTEGRITY CHECK ---

     -api has been opened properly and AMASS is running.
     -verifying pathnames.
     -got locks on database
     -unlocking database tables and exiting

  --- CHECK COMPLETED!! ---


  --- CHECKING AVAILABILITY OF WRITE RESOURCES FNODEs AND CACHE
BLOCKS ---

     -api has been opened properly and AMASS is running.
     -Initializing the passed arguments.
     -Returning the passed arguments.
     -Restoring signals.
     -exiting.

  --- CHECK COMPLETED!! ---


  --- RUNNING CACHE TEST ---

     -api has been opened properly and AMASS is running.
     -Validating the raw cache.
     -Restoring signals.
     -exiting.

  --- TEST COMPLETED!! ---
```

- If an error message is returned, it may be necessary to restart AMASS (refer to Section 17.1.3, **Rebooting AMASS**).

4 To check library components, type **/usr/amass/bin/healthcheck -vl 1 0** ***volumenumber*** and press the **Return/Enter** key.

- The argument **-l** (lower-case l) specifies the library components check, and requires specification of a jukebox (**1** in this case), a drive number (entering **0** as in this case checks all active drives), and a volume number (***volumenumber*** is the volume ID of an available volume in the specified jukebox; it may be helpful to use the **vollist** command [refer to Section 17.7.1.3, **Using *vollist* to Display Volume Data**] to identify a suitable volume, such as a volume in the Space Pool, to use for this test).

- AMASS returns information on the health of library components in the following format:

```
--- CHECKING LIBRARY COMPONENTS ---

     -api has been opened properly and AMASS is running.
     -mapping shared memory.
     -verifying the juke number.
     -validating volume number.
     -validating drive number and checking for active drive/s/.
     -saving the volume's status before inactivating it.
     -proceeding with physical test.
     -restoring signals and exiting.

  --- CHECK COMPLETED!! ---
```

- If an error message is returned, it may be necessary to restart AMASS (refer to Section 17.1.3, **Rebooting AMASS**) and/or to check for possible hardware problems with drives or other components.

***Table 17.7-2. Checking Daemons and Using* healthcheck**

Step	What to Do	Action to Take
1	Log in at FSMS host	**enter text; press Return/Enter**
2	**ps -ef | grep amass**	**enter text; press Return/Enter**
3	**/usr/amass/bin/healthcheck -viwc**	**enter text; press Return/Enter**
4	**/usr/amass/bin/healthcheck -vl 1 0 *volumenumber***	**enter text; press Return/Enter**

17.7.1.2 Using *sysperf* to Display the Status of AMASS I/O Activity

Table 17.7-3 presents the steps required for using *sysperf* to display the status of AMASS I/O activity. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the FSMS host (e0drg11, g0drg01, l0drg01, or n0drg01).

2 Type **/usr/amass/bin/sysperf -k 5** and press the **Return/Enter** key.

- The screen updates every 5 seconds and display information on the amass kernel (**-k**) in a form similar to the following example (***Note***: A different number of seconds may be entered to specify a different refresh rate.):

```
SYSTEM STATISTICS  -   Thu Sep 27 08:17:33
UPDATE INTERVAL    -   10 SEC
AVERAGE THROUGHPUT -    0 KBYTES/SEC

READ REQUESTS         # OF VOLUMES
       0                     0

WRITE REQUESTS        # OF VOL GROUPS
```

```
        0                    0

CACHE BLOCKS   2957 Total    2957 Free       0 Dirty
FNODES          800 Total     796 Free       4 Used

JUKE  DRIVE  VOLFLAGS  VOLUME  VOLGRP  KBYTES/SEC
```

3 To break out of the command, use **ctrl-c** (while holding down the **Control Key**, press **c**).
- The screen stops updating and displays a UNIX prompt.

Table 17.7-3. Using* sysperf *to Display the Status of AMASS I/O Activity

Step	What to Do	Action to Take
1	Log in at FSMS host	**enter text; press Return/Enter**
2	**sysperf -k 5**	**enter text; press Return/Enter**
3	**ctrl-c**	**hold Control key and press c**

17.7.1.3 Using *vollist* to Display Volume Data

Table 17.7-4 presents the steps required for using *vollist* to display volume data. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the FSMS host (e0drg11, g0drg01, l0drg01, or n0drg01).

2 Type **/usr/amass/bin/vollist *volumenumber*** (where ***volumenumbe****r* is the ID for one of the volumes) and press the **Return/Enter** key.
- AMASS displays volume data in the following form:
```
VOL  VOL  JUKE POS  VOL     FLAGS  USED  AVAIL  DEAD  ERRS
NUM  GRP  NUM       LABEL           (MB)  (MB)   (%)
100  500  3    NET  SD0060   O     99213  3167    0     0
```
- ***Note***: In this example for volume 100, the **O** in the **FLAGS** column indicates that the volume is offline. Other often-used flags are: **A** for Active, **I** for Inactive, **R** for Read-only, **U** for Unformatted.
- If ***volumenumber*** is omitted from the command, AMASS displays volume data for all volumes.
- If the argument **-g** is used with the command and a volume group identifier is specified (i.e., **vollist -g *volumegroupnumber***), AMASS displays volume data for each volume in the specified volume group.

3 To put an offline volume back on line, type **/usr/amass/bin/volloc -n *volumenumber*** and press the **Return/Enter** key.

- The specified volume is put online, and in output from execution of an appropriate **vollist** command, AMASS displays **A** in the **FLAGS** column.

Table 17.7-4. Using* vollist *to Display Volume Data

Step	What to Do	Action to Take
1	Log in at FSMS host	**enter text; press Return/Enter**
2	**vollist [-g] [*volumenumber*]**	**enter text; press Return/Enter**
3	**volloc -n *volumenumber*** (to put offline volume online)	**enter text; press Return/Enter**

17.7.1.4 Using the *amass_log* Script to Display AMASS Errors

Table 17.7-5 presents the steps required for using the *amass_log* script to display AMASS errors. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the FSMS host (e0drg11, g0drg01, l0drg01, or n0drg01).

2 To change to the AMASS tools directory, type **cd /usr/amass/tools**, and then press the **Return/Enter** key.

- The working directory is changed to **/usr/amass/tools**.

3 Type **./amass_log *logfilepath***, where ***logfilepath*** is the full pathname of the system log file to scan for AMASS messages, and then press the **Return/Enter** key.

- On a Sun, the ***logfilepath*** is likely to be **/var/adm/messages**; on an SGI, the ***logfilepath*** is likely to be **/var/adm/SYSLOG**. Any AMASS error messages in the scanned log file are displayed.

4 Perform the action recommended for the error message in the log.

- The AMASS *System Administrator's Guide* (available electronically on **drg** servers [e.g., g0drg01, e0drg11, l0drg01, n0drg01] in directory **/usr/amass/books**) provides detailed information concerning error messages. An error message informs of critical problems that prevent AMASS from functioning. An error message is usually followed by a correction message, which provides instructions for correcting the situation. Sometimes, there is a previous warning message that may provide an accompanying correction message. Other messages may be identified by number only; the *System Administrator's Guide* provides a reference list, with accompanying corrective actions.

Table 17.7-5. Using the* amass_log *Script to Display AMASS Errors

Step	What to Do	Action to Take
1	Log in at FSMS host	**enter text; press Return/Enter**
2	**cd /usr/amass/tools**	**enter text; press Return/Enter**
3	**./amass_log *logfilepath***	**enter text; press Return/Enter**
4	Perform recommended action (see *System Administrator's Guide*)	**read text**

17.7.1.5 Using *quedisplay* to View What is in the AMASS Queue

Table 17.7-6 presents the steps required for using *quedisplay* to view what is in the AMASS queue. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the FSMS host (e0drg11, g0drg01, l0drg01, or n0drg01).

2 To change to the utilities directory, type **cd /usr/amass/utils**, and then press the **Return/Enter** key.

- The working directory is changed to **/usr/amass/utils**.

3 Type **quedisplay**, and then press the **Return/Enter** key.

- The AMASS queue is displayed in the following form:

```
READQ rid=52696, fptr=0xf0227c5c, vol=3, fnode_flags=0x110
WRITEQ rid=79, fptr=0xc00eff54, vol=5, fnode_flags=0x8048844
ADMINQ:cmd=1, flags=0x6,vol=32, juke=1, pid=1047, ftype=0, err=0
JUKEBOX 1 DRIVE 1, vid=32, vflag=0x100, status=0
JUKEBOX 1 DRIVE 2, no volume in drive
```

- ***Note***: In the output, "rid" = Record ID, "pid" = Process ID

Table 17.7-6. Using* quedisplay *to View What is in the AMASS Queue

Step	What to Do	Action to Take
1	Log in at FSMS host	**enter text; press Return/Enter**
2	**cd /usr/amass/utils**	**enter text; press Return/Enter**
3	**quedisplay**	**enter text; press Return/Enter**

17.7.1.6 Using *mediamove* to Establish Synchrony between *quedisplay* and *medialist*

Table 17.7-7 presents the steps required for using *mediamove* to establish synchrony between *quedisplay* and *medialist*. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in as **amass** at the FSMS host (e0drg11, g0drg01, l0drg01, or n0drg01).

2 Type **/usr/amass/utils/quedisplay** and then press the **Return/Enter** key.

- AMASS displays the following information (for example of incorrect status).

```
. . .
JUKEBOX 1 DRIVE 1, no volume in drive
JUKEBOX 1 DRIVE 2, vid=50, vflags-0x4, status=0
```

3 Type **/usr/amass/utils/medialist** and then press the **Return/Enter** key.

- AMASS displays the following information (for example of actual status).

```
. . .
SLOT VSD0098 FULL
DRIVE 1 FULL FROM VSD0096
DRIVE 2 FULL FROM VSD0097
```

- Note that the **medialist** result shows that drive 1 actually is occupied, although **quedisplay** registers that drive 1 is empty.

4 Type **/usr/amass/utils/mediamove 1 VSD0096 1** and then press the **Return/Enter** key.

- AMASS moves the volume from the ***source*** (drive **1** in this example) to the ***destination*** (slot **VSD0096** in this example) in the specified ***jukeboxnumber*** (jukebox **1** in this example), thereby bringing the actual status of drive 1 (as known by ***medialist***) to the status reflected by ***quedisplay***.

***Table 17.7-7. Using* mediamove *to Establish Synchrony Between* quedisplay *and* medialist**

Step	What to Do	Action to Take
1	Log in as **amass** at FSMS host	**enter text; press Return/Enter**
2	**Quedisplay**	**enter text; press Return/Enter**
3	**Medialist**	**enter text; press Return/Enter**
4	**mediamove *source destination* [*jukeboxnumber*]**	**enter text; press Return/Enter**

17.7.2 Recovering from Failure to Store or Retrieve Data

Successful data storage and retrieval functions are the heart of ECS. Successful ingest of data or processing of data to produce new science data granules require that Storage Management (STMGT) is inserting the product into the archive and that Science Data Server (SDSRV) is inserting the associated metadata into the inventory. Staging disks and cache managers for the Archive server and the FTP server are also involved in this process. To check the functioning of these elements, it is necessary that the ESDTs for the data to be inserted are installed and available, and that subscriptions have been registered.

Troubleshooting failures to store or retrieve data (as well as other failures) often requires review of server or application log files. This section contains a general procedure for reviewing log files to check for proper start-up and communications. It also has a procedure for a special case of reviewing log files for the Storage Management Request Manager server, and a procedure for reviewing the current tac log file of interactions between AMASS and ACSLS. Separate procedures then address recovery from failure to insert (store) data and recovery from failure to acquire (retrieve) data.

17.7.2.1 Checking Server Log Files

Table 17.7-8 presents the general steps required for checking server log files. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the host for the server and log(s) to be examined.

2 Type **cd /usr/ecs/<*MODE*>/CUSTOM/logs** and then press the **Return/Enter** key.
- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/logs**.

3 To view a server log, type **pg *filename*** and then press the **Return/Enter** key.
- ***filename*** refers to the log file to be reviewed (e.g., **EcDsScienceDataServer.ALOG**, **EcDsScienceDataServerDebug.log**).
- The first page of the log file is displayed; additional sequential pages can be displayed by pressing the **Return/Enter** key at the **:** prompt.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view**, **more**, **tail**) can be used to review the log file.
- Typically, the **<*server*>Debug.log** captures more detailed information than the **<*server*>.ALOG**. However, for some servers (e.g., **SDSRV**), there may be significant detail in the **<*server*>.ALOG**. It is also important to note that the **DebugLevel** parameter setting in the **Configuration Registry** determines the level of detail captured in the **<*server*>Debug.log** (**0** is off, a setting of **1** captures status and errors, a setting of **2** captures major events, and a setting of **3** is a full trace recording of all activity). If the **DebugLevel** has been set to one of the lower levels during

operations, the System Administrator may set it to **3** during troubleshooting. Similarly, the **AppLogLevel** parameter setting determines the level of detail captured in the **<*server*>.ALOG** (0 provides a full trace recording of all events, 1 provides messages related to all major events, 2 yields just records of errors, and 3 turns recording off). (**Note:** There are additional debug levels available for some logs; Storage Management (STMGT) offers "enhanced" debugging based on bitmasks. Level 7 provides a four-bit level for detailed database debugging. Level 15 provides an eight-bit level that repeatedly dumps the in-memory request queue in the STMGT Request Manager.

4 Review the log file(s) to determine if there are any indications of connection problems or errors at start up.

- The log file for the called server may contain an error message indicating a problem at start-up. The debug log should indicate a typical start sequence, including (sample log entries in the following material were taken from a debug log showing start-up for **EcDsStFtpServer**):
  - Get parameters from registry (log entries similar to the following).

```
DSS EcDsStFtpServer Server Debug  log on f2acg01 starting at Mon
Jun  4 07:57:45 EDT 2001
EcAgInstanceID Sequence Number is 3870
Setting up environment variables needed for DCE:
RPC_UNSUPPORTED_NETIFS = ""
/usr/ecs/DEV07/CUSTOM/bin/DSS/EcDsStFtpServer ConfigFile
/usr/ecs/DEV07/CUSTOM/cfg/EcDsStFtpServer.CFG ecs_mode DEV07
StartTemperature cold
Started process EcDsStFtpServer in mode DEV07 with PID 2709893
EcRgRegistry_1_0::ctor this = 0x104eef38
EcRgRegistry_1_0::ctor this = 0x104eef88
FoIpPtToPtPortalImp::Send sent 20/20
FoIpPtToPtPortalImp::Send sent 219/219
FoIpPtToPtPortalImp::Receive got 20
FoIpPtToPtPortalImp::Receive got 1024
FoIpPtToPtPortalImp::Receive got 246
******* After Retrieving of RGY: Name = EcDsStFtpServerNONE
ProgramID = 4645102
ApplicationID = 4600000
Release = B
DeltaTime = 0
Site = RBD
SubSysName = DSS
MajorVersion = 1
MinorVersion = 0
DebugLevel = 3
AppLogLevel = 0
AppLogSize = 3000000
DBServer = f2acg01_srvr
DBLoginName = EcDsStFtpServer
DBName = stmgtdb1
```

– Load resource catalogs (log entries indicate the loading, or that the loading did not complete, similar to the following).

```
06/04/01 07:57:47:  Thread ID : 65536 : loading resource catalog
file from
/usr/ecs/DEV07/CUSTOM/data/DSS/ResourceCatalogs/DsMdResource.dat.r
cat
06/04/01 07:57:48:  Thread ID : 65536 : loading resource catalog
file from
/usr/ecs/DEV07/CUSTOM/data/DSS/ResourceCatalogs/EcDsSdHr.dat.rcat
06/04/01 07:57:48:  Thread ID : 65536 : loading resource catalog
file from
/usr/ecs/DEV07/CUSTOM/data/DSS/ResourceCatalogs/DsSrResource.dat.r
cat
06/04/01 07:57:48:  Thread ID : 65536 : loading resource catalog
file from
/usr/ecs/DEV07/CUSTOM/data/DSS/ResourceCatalogs/DsGlResource.dat.r
cat
06/04/01 07:57:48:  Thread ID : 65536 : loading resource catalog
file from
/usr/ecs/DEV07/CUSTOM/data/DSS/ResourceCatalogs/DsShResource.dat.r
cat
06/04/01 07:57:48:  Thread ID : 65536 : loading resource catalog
file from
/usr/ecs/DEV07/CUSTOM/data/DSS/ResourceCatalogs/EcDsSdHc.dat.rcat
```

– Pre-cache errors associated with database connectivity (log entries similar to the following).

```
06/04/01 07:57:48:  Thread ID : 65536 : User Name    :
EcDsStFtpServer | Thread 65536
06/04/01 07:57:48:  Thread ID : 65536 : Database Name        :
stmgtdb1_DEV07 | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : Server Name       :
f2acg01_srvr | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : DsShTSStorage: creating
the MutexVec for this thread
06/04/01 07:57:49:  Thread ID : 65536 : SEARCHING FOR: 30141 (Not
found) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : CACHING: DsEStUnknownError
(30141) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : SEARCHING FOR: 30143 (Not
found) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : CACHING: DsEStUnknownError
(30143) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : SEARCHING FOR: 30139 (Not
found) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : CACHING: DsEStUnknownError
(30139) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : SEARCHING FOR: 30142 (Not
found) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : CACHING: DsEStUnknownError
(30142) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : SEARCHING FOR: 30148 (Not
found) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : CACHING: DsEStUnknownError
(30148) | Thread 65536
```

```
06/04/01 07:57:49:  Thread ID : 65536 : SEARCHING FOR: 30144 (Not
found) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : CACHING: DsEStUnknownError
(30144) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : SEARCHING FOR: 30145 (Not
found) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : CACHING: DsEStUnknownError
(30145) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : SEARCHING FOR: 30147 (Not
found) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : CACHING: DsEStUnknownError
(30147) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : SEARCHING FOR: 30146 (Not
found) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : CACHING: DsEStUnknownError
(30146) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : SEARCHING FOR: 30211 (Not
found) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : CACHING: DsEStUnknownError
(30211) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : SEARCHING FOR: 30140 (Not
found) | Thread 65536
06/04/01 07:57:49:  Thread ID : 65536 : CACHING: DsEStUnknownError
(30140) | Thread 65536
```

– Get server configuration parameters from the database (log entries similar to the following).

```
06/04/01 07:57:49:  Thread ID : 65536 : BaseReal::Ctor: Server
Name is - EcDsStFtpServerNONE | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : User Name   :
EcDsStFtpServer | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : Database Name        :
stmgtdb1_DEV07 | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : Server Name     :
f2acg01_srvr | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : myTransactionList[0]: use
stmgtdb1_DEV07 | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : DBIF:Execute: Ultimate
SQL: use stmgtdb1_DEV07 | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : myTransactionList[1]: exec
DsStCPSelectByName "EcDsStFtpServerNONE" | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : DBIF:Execute: Ultimate
SQL: exec DsStCPSelectByName "EcDsStFtpServerNONE" | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 :
DBIF:Fetched:[8.000000][EcDsStFtpServerNONE][1][10][FTP][][0][FTPA
][NONE][4194304] | Thread 65536
```

– Spawn receptionist thread and register server in the database (log entries similar to the following).

```
06/04/01 07:57:50:  Thread ID : 65536 :
DsStReceptionist:BindSocketGetInfo: Port assigned is 13441 |
Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : myTransactionList[0]: use
stmgtdb1_DEV07 | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : DBIF:Execute: Ultimate
SQL: use stmgtdb1_DEV07 | Thread 65536
```

```
06/04/01 07:57:50:  Thread ID : 65536 : myTransactionList[1]: exec
DsStCPRegisterServer 8, 13441, "f2acg01" | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : DBIF:Execute: Ultimate
SQL: exec DsStCPRegisterServer 8, 13441, "f2acg01" | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : Ftp:Ctor:
EcDsStFtpServerNONE | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : myTransactionList[0]: use
stmgtdb1_DEV07 | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : DBIF:Execute: Ultimate
SQL: use stmgtdb1_DEV07 | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : myTransactionList[1]: exec
DsStCPSelectById 8 | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : DBIF:Execute: Ultimate
SQL: exec DsStCPSelectById 8 | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 :
DBIF:Fetched:[8.000000][EcDsStFtpServerNONE][1][10][FTP][f2acg01][
13441][FTPA][NONE][4194304] | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : Ftp:Ctor: Leaving | Thread
65536
```

– Spawn service threads (log entries similar to the following).

```
06/04/01 07:57:50:  Thread ID : 65536 : Ftp:Startup: temperature =
cold | Thread 65536
06/04/01 07:57:50: Performing startup processing | Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 : Spawning service threads |
Thread 65536
06/04/01 07:57:50:  Thread ID : 65536 :
BR:GetThreadPoolConfiguration | Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : myTransactionList[0]: use
stmgtdb1_DEV07 | Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : DBIF:Execute: Ultimate
SQL: use stmgtdb1_DEV07 | Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : myTransactionList[1]: exec
DsStSTCSelectForServer 8, "ThreadPool" | Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : DBIF:Execute: Ultimate
SQL: exec DsStSTCSelectForServer 8, "ThreadPool" | Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : DBIF:Fetched:[ThreadPool
][10][0][0][0][0][10] | Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : 3_2709893_0757-
1125858625_155062001_f2acg01:FTPA: BR:GetThreadPoolConfiguration
Return
ing | Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : Ftp: Spawning a service
thread | Thread 65536
06/04/01 07:57:51: Starting a new service thread | Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : Ftp: Spawning a service
thread | Thread 65536
06/04/01 07:57:51: 06/04/01 07:57:51: Thread ID : 65554 : Waiting
for work | Thread 65554
06/04/01 07:57:51:  Thread ID : 65554 : DsShTSStorage: creating
the MutexVec for this thread
06/04/01 07:57:51:  Thread ID : 65554 : Waking up manager thread |
Thread 65554
      .
      .
      .
```

```
06/04/01 07:57:51: Starting a new service thread | Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : Ftp: Spawning a service
thread | Thread 65536
06/04/01 07:57:51: Starting a new service thread | Thread 65536
06/04/01 07:57:51:  Thread ID : 65559 : Waiting for work | Thread
65559
06/04/01 07:57:51:  Thread ID : 65560 : Waiting for work | Thread
65560
06/04/01 07:57:51:  Thread ID : 65561 : Waiting for work | Thread
65561
```

– Process Restart Notification for server restart ("Ready to accept requests") (log entries similar to the following).

```
06/04/01 07:57:51:  Thread ID : 65536 : myTransactionList[0]: use
stmgtdb1_DEV07 | Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : DBIF:Execute: Ultimate
SQL: use stmgtdb1_DEV07 | Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : myTransactionList[1]:
BEGIN TRANSACTION OUTER_278888352 | Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : DBIF:Execute: Ultimate
SQL: BEGIN TRANSACTION OUTER_278888352 | Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : myTransactionList[2]: exec
DsStGRRestartNotification "10_2709893_0757-1125858625_15506
2001_f2acg01:FTPA:Server restart", "EcDsStFtpServerNONE", "cold" |
Thread 65536
06/04/01 07:57:51:  Thread ID : 65536 : DBIF:Execute: Ultimate
SQL: exec DsStGRRestartNotification "10_2709893_0757-1125858625
_155062001_f2acg01:FTPA:Server restart", "EcDsStFtpServerNONE",
"cold" | Thread 65536
06/04/01 07:57:52:  Thread ID : 65536 : DBIF:Fetched:[] | Thread
65536
06/04/01 07:57:52:  Thread ID : 65536 : DBIF:Fetched:[8.000000] |
Thread 65536
06/04/01 07:57:52:  Thread ID : 65536 : DBIF:Execute: Ultimate
SQL: COMMIT TRANSACTION OUTER_278888352 | Thread 65536
06/04/01 07:57:52:  Thread ID : 0 : No servers to awaken -- get
status | Thread 0
06/04/01 07:57:52:  Thread ID : 65536 : Spawning manager thread |
Thread 65536
06/04/01 07:57:52: Ready to accept requests | Thread 65564
```

– Check queue for requests ("Waiting for an event" means there is nothing else in the queue.) (log entries similar to the following).

```
06/04/01 07:57:52:  Thread ID : 65564 :
BR:ProcessCancelledRequests | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : DsShTSStorage: creating
the MutexVec for this thread
06/04/01 07:57:52:  Thread ID : 65564 : myTransactionList[0]: use
stmgtdb1_DEV07 | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : DBIF:Execute: Ultimate
SQL: use stmgtdb1_DEV07 | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : myTransactionList[1]: exec
DsStGRSelectCancelled 8 | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : DBIF:Execute: Ultimate
SQL: exec DsStGRSelectCancelled 8 | Thread 65564
```

```
06/04/01 07:57:52:  Thread ID : 65564 :
BR:ProcessCancelledRequests: Nothing cancelled | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 :
BR:ProcessCancelledRequests Returning | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : Ftp: Getting next request
| Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : myTransactionList[0]: use
stmgtdb1_DEV07 | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : DBIF:Execute: Ultimate
SQL: use stmgtdb1_DEV07 | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : myTransactionList[1]: exec
DsStFRGetNextRequest 8 | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : DBIF:Execute: Ultimate
SQL: exec DsStFRGetNextRequest 8 | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : GetNextRequest: No
requests available | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : Waiting for an event |
Thread 65564
```

- The log file for the server from which the call originated may indicate a problem completing a connection. The log should indicate successful awakening of a remote host, with entries similar to the following:

```
06/04/01 07:57:52:  Thread ID : 65536 :
DsStPatron:AwakenRemoteServer: Hostname - f2acg01 | Thread 65536
06/04/01 07:57:52:  Thread ID : 65536 :
DsStPatron:AwakenRemoteServer: Port Number - 13441 | Thread 65536
06/04/01 07:57:52:  Thread ID : 65536 : Patron: Creating new entry
for EcDsStFtpServerNONE | Thread 65536
06/04/01 07:57:52:  Thread ID : 65536 : Trying gethostbyname_r() 0
of 5 attempts | Thread 65536
06/04/01 07:57:52:  Thread ID : 65536 : Waking up
EcDsStFtpServerNONE | Thread 65536
```

- and should indicate completion of a connection to the called server, with entries similar to the following:

```
06/04/01 07:57:52:  Thread ID : 65553 :
DsStReceptionist:WaitForConnections: A connection has been
accepted | Thread 65553
06/04/01 07:57:52:  Thread ID : 65564 :
BR:ProcessCancelledRequests | Thread 65564
06/04/01 07:57:52:
06/04/01 07:57:52:  Thread ID : 65553 : Waking up manager thread |
Thread 65553
06/04/01 07:57:52:  Thread ID : 65564 :  : 06/04/01 07:57:52: read
ID : 7:57:52: DsShTSStorageDsShTSStorage: creating the MutexVec
for this thread: creating the MutexVec for this thread665553: 53 :
DsShTSStorage: creating the MutexVec for this thread
06/04/01 07:57:52:  Thread ID : 65564 : myTransactionList[0]: use
stmgtdb1_DEV07 | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : DBIF:Execute: Ultimate
SQL: use stmgtdb1_DEV07 | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : myTransactionList[1]: exec
DsStGRSelectCancelled 8 | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 : DBIF:Execute: Ultimate
SQL: exec DsStGRSelectCancelled 8 | Thread 65564
```

```
06/04/01 07:57:52:  Thread ID : 65564 :
BR:ProcessCancelledRequests: Nothing cancelled | Thread 65564
06/04/01 07:57:52:  Thread ID : 65564 :
BR:ProcessCancelledRequests Returning | Thread 65564.
```

- This procedure is applicable for reviewing logs for different types of errors and events on ECS servers.

5 Exit the log file (e.g., from **pg**, type **q** and then press the **Return/Enter** key).

Table 17.7-8. Checking Server Log Files

Step	What to Do	Action to Take
1	Log in at host for server and log(s) to be examined	**enter text; press Return/Enter**
2	**cd /usr/ecs/<*MODE*>/CUSTOM/logs**	**enter text; press Return/Enter**
3	**pg** (or other viewing command) ***filename***	**enter text; press Return/Enter**
4	Review the entries in the file	**read text**
5	Exit the log file (e.g., **q** for exit from **pg**)	**enter text; press Return/Enter**

17.7.2.2 A Special Case: Checking the Request Manager Server Debug Log

The Request Manager server in the Storage Management computer software configuration item of the Data Server Subsystem processes requests from external clients (processes outside of Storage Management). Requests between Storage Management servers are passed directly from one server to another.

- Requests that require one of the Storage Management servers to perform processing are checkpointed (except requests that can be serviced solely through SQL).
  - Checkpointing involves recording the request's state (e.g., "checkpointed," "failed," "completed") in the database to assist in error recovery.
- Requests that can be serviced solely through SQL are considered "trivial" requests.
  - Trivial requests are not checkpointed.
  - Examples include attaching to a staging disk, getting capacity, and getting block size.
  - Trivial requests submitted from outside Storage Management are serviced by the Request Manager server.
  - Trivial requests originating within Storage Management are passed directly from the client to the database server.

The Request Manager server (like other Storage Management servers) can manage several concurrent activities. This is accomplished through the use of threads. There are several different kinds of threads:

- Manager thread.
  - One per Storage Management server.
  - Responsible for dequeuing requests and assigning them to service threads.

  - Checks for cancelled requests.
- Service thread.
  - Multiple threads per Storage Management server.
  - Responsible for the actual servicing of requests.
  - Logs all progress including all changes of request state.
  - Notifies submitter when request has been completed.
- Receptionist thread.
  - One per Storage Management server.
  - Registers the server as "up" in the database.
  - Sits on a socket, waiting for connections from other Storage Management servers.
  - Unregisters the server at shutdown.
- Inbound RPC thread.
  - Spawned by a request from a Storage Management client.
  - Hands off the request to the manager thread and waits for completion of the request.
- Housekeeper thread.
  - Watches for completed requests which haven't previously been seen and processed.

Information concerning Request Manager server processing of requests (identified by thread) is recorded in the Request Manager server debug log (assuming some level of debug log recording is specified in the Registry database).

Trivial requests typically involve the following types of activities:

- Inbound RPC thread appears with a request.
- Manager thread dequeues the request and assigns it to a service thread.
- Service thread recognizes the thread as "trivial."
  - A "No checkpointing required -- going straight to responded" message is recorded in the Request Manager server debug log.
- Service thread executes the database transaction for results.
  - When the request is completed, a "Done servicing" message is recorded in the Request Manager server debug log.
  - If the request fails, an "Unable to service" message is recorded in the Request Manager server debug log.
- Service thread hands the results to the inbound RPC thread.
  - A "Notifying the client" message is recorded in the Request Manager server debug log.
- Inbound RPC thread silently returns to the client with the results.

Non-trivial requests are forwarded to the appropriate Storage Management server (e.g., EcDsStFtpServer, EcDsStStagingDiskServer, EcDsStArchiveServer) for processing.

- Some of the same types of entries are made in the Request Manager server debug log for non-trivial requests as for trivial requests.
  - For example:

    "Waking up service thread" (Request Manager is preparing to process the request).

    "Done servicing" (request processing has been completed).

    "Unable to service" (the request has failed).
- Although some trivial requests include "token" statements, tokens are characteristic of non-trivial requests.
  - A token includes request information that varies with the type of operation to be performed.
  - For example, a token for an ftp request might include the following types of data:

    Stored procedure (e.g., DsStFRInsert) [other types of stored procedures include DsStSDRInsert and DsStGRMapLogicalArchiveId].

    RPC ID (e.g., RPCId=1821_535_1109-1124464729_171062001_x0ins01.xdc.ecs.nasa.gov:SBSVSDSV1DSDD1DSDD4:).

    Username.

    Encrypted password.

    Host.

    Source path.

    Destination path.

    External request ID.

    Server name (e.g., EcDsStFtpServerNONE) [other types of operations might involve the EcDsStStagingDiskServerDRP1 for example].

    Type of operation (e.g., FtpPush) [other types of operations include ArRetrieve, SDAllocateDisk, SDLinkFile].

    Submitter (e.g., DSDD) [other types of operations might involve SDSV].

    Priority.
  - The server to which the request was sent is identified by name (ServerName).
  - Transaction ID is embedded in the RPC ID (the portion before the first colon in the RPC ID).

A "transaction" may involve multiple operations on a host or several hosts. Consequently, multiple threads may be used on each relevant host.

Table 17.7-9 presents the general steps required for checking the Storage Management Request Manager server debug log file. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the Distribution Server host (e.g., e0dis02, g0dis02, l0dis02, n0dis02).

2 To change to the logs directory, type **cd /usr/ecs/<*MODE*>/CUSTOM/logs** then press the **Return/Enter** key.

- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/logs**.

3 Type **pg *filename*** then press the **Return/Enter** key.

- ***filename*** refers to the appropriate Request Manager debug log.
- For example: **pg EcDsStRequestManagerServerDebug.log**
- The content of the first page of the specified file is displayed.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view**, **more**) can be used to review the log file.

4 At the : prompt type **/*date time*** then press the **Return/Enter** key.

- ***date time*** refers to the approximate date and time of the problem.
  - For example:

    /06/18/01 12:17:31

- The file is searched for the specified text.
  - If the specified text is in the log file, the following type of response is displayed.

    ```
    ...skipping forward
    06/18/01 12:17:31:  Thread ID : 105 : DsShTSStorage: creating the
    MutexVec for this thread
    […]
    ```

  - If the specified text is not in the log file, the following type of response is displayed.

    ```
    Pattern not found:
    ```

  - If the specified text is not in the log file, verify the following aspects of Steps 3 and 4:

    Date and time were entered correctly (Step 4).

    Proper file was opened (Step 3).

5 At the : prompt type **/Unable to service** then press the **Return/Enter** key.

- **pg** searches the file for the specified text.
  - If the specified text is in the log file, the following type of response is displayed.

```
...skipping forward
2:IngestRQ409GR1 Unable to service | Thread 52
[…]
```

  - If the specified text is not in the log file, the following type of response is displayed.

```
Pattern not found:
```

- If the specified text is in the file, go to Step 7.
- If the specified text is not in the file, go to Step 6.

6 Examine the contents of the log file to determine which thread is associated with the problem being investigated.

- The following **pg** commands (at the **:** prompt) are useful:
  - ***n*** then **Return/Enter** (go to Page *n*).
  - **Return/Enter** or **+1** then **Return/Enter** (go down to the next page).
  - **-1** then **Return/Enter** (go back to the preceding page).
  - **+*n*** then **Return/Enter** (go down *n* number of pages).
  - **-*n*** then **Return/Enter** (go back *n* number of pages).
  - **+*n*l** then **Return/Enter** (go down *n* number of lines).
  - **-*n*l** then **Return/Enter** (go back *n* number of lines).
  - **q** then **Return/Enter** (exit from **pg**).

7 At the : prompt type the appropriate text (depending on the direction of the desired search) then press the **Return/Enter** key:

8 To search back toward the beginning of the file, type **^Waking up service thread *n*^** and then press **Return/Enter**.

9 To search toward the end of the file, type **/Waking up service thread *n*** and then press **Return/Enter**.

- For example:

  ^Waking up service thread 52^

  - The file is searched back toward the beginning of the file for the specified text.
- If the specified text is in the log file, the following type of response is displayed.

```
...skipping backward
06/18/01 12:17:31:  Thread ID : 102 : Waking up service thread 52
| Thread 102
[…]
```

- If the specified text is not in the log file, the following type of response is displayed.

  ```
  Pattern not found:
  ```

- The entries "`Waking up service thread n`" and "`Unable to service | Thread n`" bracket the thread servicing in which an error occurred.

NOTE: Thread IDs are reused frequently. There are likely to be many processes with the same thread ID in any particular log file. It is important to follow the correct instance of the thread.

NOTE: It is likely that the Request Manager would try again to process a failed request. Subsequent request processing may use the same thread ID or a different thread ID. However, it would involve the same transaction ID.

- A "`No checkpointing required -- going straight to responded`" entry associated with the thread ID indicates that the request is "trivial."

10 At the **:** prompt type **/SEARCHING** then press **Return/Enter**.

- The file is searched for the specified text.
  - If the specified text is in the log file, the following type of response is displayed.

```
...skipping forward
06/18/01 12:17:31:  Thread ID : 52 : SEARCHING FOR: 30148 (Found)
| Thread 52
06/18/01 12:17:31:  Thread ID : 52 : SEARCHING FOR: 30148 (Found)
| Thread 52
06/18/01 12:17:31:  Thread ID : 52 : DsStStoredProcedures::Execute
- ERROR: Could not execute stored procedure | Thread 52
06/18/01 12:17:31:  Thread ID : 52 : Error encountered in stored
procedure | Thread 52
06/18/01 12:17:31:  Thread ID : 52 : DBIF:Execute: Ultimate SQL:
ROLLBACK TRANSACTION OUTER_7077776 | Thread 52
06/18/01 12:17:32:  Thread ID : 52 : 1_4501810_1217-
1124633447_169062001_p0icg01.pvc.ecs.nasa.gov:IPOBIPOB1INRM1IGSA15
:IngestRQ409GR1 Done servicing | Thread 52
06/18/01 12:17:32:  Thread ID : 52 : 1_4501810_1217-
1124633447_169062001_p0icg01.pvc.ecs.nasa.gov:IPOBIPOB1INRM1IGSA15
:IngestRQ409GR1 Unable to service | Thread 52
06/18/01 12:17:32:  Thread ID : 52 : 1_4501810_1217-
1124633447_169062001_p0icg01.pvc.ecs.nasa.gov:IPOBIPOB1INRM1IGSA15
:IngestRQ409GR1 Marked as unassigned | Thread 52
06/18/01 12:17:32:  Thread ID : 52 : 1_4501810_1217-
1124633447_169062001_p0icg01.pvc.ecs.nasa.gov:IPOBIPOB1INRM1IGSA15
:IngestRQ409GR1 Notifying the client | Thread 52
06/18/01 12:17:32:  Thread ID : 52 : Waiting for work | Thread 52
06/18/01 12:17:32:  Thread ID : 52 : Waking up manager thread |
Thread 52
[…]
```

In the preceding example the expression **SEARCHING** is associated with Thread ID 52.

The context of the SEARCHING statement indicates the type and source of the problem; in this case there appears to be a problem executing a stored procedure.

– If the specified text is not in the log file, the following type of response is displayed.

```
Pattern not found:
```

11 If the expression **SEARCHING** is not associated with the specified thread in the lines displayed, repeat Step 8.

12 If necessary, at the : prompt type **-2l** [lower-case letter l] then press the **Return/Enter** key.

- **pg** simulates scrolling the screen backward two lines (or any other number of lines that is typed at the prompt).
  – The file is redisplayed to include the two lines that preceded the page previously displayed.
  – For example:

```
...skipping backward
06/18/01 12:17:31:  Thread ID : 52 : DBIF:Execute: Ultimate SQL:
exec DsStSDAttachDisk
"/usr/ecs/TS2/CUSTOM/pdps/x0spg01/data/DpPrRm/x0spg01_disk",
"SDSV", 0 | Thread 52
06/18/01 12:17:31:  Thread ID : 52 : SEARCHING FOR: 30148 (Found)
| Thread 52
06/18/01 12:17:31:  Thread ID : 52 : SEARCHING FOR: 30148 (Found)
| Thread 52
06/18/01 12:17:31:  Thread ID : 52 : DsStStoredProcedures::Execute
- ERROR: Could not execute stored procedure | Thread 52
06/18/01 12:17:31:  Thread ID : 52 : Error encountered in stored
procedure | Thread 52
[…]
```

  – The additional lines preceding "SEARCHING FOR" in the example indicate that the stored procedure in which the error was encountered is DsStSDAttachDisk.

13 At the : prompt type **q** then press the **Return/Enter** key.

- **pg** exits from the Request Manager server debug log file.

14 If the request is a trivial request, go to Step 22.

15 If the request is a non-trivial request, open a separate UNIX window.

- The results of related operations on the server involved in performing copy or ftp functions for the transaction are going to be checked in a separate UNIX window.

16 In the new UNIX window log in to the appropriate server host (e.g., e0drg11, g0drg01, l0drg01, n0drg01) for the server involved in performing copy or ftp functions for the transaction.

17 **At the shell prompt type grep *'TransactionId' filename* | grep 'LogProgress'** then press the **Return/Enter** key.

- For example:

  grep 'af610628-' EcDsStArchiveServerDebug.log | grep *'LogProgress'*

- ***filename*** refers to the name of the log file for the process involved in performing copy or ftp functions for the transaction.
- ***TransactionId*** refers to the Transaction ID associated with the applicable request.
- In this example af610628-1dd1-11b2-a047-af3a589fd88e is the relevant Transaction ID.
  - However, usually it is not necessary to use the entire Transaction ID in the command; a representative sample (e.g., af610628- from the example) should be sufficient.
  - References to other Transaction IDs and entries that do not contain the string "LogProgress" are filtered out so references to the specified Transaction ID that contain the string "LogProgress" are the only log entries displayed.

    The string "LogProgress" is a filter for references to stored procedure DsStGRLogProgress.
  - Progress is logged for copy and ftp input/output at each block.
  - The following type of response is displayed:

```
06/26/01 12:46:00:  Thread ID : 65674 : myTransactionList[1]: exec
DsStGRLogProgress "af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2S
C:MOD03.001:55732", 0, 1, "files" | Thread 65674
06/26/01 12:46:00:  Thread ID : 65674 : DBIF:Execute: Ultimate
SQL: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2S
C:MOD03.001:55732", 0, 1, "files" | Thread 65674
06/26/01 12:46:43:  Thread ID : 65674 :  : 06/26/01 12:46:43: read
ID : 2:46:43: myTransactionmyTransactionList[1]: exec
DsStGRLogProgress "af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2S
C:MOD03.001:55732", 60, 60, "MB"List[1]: exec DsStGRLogProgress
"af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2S
C:MOD03.001:55732", 60, 60, "MB"65714read 65674 : 74
06/26/01 12:46:43:  Thread ID : 65674 : DBIF:Execute: Ultimate
SQL: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2S
```

```
C:MOD03.001:55732", 60, 60, "MB"0DBIF:Execute: Ultimate SQL: exec
DsStGRLogProgress "af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2S
C:MOD03.001:55732", 60, 60, "MB"06/26/01 12:46:43: 6/26/01
12:46:43:  | Thread  : 65714read 65674 : 74
```

- If no progress is indicated, go to Step 22.

18 Click in the UNIX window for the Distribution Server host.

19 Type **grep *'TransactionId' filename* | grep 'Done servicing'** then press **Return/Enter**.

- ***filename*** refers to the appropriate Request Manager debug log.
- For example:

  grep 'af610628-' EcDsStRequestManagerServerDebug.log | grep 'Done servicing'

- If the operation has been completed, the following type of response is displayed:

```
06/26/01 12:46:00:  Thread ID : 52 : af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2S
C:MOD03.001:55732 Done servicing | Thread 52
06/26/01 12:46:44:  Thread ID : 52 : af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2S
C:MOD03.001:55732 Done servicing | Thread 52
06/26/01 12:46:45:  Thread ID : 52 : af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD2DSDD1DSDD3:MoPGE02#sy14182000TS2SC
:MOD03.001:55732 Done servicing | Thread 52
06/26/01 12:46:47:  Thread ID : 52 : af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD2DSDD1DSDD3:MoPGE02#sy14182000TS2SC
:MOD03.001:55732 Done servicing | Thread 52
06/26/01 12:46:47:  Thread ID : 52 : af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD2DSDD1DSDD7:MoPGE02#sy14182000TS2SC
:MOD03.001:55732 Done servicing | Thread 52
06/26/01 12:46:50:  Thread ID : 52 : af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD2DSDD1DSDD7:MoPGE02#sy14182000TS2SC
:MOD03.001:55732 Done servicing | Thread 52
06/26/01 12:46:51:  Thread ID : 52 : af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD4:MoPGE02#sy14182000TS2SC:MOD03.001
:55732 Done servicing | Thread 52
06/26/01 12:46:56:  Thread ID : 52 : af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD4:MoPGE02#sy14182000TS2SC:MOD03.001
:55732 Done servicing | Thread 52
06/26/01 12:46:56:  Thread ID : 52 : af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD8:MoPGE02#sy14182000TS2SC:MOD03.001
:55732 Done servicing | Thread 52
06/26/01 12:46:59:  Thread ID : 52 : af610628-1dd1-11b2-a047-
af3a589fd88e:PDPSSDSV1DSDD1DSDD8:MoPGE02#sy14182000TS2SC:MOD03.001
:55732 Done servicing | Thread 52
```

  – The statement "Done servicing" shows that the operation has been completed; however, it provides no indication as to whether the operation succeeded or failed.

- If "Done servicing" is followed by "Unable to service," (as described in Step 19) the operation failed.

- If the operation has not been completed, no file entries are displayed (the UNIX prompt is displayed).
  - It may just be slow to complete.
- If the operation has been completed, go to Step 19.
- If the operation has not been completed, go to Step 20.

20 Type **grep *'TransactionId' filename* | grep 'Unable to service'** then press the **Return/Enter** key.

- ***filename*** refers to the appropriate Request Manager debug log.
- For example:

  grep '2a7d4168-' EcDsStRequestManagerServerDebug.log | grep 'Unable to service'

- If the request has failed, the following type of response is displayed:

```
06/26/01 12:56:22:  Thread ID : 52 : 2a7d4168-1dd2-11b2-8c52-
99d0f708dce5:PDPSSDSV1:MoPGE02#sy14182000TS2MOD02OBC Unable to
service | Thread 52
06/26/01 12:56:22:  Thread ID : 52 : 2a7d4168-1dd2-11b2-8c52-
99d0f708dce5:PDPSSDSV4:MoPGE02#sy14182000TS2MOD02OBC Unable to
service | Thread 52
```

  - If the operation has failed, return to Step 7.
- If the operation has not failed, no file entries are displayed (the UNIX prompt is displayed).

21 If the operation has not failed, at the shell prompt type **tail -f *filename* | grep *'TransactionId'*** and then press the **Return/Enter** key.

- ***filename*** refers to the appropriate Request Manager debug log.
- ***TransactionId*** refers to the Transaction ID associated with the applicable request.
- For example:

  tail -f EcDsStRequestManagerServerDebug.log | grep 'af610628-'

- If new entries are being posted to the log, the operation has not finished yet.
  - If the same entries continue to be repeated over and over, it may be necessary to restart the server.
- If it is necessary to exit from a tailed log, type **ctrl-c** (while holding down the **Control Key**, press **c**).

22 If the operation has not finished yet, monitor the tailed log for awhile.

- If the operation does not seem to finish (i.e., if entries continue to be made to the tailed log) after a reasonable period of time (e.g., 30 minutes), it may be necessary to restart the Request Manager server.

- If it is necessary to exit from a tailed log, type **ctrl-c** (while holding down the **Control Key**, press **c**).

23 If problems were detected in the Request Manager server debug log and/or the log file for the process involved in performing copy or ftp functions for the transaction, it may be necessary to restart the server(s) performing those functions.

- If server restart does not resolve the problem, it is appropriate to notify the Help Desk and prepare a Trouble Ticket.

24 If no problems were detected in the Request Manager server debug log or the log file for the process involved in performing copy or ftp functions for the transaction, check the Science Data Server log files; use Section 17.7.2.1, **Checking Server Log Files**.

Table 17.7-9. A Special Case: Checking the Request Manager Server Debug Log (1 of 2)

Step	What to Do	Action to Take
1	Log in at host for Distribution Server	**enter text; press Return/Enter**
2	**cd /usr/ecs/<*MODE*>/CUSTOM/logs**	**enter text; press Return/Enter**
3	**pg** (or other viewing command) **EcDsStRequestManagerServerDebug.Log** (or ***filename*** of other Request Manager debug log)	**enter text; press Return/Enter**
4	***/date time*** (of problem)	**enter text; press Return/Enter**
5	**/Unable to service**	**enter text; press Return/Enter**
6	Identify thread ID associated with problem	**read text**
7	**^Waking up service thread *n*^** or **/Waking up service thread n**	**enter text; press Return/Enter**
8	**/SEARCHING**	**enter text; press Return/Enter**
9	As necessary, repeat Step 8	
10	As necessary, **-2l**	**enter text; press Return/Enter**
11	**q** (to exit **pg**)	**enter text; press Return/Enter**
12	If request is trivial, go to Step 22	
13	If request is non-trivial, open a separate UNIX window	**enter text; press Return/Enter**
14	(In new window), log in at host for server for transaction	**enter text; press Return/Enter**
15	**grep '*TransactionId*' *filename* | grep 'LogProgress'**	**enter text; press Return/Enter**
16	Go to window for Distribution Server host	**single-click**
17	(In logs directory) **grep '*TransactionId*' *filename* | grep 'Done servicing'**	**enter text; press Return/Enter**
18	**grep '*TransactionId*' *filename* | grep 'Unable to service'**	**enter text; press Return/Enter**
19	If operation has not failed, **tail -f *filename* | grep '*TransactionId*'**	**enter text; press Return/Enter**

Table 17.7-9. A Special Case: Checking the Request Manager Server Debug Log (2 of 2)

Step	What to Do	Action to Take
20	If operation not finished, monitor tailed log	**read text**
21	If problem(s) detected, restart associated server	
22	If no problem detected, check Science Data Server logs	Use procedure in Section 17.7.2.1

17.7.2.3 Checking the *tac* Log

Each day a current **tac_00** log on the FSMS host records interactions between AMASS and ACSLS. This log can provide helpful information in troubleshooting problems manifested in those interactions. Table 17.7-10 presents the steps required for recovering from a failure to store data. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in as **amass** at the FSMS host.

2 Type **cd /usr/amass/logs/tac** and then press the **Return/Enter** key.

- The working directory is changed to **/usr/amass/logs/tac**.

3 Use the current tac log to investigate possible problems in communication between AMASS and ACSLS. To view the current tac log, type **pg tac_00** and then press the **Return/Enter** key.

- The first page of the log file is displayed; additional sequential pages can be displayed by pressing the **Return/Enter** key at the **:** prompt.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view**, **more**, **tail**) can be used to review the log file.
- The log contains entries related to activities and communications associated with actions by AMASS to direct ACSLS robotic activities; the entries should appear in format similar to the following sample:

```
Sep 24 09:49:42 p0drg01 amass LIBSCHED3[7215638]:
E7003(16)<00000>:xdiStk2749:  STK Response received; Status: 0
Sep 24 09:49:42 p0drg01 amass LIBSCHED3[7215638]:
E7003(16)<00000>:xdiStk2797:  ACSLS ACK response received
Sep 24 09:49:42 p0drg01 amass LIBSCHED3[7215638]:
E7003(16)<00000>:xdiStk2742:  Waiting for ACSLS response
Sep 24 09:49:51 p0drg01 amass LIBSCHED3[7215638]:
E7003(16)<00000>:xdiStk2749:  STK Response received; Status: 0
Sep 24 09:49:51 p0drg01 amass LIBSCHED3[7215638]:
E7003(16)<00000>:xdiStk2873:  ACSLS final response received
Sep 24 09:49:51 p0drg01 amass LIBSCHED3[7215638]:
E7003(16)<00000>:xdiStk2876:  1 network packets transfered
```

```
Sep 24 10:18:52 p0drg01 amass LIBSCHED1[7215870]:
E7003(16)<00000>:xdiArch39:  Archive index : 0
Sep 24 10:18:52 p0drg01 amass LIBSCHED1[7215870]:
E7003(16)<00000>:xdiStk486:  Media Id = P10011, Drive index = 0
Sep 24 10:18:52 p0drg01 amass LIBSCHED1[7215870]:
E7003(16)<00000>:xdiStk533:  Sending a mount command
Sep 24 10:19:32 p0drg01 amass LIBSCHED1[7215870]:
E7003(16)<00000>:xdiArch39:  Archive index : 0
Sep 24 10:19:32 p0drg01 amass LIBSCHED1[7215870]:
E7003(16)<00000>:xdiStk486:  Media Id = P20676, Drive index = 1
Sep 24 10:19:32 p0drg01 amass LIBSCHED1[7215870]:
E7003(16)<00000>:xdiStk533:  Sending a mount command
Sep 24 10:34:56 p0drg01 amass LIBSCHED1[7215870]:
E1043(7)<00000>:libsched3165:  Idle Eject timer expired on volume 188
in drive 2.
Sep 24 10:35:07 p0drg01 amass LIBSCHED1[7215870]:
E7003(16)<00000>:xdiArch39:  Archive index : 0
Sep 24 10:35:07 p0drg01 amass LIBSCHED1[7215870]:
E7003(16)<00000>:xdiStk686:  Media Id = P20676, Drive index = 1
Sep 24 10:35:07 p0drg01 amass LIBSCHED1[7215870]:
E7003(16)<00000>:xdiStk719:  Sending a dismount command
Sep 24 10:35:07 p0drg01 amass LIBSCHED1[7215870]:
E7003(16)<00000>:xdiStk2742:  Waiting for ACSLS response
Sep 24 10:35:07 p0drg01 amass LIBSCHED1[7215870]:
E7003(16)<00000>:xdiStk2749:  STK Response received; Status: 0
Sep 24 10:35:07 p0drg01 amass LIBSCHED1[7215870]:
E7003(16)<00000>:xdiStk2758:  Error unexpected sequence number: 101 -
expected sequence number: 109
```

- Examine the sections of the log with entries near the time of any problem being investigated, looking for messages that indicate whether there was successful communication between AMASS and ACSLS regarding mounting of a tape and transfer of information. It may be useful to search the log for occurrences of the word **fail** (while viewing the log with **pg**, **view**, **vi**, or other viewing/editing tool, type **/fail** and press the **Return/Enter** key).
- If the log indicates problems in communication between AMASS and ACSLS, it may be useful to use the **quedisplay** command to obtain the AMASS view of the queue and the **medialist** command to obtain the robot view. If these commands show discrepancies indicating a lack of synchrony between AMASS and ACSLS, it may be possible to re-establish that synchrony using the **mediamove** command (refer to Section 17.7.1.6, **Using *mediamove* to Establish Synchrony Between *quedisplay* and *medialist***).
- ***Note***: The message "Error unexpected sequence number: 101 -expected sequence number: 109" is an artifact likely to be removed in releases of AMASS subsequent to Version 5.0.0 Revision 17 and does not reflect a real error.

Table 17.7-10. Checking the* tac *Log

Step	What to Do	Action to Take
1	Log in at FSMS host	**enter text; press Return/Enter**
2	**cd /usr/amass/logs/tac**	**enter text; press Return/Enter**
3	**pg tac_00** (or **vi**, **view**, **tail**, or other viewing tool)	**enter text; press Return/Enter**

17.7.2.4 Handling a Data Insertion Failure

Successful data insertion requires interactions among numerous servers, and the interactions are reflected in entries in the debug logs for those servers. Detection and initial isolation of a problem that prevents successful insertion may require tracing events across multiple log files on different hosts. Table 17.7-11 presents the steps required for recovering from a failure to store data. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the host for SDSRV (e.g., e0acs05, g0acs03, l0acs03, n0acs04), review the debug log **EcDsScienceDataServerDebug.log** (use Section 17.7.2.1, **Checking Server Log Files**).

- Examine the section of the log with entries near the time of the problem, looking for error messages that indicate communication failure.
- If the log file entries indicate a communication problem, note the server(s) with which there is impairment or disruption of communication.

2 At the host for Archive Server (e.g., e0drg11, g0drg01, l0drg01, n0drg01), review the debug log **EcDsStArchiveServerDebug.log** (use Section 17.7.2.1, Checking Server Log Files).

- Examine the section of the log with entries near the time of the problem, looking for error messages that indicate communication failure.
- If the log file entries indicate a communication problem, note the server(s) with which there is impairment or disruption of communication.

3 If Step 1 and/or Step 2 resulted in detection of a problem in the interaction of SDSRV and/or Archive Server with other servers, at the host(s) for those servers, review the server debug log(s). These logs may include:

- **EcDsStStagingDiskServerDebug.log** (on Archive Server host).
- **EcDsStCacheManagerServerDebug.log** (on Archive Server host).
- **EcDsStRequestManagerServerDebug.log** (e.g., on e0dis02, g0dis02, l0dis02, n0dis02; use procedure in Section 17.7.2.2).
- **EcIoAdServerDebug.log** (e.g., on e0ins02, g0ins02, l0ins02, n0ins02).
- **EcSbSubServerDebug.log** (e.g., on e0ins01, g0ins01, l0ins01, n0ins01).

- If there is evidence of requests not succeeding or other communication failure, it may be necessary to have System Administrators or Engineering Support personnel resolve the problem (e.g., restart affected servers, execute **EcCsIdPingServers**, ensure that the **Name Server** is up in the mode being used and that its debug log reflects appropriate look-up activity by the application servers, mount points are intact, and database access is not impaired).
- ***Note***: The next three steps address running the Check Archive script, **EcDsCheckArchive**. To run this script, it is necessary to enter eight database-specific parameters when prompted during the running of the script: STMGT SQL server name, STMGT database name, STMGT SQL server userID, STMGT SQL server database password, SDSRV SQL server name, SDSRV database name, SDSRV SQL server userID, and SDSRV database password. To facilitate the smooth execution of the script, the parameters may be set as environmental variables instead. The parameters are not readily available to most operators; therefore, you will need to obtain them from the Database Administrator or have the Database Administrator run the script for you, using Steps 4 through 6.

4 On the host for the Archive Server, type **cd /usr/ecs/<*MODE*>/CUSTOM /utilities** and then press the **Return/Enter** key.

- The prompt reflects the directory change to **/usr/ecs/<*MODE*>/CUSTOM/utilities**.

5 Type **EcDsCheckArchive <*MODE*>.**

- The Check Archive script runs; the initially displayed information should be similar to the following:

```
============================================================
 This script is designed to validate the Inventory
 against the Archive.

 The user must select the menu option associated with the
 Volume Group to be validated

            Please press [RETURN] to continue
============================================================
```

6 Follow the on-screen prompts for the script, entering the necessary parameters.

- The script provides indication of any discrepancies between the presence of granules in the Archive and entries in the inventory (metadata). Note that the appearance of a discrepancy is not necessarily indication of a failure (e.g., if a granule has been deleted but the inventory database has not been cleaned up, there may be inventory entries for which there are no granules in the archive), but a problem may be indicated if a discrepancy is apparent for a granule that you just inserted. Note also that this script would not reveal a problem if you attempted to insert a granule which failed to get inserted and also had its metadata fail to be inserted into the inventory (i.e., no granule and no inventory entry = no discrepancy). Therefore, if the script reveals no discrepancies, it may still be useful to conduct a direct examination to determine if the granule has been inserted.

7 On the host for the Archive Server, type the directory change command **cd /dss_stk1/**<***MODE***>**/**<***data_type_directory***> and then press the **Return/Enter** key.

- The working directory is changed to **/dss_stk1/**<***MODE***>**/**<***data_type_directory***>.

8 Type **ls -al | grep "**<***date***>**"** where **"**<***date***>**"** is a three-letter abbreviation for the month followed by a number indicating the day (e.g., **"Apr 21"**) for the granule being inserted, and then press the **Return/Enter** key.

- If the inserted file is displayed, with date and time of entry, go to Step 9.
- If the inserted file is not displayed, have the Ingest/Distribution Technician insert the file again. If this succeeds (i.e., the file is now listed), go to Step 9; otherwise, conduct the procedure for **Diagnosing/Investigating Write Errors**, Section 17.7.3).

9 Determine if the inserted file is reflected in the Inventory Database (Database Administrator function) by logging into Sybase on the host for SDSRV and then selecting the data type for the granule being inserted.

- If the inserted file is reflected in the Inventory Database, go to Step 10.
- If the inserted file is not reflected in the Inventory Database, ensure that database access is not impaired (Database Administrator function).

10 Determine if the directory from/to which the copy is being made is visible on the machine being used; have the System Administrators or Engineering Support personnel check the mount points on the Archive host and the SDSRV host.

- If the mount points are OK, go to Step 11.
- If necessary, have the System Administrators or Engineering Support personnel re-establish the mount point(s).

11 If you inserted the file with the DSS Driver, go to Step 13. If you used Ingest to insert the file, on the Ingest host (e.g., e0icg11, g0icg01, l0acg02, n0acg01) examine the **drp**- or **icl**-mounted staging directory to determine if a staging disk was created. To do this, first type **cd /usr/ecs/**<***MODE***>**/CUSTOM/drp/**<***host***>**/data/staging/cache** (or type **cd /usr/ecs/**<***MODE***>**/CUSTOM/icl/**<***host***>**/data/StagingArea/cache**), then press the **Return/Enter** key.

- The prompt reflects a change to the specified directory. [***Note***: Be sure that you are checking the correct mount/host. Most ingests use Ingest subsystem staging areas (i.e., **icl**), but others may not. Media ingest (e.g., from tape) typically involves staging in a **dip** area. For a polling ingest for data from EDOS, the polling directory may serve as the staging area. Some data are staged directly to working storage in the Data Server subsystem. If in doubt, consult Ingest/Archive personnel.]

12 Type **ls -al | more** and then press the **Return/Enter** key.

- Any staging areas are listed in output similar to the following sample:

```
-rw-rw-r--    1 cmshared cmshared   10375 Jan 30 14:46
:SC:L70RF2.002:16015:6.HDF-EOS
```

```
-rw-rw-r--    1 cmshared cmshared  535563 Jan 30 14:46
:SC:L70RF2.002:16015:7.HDF-EOS
-rw-rw-r--    1 cmshared cmshared  154399 Jan 25 12:34
:SC:L7CPF.002:13835:1.ASCII
-rw-rw-r--    1 cmshared cmshared  154399 Jan 25 14:17
:SC:L7CPF.002:16644:1.ASCII
-rw-rw-r--    1 cmshared cmshared  154399 Jan 25 17:31
:SC:L7CPF.002:16769:1.ASCII
-rw-rw-r--    1 cmshared cmshared   67466 Jan 25 18:11
:SC:L7IGS.001:16789:1.ASCII
-rw-rw-r--    1 cmshared cmshared   43570 Jan 25 18:04
:SC:L7IGS.001:16790:1.ASCII
-rw-rw-r--    1 cmshared cmshared 499804704 Feb  6 11:49
:SC:MOD000.001:11856:1.CCSDS
-rw-rw-r--    1 cmshared cmshared 320663592 Feb  6 11:51
:SC:MOD000.001:11856:2.CCSDS
-rw-rw-r--    1 cmshared cmshared     540 Feb  6 11:51
:SC:MOD000.001:11856:3.CCSDS.
```

- If a staging area for the inserted file appears at the end of the list, go to Step 13.
- If no staging area appears for the inserted file, it is possible that the ingest failed and that the staging area was immediately removed as part of clean-up. Check the Ingest logs (e.g., **EcInReqMgrDebug.log**, **EcInAutoDebug.log**, **EcInGranDebug.log**, or **EcInGranDebug**.log, depending on the type of Ingest) (refer to procedures for troubleshooting Ingest problems, Chapter 16) to determine if a staging disk was created. If no staging disk was created, it may be necessary to resolve a communications failure as described in Step 7.

13 Ensure that the Archive volume groups are set up correctly (refer to Section 17.3.2, **Using Storage Management GUIs to Display Archive Path Information**).

14 Ensure that the volume groups are on line (refer to Section 17.7.1.3, **Using *vollist* to Display Volume Data**).

- If the volume groups are set up correctly and their volumes are on line, and insertion still fails, it is appropriate to contact the Help Desk and prepare a trouble ticket (see Chapter 8).

Table 17.7-11. Handling a Data Insertion Failure

Step	What to Do	Action to Take
1	Review Science Data Server Debug Log	Use procedure in Section 17.7.2.1
2	Review Archive Server Debug Log	Use procedure in Section 17.7.2.1
3	Review debug logs for any implicated servers: a. **EcDsStStagingDiskServerDebug.log** b. **EcDsStCacheManagerServerDebug.log** c. **EcDsStRequestManagerServerDebug.log** d. **EcIoAdServerDebug.log** e. **EcSbSubServerDebug.log**	Use the following procedures: a. Section 17.7.2.1 b. Section 17.7.2.1 c. Section 17.7.2.2 d. Section 17.7.2.1 e. Section 17.7.2.1
4	(On Archive Server host) **cd /usr/ecs/<*MODE*>/CUSTOM/utilities**	**enter text; press Return/Enter**
5	**EcDsCheckArchive <*MODE*>**	**enter text; press Return/Enter**
6	Respond to prompts to complete Check Archive Script	**read text; enter text; press Return/Enter**
7	(On Archive Server host) **cd /dss_stk1/<*MODE*>/<*data_type_directory*>**	**enter text; press Return/Enter**
8	**ls -al | grep "<*date*>"**	**enter text; press Return/Enter**
9	Check for file in SDSRV Inventory database	(Database Administrator task)
10	Check mount points on Archive host and SDSRV host	(System Administrator task)
11	(For Ingested file, on Ingest host) **cd /usr/ecs/<*MODE*>/CUSTOM/drp/<*host*>/data/staging/cache** OR **cd /usr/ecs/<*MODE*>/CUSTOM/icl/<*host*>/data/StagingArea/cache**)	**enter text; press Return/Enter**
12	**ls -al | more**	**enter text; press Return/Enter**
13	Check Archive path information to ensure volume groups are set up correctly	Use procedure in Section 17.3.2
14	Use ***vollist*** to ensure that volume groups are online	Use procedure in Section 17.7.1.3

17.7.2.5 Handling a Data Acquire Failure

As a first check, it is appropriate to determine if the acquire request appears in the list of System Requests on the Science Data Server GUI. If the acquire request does not appear on the Science Data Server GUI, you will need to determine where the breakdown occurred. Diagnosing an acquire failure requires detailed examination of the following system log files and directories associated with the process:

- Science Data Server log file (EcDsScienceDataServerDebug.log).
- Archive Server log file (EcDsStArchiveServerDebug.log).
- STMGT Request Manager Server log file (EcDsStRequestManagerDebug.log)
- Staging Area.
  - Presence of the relevant file.
  - Staging Disk log files (EcDsStStagingDiskServerDebug.log or EcDsStCacheManager ServerDebug.log).
  - Space available in the staging area.

In addition, note that a number of servers, clients, or other software running on various hosts, as reflected in Table 17.7-12, may be involved at various times in processing an acquire request. More information useful in troubleshooting may appear in related logs on these hosts.

Table 17.7-12. Hosts, Servers, Clients and Other Software Relevant to Acquires

HOST	SERVER/CLIENT/OTHER SOFTWARE
Distribution Server (e.g., e0dis02, g0dis02, l0dis02, n0dis02)	Distribution Server (EcDsDistribution Server) Request Manager Server (EcDsStRequestManagerServer)
Working Storage (e.g., e0wkg01)	Archive Server (EcDsStArchiveServer) Cache Manager Server (EcDsStCacheManagerServer) Staging Disk Server (EcDsStStagingDiskServer)
SDSRV Server (e.g., e0acs05, g0acs03, l0acs03, n0acs04)	Science Data Server (EcDsScienceDataServer) HDF EOS Server (EcDsHdfEosServer)
Access/Process Coordinators (APC) Server (e.g., e0acg11, g0acg01, l0acg02, n0acg01)	Archive Server (EcDsStArchiveServer) FTP Server (EcDsStFtpServer) Cache Manager Server (EcDsStCacheManagerServer) Staging Disk Server (EcDsStStagingDiskServer) Pull Monitor Server (EcDsStPullMonitorServer)
FSMS Server (e.g., e0drg11, g0drg01, l0drg01, n0drg01)	Archive Server (EcDsStArchiveServer) Cache Manager Server (EcDsStCacheManagerServer) Staging Disk Server (EcDsStStagingDiskServer)
Interface Server 02 (e.g., e0ins01, g0ins01, l0ins01, n0ins01)	Subscription Server (EcSbSubServer) Event Server (EcSbEventServer)

Table 17.7-13 presents the steps required for recovering from a failure to retrieve data. The procedure is used to:

- make the initial check on the Science Data Server GUI.
- follow up with checks of the Science Data Server log file, Archive Server log file, and Request Manager log file.
- determine if a failure occurred during copying of the files to a staging area (and if so, whether there is sufficient staging space available).

If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Science Data Server GUI (see Section 17.3.1 **Launching DSS GUIs**).

2 Click on the **System Requests** tab.

- The **System Requests** window is displayed.

3 Examine the requests displayed in the **System Management Requests** field to determine if SDSRV received the acquire request.

- If the number of request is large, the **Find** button and field below the **System Management Requests** field may be used to enter and search for information in the request, such as the Requester, or the **Filter . . .** button ca be used to launch a **System Management Filter Requests** window to limit the number of entries that appear in the **System Management Requests** field.

4 On the SDSRV Server host (e.g., e0acs05, g0acs03, l0acs03, n0acs04), review the server logs **EcDsScienceDataServer.ALOG** and **EcDsScienceDataServerDebug.log** (refer to Section 17.7.2.1, **Checking Server Log Files**).

- Examine the section of the log with entries near the time of the problem, looking for messages that indicate whether the relevant file was successfully acquired.
- The **EcDsScienceDataServer.ALOG** file should contain entries identifying the file to be acquired by the ShortName of the corresponding ESDT; entries should be similar to the following:

```
PID : 29168:MsgLink :0 meaningfulname
:DsSrSessionExecuteRequestStart0
 Msg: Request ID b5156038-03d3-11d3-8d16-c676e82eaa77:????:
executing:
DsSrRequest (1): DsShSciRequestImp: [ svr: ScienceDS, pri: NORMAL
domain: ]: (DsShSciCommandImp:  service: INSERT num parameters: 3
category: Parameters are:
-UnnamedPL[SHORTNAME(AST_L1BT) VERSIONID(001)
--MAINGROUP[SHORTNAME(AST_L1BT) VERSIONID(001)
---
METAFILEGROUP[METADATAFILE(/home/cmops/data/SCAST_L1BT.0011279.met)]
---DATAFILEGROUP[DATAFILE(/home/cmops/data/tahoe-north-middle.MTA)]
---DATAFILEGROUP[DATAFILE(/home/cmops/data/tahoe-north-middle.hdf)]]]
WC)
```

- The **EcDsScienceDataServerDebug.log** file should contain entries regarding the acquire activity. The following types of messages should be included in the log file:

```
05/06/99 12:52:01:
About to execute Statement: exec ProcInsertReqDomain 2205,
"UR:10:DsShESDT
UR:UR:15:DsShSciServerUR:13:[VTC:DSSDSRV]:20:SC:AST_L1BT.001:2201"
05/06/99 12:52:01:
About to execute Statement: ProcInsertAcquireCmd 2206, 2205, 3, null,
null, "tester", "FtpPush", "MAIL", "FILEFORMAT", null, "jrattiga",
"abc123", "t1dps04", "/home/jrattiga
/push", null, null
```

- If the ShortName does not appear in the file, with a timestamp corresponding to the time of the attempted acquire, SDSRV may not be running, or may not be communicating with other servers. Have the System Administrator or Operations Controller check to be sure the server is up and, if appropriate, resolve the problem (e.g., restart affected servers, execute **EcCsIdPingServers**, ensure that the **Name Server** is up in the mode being used and that its debug log reflects appropriate look-up activity by the application servers, mount points are intact, and database access is not impaired).
- If the log file does contain entries for the relevant ShortName, and indicates that two files (the file and its associated metadata file) are being distributed, SDSRV has completed its role in the acquire. Go to the next step.
- If the ALOG contains the ShortName, and also contains an error showing that the data file time stamp does not match the time stamp required by the acquire, the data file needs to be removed from the Science Data Server and reinserted.
  - This is usually done using a script called DsDbCleanGranules.

5 To inspect the Archive Server log and Request Manager Server log for error messages associated with the acquire, on the Archive host (e.g., **e0drg11, g0drg01, l0drg01, n0drg01**), review the respective server logs (**EcDsStArchiveServerDebug.log**, **EcDsStRequestManagerServerDebug.log**); refer to Section 17.7.2.1, **Checking Server Log Files** and Section 17.7.2.2, **A Special Case: Checking the Request Manager Server Debug Log**.

- Examine the sections of the logs with entries near the time of the problem, looking for messages that indicate whether the Request Manager handled the request and whether the Archive Server log shows that the relevant file was successfully acquired.
- If the logs indicate that the relevant file was successfully acquired, go to the next step.
- If the file was not successfully acquired, it may be necessary to reboot AMASS (see Section 17.1.3 **Rebooting AMASS**) and investigate the possibility of read errors (see Section 17.7.4 **Diagnosing/Investigating Read Errors**).

6 To determine whether the file being acquired (or a link to it) and its associated metadata file arrived in the Data Distribution staging area, on the Distribution Server (e.g., **e0dis02, g0dis02, l0dis02, n0dis02**) type **cd /usr/ecs/<*MODE*>/CUSTOM/drp/<*archivehost*>/data/staging/cache** and then press the **Return/Enter** key.

- The working directory is changed to the specified directory.

7 Type **ls -lrt** and then press the **Return/Enter** key.

- The contents of the directory are displayed.

8 Review the listing to determine whether the relevant file and its metadata file arrived in the staging area.

- The display should contain entries similar to the following:

```
lrwxrwxr-x  1 cmshared cmshared  75 Apr 26 12:52
L7CPF19980518_19980518.01 ->
/usr/ecs/TS1/CUSTOM/drp/raven/data/staging/cache/:SC:L7CPF.001:1427:1
.ASCII
-rw-rw-rw-   1 cmshared cmshared   14802 Apr 26 12:52
SCL7CPF.0011427.met
-rw-rw-r--   1 cmshared cmshared    111 Apr 26 13:01
staging.disk.filename.list
-rw-rw-r--   1 cmshared cmshared   2044 Apr 26 13:01
PACKING.LST.115124935248431
```

- If the relevant files were not successfully staged, the staging log files may reveal the cause; go to Step 9.
- If the relevant files were successfully staged, an acquire failure could be a result of problems with related servers or software (see Table 17.7-12). Have the System Administrator or Operations Controller ensure that the necessary hosts and servers are up.

9 To inspect the Staging Disk log for error messages associated with the acquire, on the APC Server host (e.g., **e0acg11, g0acg01, l0acg02, n0acg01**), review the server logs (e.g., **EcDsStStagingDiskServerDebug.log; EcDsStCacheManagerServerDebug.log**); refer to Section 17.7.2.1, **Checking Server Log Files**.

- Examine the section of each log with entries near the time of the problem, looking for messages that indicate whether the relevant files were successfully staged.
- If the relevant files were not successfully staged, the cause may be a lack of space in the staging area; go to Step 10.
- If the relevant files were successfully staged, an acquire failure could be a result of problems with related servers or software (see Table 17.7-12). Have the System Administrator or Operations Controller ensure that the necessary hosts and servers are up.

10 To check the space available in the staging area, on the Distribution Server (e.g., **e0dis02, g0dis02, l0dis02, n0dis02**) type **cd /usr/ecs/<*mode*>/CUSTOM/drp/<*archivehost*>/data** and then press the **Return/Enter** key.

- The working directory is changed to the specified directory.

11 Type **df -k .** (be sure to include the ".") and then press the **Return/Enter** key.

- The filesystem, staging disk space capacity in kbytes, amount used, amount available, and percent of capacity are displayed, as in the following example:

```
Filesystem             kbytes    used   avail capacity  Mounted on
t1drg01:/usr/ecs/TS1/CUSTOM/drp/t1drg01/data
                     225209856 173253056 51956800    77%
/data1/ecs/TS1/CUSTOM/drp/t1drg01/data
```

- If there is not adequate space for staging the relevant files, it will be necessary to free up additional space (e.g., by purging expired files from cache).

Table 17.7-13. Handling a Data Acquire Failure

Step	What to Do	Action to Take
1	Launch the Science Data Server GUI	Use procedure in Section 17.3.1
2	Select the **System Requests** tab	**single-click**
3	Review list of **System Management Requests** to determine if SDSRV receive the acquire request	**read text**
4	Review SDSRV logs for evidence of acquire or errors: a. **EcDsScienceDataServer.ALOG** b. **EcDsScienceDataServerDebug.log**	Use the following procedures: a. Section 17.7.2.1 b. Section 17.7.2.1
5	Review server logs for acquire error messages: a. **EcDsStArchiveServerDebug.log** b. **EcDsStRequestManagerServerDebug.log**	Use the following procedures: a. Section 17.7.2.1 b. Section 17.7.2.2
6	(On the Distribution Server host) **cd /usr/ecs/<*MODE*>/CUSTOM/drp/<*archivehost*>/data/staging/cache**	**enter text; press Return/Enter**
7	**ls –lrt**	**enter text; press Return/Enter**
8	Review listing for relevant file and metadata	**read text**
9	(On APC Server host) Review staging disk logs for acquire error messages: a. **EcDsStStagingDiskServerDebug.log** b. **EcDsStCacheManagerServerDebug.log**	Use the following procedures: a. Section 17.7.2.1 b. Section 17.7.2.1
10	(On the Distribution Server host) **cd /usr/ecs/<*mode*>/CUSTOM/drp/<*archivehost*>/data**	**enter text; press Return/Enter**
11	**dr –k .**	**enter text; press Return/Enter**

17.7.3 Diagnosing/Investigating Write Errors

Although write errors to the archive should be infrequent, there are some circumstances under which they may occur. Associated error messages should appear in a relevant log file (e.g., on a Sun, in **/var/adm/messages**; on an SGI, in **/var/adm/SYSLOG**). Causes of write errors may include the following:

- *AMASS off line* -- software captures and logs the error because the directory that is being written to does not exist. However, the nature of the write error is not detected.
- *Directory does not exist* -- if there is an attempt to write to a directory that does not exist, even if AMASS is on line, the result is a write error.
- *All drives off line* -- write requests are accepted until cache space fills up, which stops further data transfer.
- *Volume off line or no media associated with the directory* - causes a write error that is detectable by the software. An I/O error is recorded in the relevant log file.
- *AMASS: media write failure* -- causes the drive to go off-line and the media volume to go off-line as well. The error is written to the relevant log file. No error is detected by the application software. The operator can execute the command **/usr/amass/bin/drivelist** to see which drive has been put off-line.

Table 17.7-14 presents the general steps required for diagnosing/investigating write errors. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the FSMS host (e0drg11, g0drg01, l0drg01, or n0drg01) as **amass**.

2 To verify that AMASS is running and active, type **/usr/amass/bin/amassstat -c** and then press the **Return/Enter** key.

- The message **FILESYSTEM IS ACTIVE** is displayed.
- If the message **FILESYSTEM IS INACTIVE** is displayed, AMASS is inactive (off line); to put AMASS back on line, type **/usr/amass/bin/amassstat -a** and press the **Return/Enter** key, entering **y** in answer to the displayed confirmation question **Do you want to change the status? [y - n]**. If this does not activate AMASS, it may be necessary to reboot it (refer to Section 17.1.3, **Rebooting AMASS**).

3 Display AMASS I/O activity (refer to Section 17.7.1.2, **Using *sysperf* to Display the Status of AMASS I/O Activity**).

- If the returned output indicates no free cache blocks, this may indicate that all drives are off line and that as a result all available cache space is filled, stopping write actions. In that case, it may be necessary to use **ctrl-c** to cancel pending I/O requests.
- If there are no free cache blocks, go to Step 4; otherwise, go to Step 5.

4 Type **/usr/amass/bin/drivelist** and press the **Return/Enter** key.

- AMASS returns the status of drives in format similar to the following:

```
DRIVE JUKE  STATUS  ERRORS
  1    1      A        0
  2    1      A        0
  3    1      I        0
  4    1      A        0
  1    2      I        0
  2    2      A        0
  1    3      A        0
  2    3      A        0
  3    3      A        0
/usr/amass/bin/drivelist: 9 drives configured in this system
```

5 Use the **amass_log** script to display and examine AMASS errors (refer to Section 17.7.1.4, **Using the *amass_log* Script to Display AMASS Errors**).

- If the returned error message(s) identify critical problems that prevent AMASS from functioning correctly, follow the corrective guidance specified in the *System Administrator's Guide* for the specific error(s).
- If there are no hardware problems and there have not been repeated attempts to activate the drive(s) that are off line, reactivate the drive(s) (see Step 6).

6 For each off-line drive, type **/usr/amass/bin/drivestat -a *drivenumber* [*jukeboxnumber*]** and press the **Return/Enter** key.

- AMASS places on line the drive specified by ***drivenumber*** in the jukebox specified by ***jukeboxnumber***.

7 Check the **tac** log for evidence of problems in communication between AMASS and ACSLS (refer to Section 17.7.2.3, **Checking the *tac* Log**).

- If there is evidence of communication problems, investigate and correct any lack of synchrony between AMASS and ACSLS (refer to Section 17.7.1.6, **Using *mediamove* to Establish Synchrony Between *quedisplay* and *medialist***).

Table 17.7-14. Diagnosing/Investigating Write Errors (1 of 2)

Step	What to Do	Action to Take
1	Log in to the FSMS host as **amass**	**enter text; press Return/Enter**
2	**/usr/amass/bin/amassstat –c**	**enter text; press Return/Enter**
3	Display status of AMASS I/O activity	Use procedure in Section 17.7.1.2
4	(If no free cache blocks) **/usr/amass/bin/drivelist**	**enter text; press Return/Enter**
5	Run **amass_log** script	Use procedure in Section 17.7.1.4
6	**/usr/amass/bin/drivestat -a *drivenumber* [*jukeboxnumber*]**	**enter text; press Return/Enter**

Table 17.7-14. Diagnosing/Investigating Write Errors (2 of 2)

Step	What to Do	Action to Take
7	Check **tac** log	Use procedure in Section 17.7.2.3

17.7.4 Diagnosing/Investigating Read Errors

When a read error is encountered by AMASS, both the drive and the volume (tape) are taken off line. The application is notified of the read failure. The Archive Server logs an error message when the read failure is returned. The log message includes the name of the file, the secondary path for the file, the checksum for the file, and a reason for the failure. If the reason for failure is a checksum mismatch on retrieval, then the file must be restored. If the reason for failure indicates the media was off line, then further investigation is warranted to determine why the tape was off line. Off-line status can be the result of a write error, a read error on the file, or a read error on another file that caused AMASS to take the tape off line, thus making other reads fail. For a tape that is off line, or for a tape and drive that are off line together, one possibility is that the tape is damaged. Damage may be confirmed by visual inspection or, more likely, the need to have vendor maintenance remove the media from the drive. Any requests for files on that tape fail or are served from backup. It is important that the list of files that is created for restoring a tape from backup be kept and searched when new files are reported missing. This should reduce the number of times that certain recovery procedures have to be performed (see Section 17.6.2.3 **Manual Data Recovery from Damaged Cartridge**).

Table 17.7-15 presents the steps required for diagnosing/investigating read errors observed during operations (e.g., appearing in the Archive Server debug log, or appearing as an I/O error message at the command line during an attempt to copy a file from an archive volume). If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in to the FSMS host (e0drg11, g0drg01, l0drg01, or n0drg01) as **amass**.

2 Examine the Archive Server debug log **EcDsStArchiveServerDebug.log** (refer to Section 17.7.2.1, **Checking Server Log Files**) for error messages associated with the read failure.

- Examine the sections of the log with entries near the time of the failure, looking for messages that indicate read failure. It may be useful to search the log for occurrences of the word **fail** (while viewing the log with **pg**, **view**, **vi**, or other viewing/editing tool, type **/fail** and press the **Return/Enter** key).
- From the failure information in the log, note the name of the file, the secondary path for the file, the checksum for the file, and the reason for the failure.
- If the reason for the failure is specified as a checksum mismatch on retrieval, go to Step 3. If the reason indicates media being off line, go to Step 4.

3 Restore the corrupted file (refer to Sections 17.6.2.1, **Manual Data Recovery from Local Backup Tapes**; 17.6.2.2, **Manual Data Recovery from Offsite Backup Tapes**; and 17.6.2.3, **Manual Data Recovery from Damaged Cartridge** as appropriate).

4 Type **dirfilelist *path***, where ***path*** is the full path name of the directory location of the file on which the read error occurred (e.g., **/dss_stk1/OPS/modl0**), and then press the **Return/Enter** key.

- AMASS returns a listing of the files in the directory, listing for each one the volume on which it is stored and its logical block address. Note the volume number for the file on which the read error occurred.

5 Use the **vollist** command to display data for the volume identified in Step 4 (refer to Section 17.7.1.3, **Using *vollist* to Display Volume Data**).

- AMASS displays data for the specified volume; if the volume is off line (has **O** displayed in the **FLAGS** column of the output), place it on line using the command **volstat -a** and pressing the **Return/Enter** key.

6 Use the **amass_log** script to display and examine AMASS errors (refer to Section 17.7.1.4, **Using the *amass_log* Script to Display AMASS Errors**).

- If the returned error message(s) identify critical problems that prevent AMASS from functioning correctly, follow the corrective guidance specified in the *System Administrator's Guide* for the specific error(s).
- If there are no hardware problems and there have not been repeated attempts to activate the drive(s) that are off line, reactivate the drive(s) (see Step 7).

7 For each off-line drive, type **/usr/amass/bin/drivestat -a *drivenumber* [*jukeboxnumber*]** and press the **Return/Enter** key.

- AMASS places on line the drive specified by ***drivenumber*** in the jukebox specified by ***jukeboxnumber***.

8 Check the **tac** log for evidence of problems in communication between AMASS and ACSLS (refer to Section 17.7.2.3, **Checking the *tac* Log**).

- If there is evidence of communication problems, investigate and correct any lack of synchrony between AMASS and ACSLS (refer to Section 17.7.1.6, **Using *mediamove* to Establish Synchrony Between *quedisplay* and *medialist***).

Table 17.7-15. Diagnosing/Investigating Read Errors

Step	What to Do	Action to Take
1	Log in to the FSMS host as **amass**	**enter text; press Return/Enter**
2	Examine the Archive Server debug log	Use procedure in Section 17.7.2.1
3	Restore any corrupted file	Use procedure in Section 17.6.2.1, 17.6.2.2, or 17.6.2.3 (as appropriate)
4	**dirfilelist *path***	**enter text; press Return/Enter**
5	**vollist *nnn***	Use procedure in Section 17.7.1.3
6	Run **amass_log** script	Use procedure in Section 17.7.1.4
7	**/usr/amass/bin/drivestat -a *drivenumber* [*jukeboxnumber*]**	**enter text; press Return/Enter**
8	Check **tac** log	Use procedure in Section 17.7.2.3

17.8 ACSLS Procedures

For the StorageTek Powderhorn, direct control of the tape storage and handling operations is managed by the ***Automated Cartridge System Library Software (ACSLS)***. Full guidance for using ACSLS is provided in the *Automated Cartridge System Library Software System Administrator's Guide*. Table 17.8-1 lists the commands covered in that *Guide*.

Table 17.8-1. ACSLS Command Reference (1 of 2)

Command	Function
audit	Creates or updates the database inventory of the volumes in a library component.
cancel	Cancels a current or pending request.
clear lock	Removes all active and pending locks on transports or volumes.
define pool	Creates or modifies scratch pools.
delete pool	Deletes empty scratch pools.
dismount	Dismounts a volume.
eject	Ejects one or more volumes from the Automated Cartridge System (ACS).
enter	Sets a Cartridge Access Port (CAP) to enter mode.
idle	Stops ACSLS from processing new requests.
lock	Locks (dedicates) a volume or transport to a user.
logoff	Exits the command processor.
mount	Mounts a data or scratch volume.

Table 17.8-1. ACSLS Command Reference (2 of 2)

Command	Function
query	Displays the status of a library component.
set	Sets various attributes of different library components.
show	Displays your lock ID or user ID.
start	Starts ACSLS request processing.
unlock	Removes active locks on volumes or transports.
vary	Changes the state of an ACS, LSM, CAP, transport, or port.
venter	Enters one or more volumes with missing or unreadable labels into the ACS.

ACSLS commands use the following general syntax:

command type_identifier state [options]

where **type_identifier** is the ACS component and its identifier (these are listed in the *System Administrator's Guide*), **state** is a device state for the **vary** command only, and **options** are command options (these are specified for each command in the *System Administrator's Guide*. The two most useful commands in ACSLS are **query** and **vary**. Other frequently used commands are **enter** and **eject**, for inserting and removing cartridges, respectively. ACSLS does not have an online help facility, but if you enter a command (e.g., **vary**), it will prompt you for the parameters.

There are also several utilities provided with ACSLS. These are listed with their functions in Table 17.8-2.

Table 17.8-2. ACSLS Utilities

Utility	Function
bdb.acsss	Backs up the ACSLS database.
kill.acsss	Terminates ACSLS.
rc.acsss	Starts and recovers ACSLS.
rdb.acsss	Restores the ACSLS database.
Volrpt	Creates a volume report.
db_command	Starts or stops the Oracle database.

To control and interact with ACSLS, you use the following user IDs:

- **acssa** lets you enter ACSLS commands from a command processor window.
- **acsss** lets you run ACSLS utilities from the UNIX command line prompt.

It is typical to log in as both user IDs to permit entering both ACSLS utilities and commands. You can, however, open a command processor window from the **acsss** user ID if you prefer to work from a single user ID. The *System Administrator's Guide* provides full details.

Table 17.8-3 provides an Activity Checklist for major ACSLS procedures addressed in this section.

Table 17.8-3. Activity Checklist for ACSLS Procedures

Order	Role	Task	Section	Complete?
1	Archive Manager	Entering the Archive after AMASS is Started	(P) 17.8.1	
2	Archive Manager	Backing up the ACSLS Database	(P) 17.8.2	
3	Archive Manager	Restoring the ACSLS Database	(P) 17.8.3	
4	Archive Manager	Checking Cleaning Cartridges	(P) 17.8.4	

17.8.1 Entering the Archive After AMASS is Started

There are circumstances in which it may be necessary to enter the archive after AMASS is started. For example, there may be a requirement for maintenance that necessitates access to the robot or other area inside the Powderhorn. Another example is that it may sometime be desirable to bypass the Cartridge Access Port (CAP) when inserting tape cartridges, if there is a need to perform bulk loading of a large number of tapes, although usually this would be limited to initial loading of the volumes. Table 17.8-4 presents the steps required for entering the archive after AMASS has started. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the host for ACSLS (e.g., **e0drs03, g0drs03, l0drs02, n0drs03**), log in using the **acssa** user ID and password.
- The **acssa** command-process window is displayed with the **ACSSA>** prompt.

2 Type **vary lsm 0,0 offline** and then press the **Return/Enter** key.
- The access port is unlocked (audible unlatching sound).

3 Use the key to unlatch and open the access door.
- A red **DO NOT ENTER** warning is visible inside the enclosure.

Warning

If it is necessary to enter the STK Powderhorn after AMASS is started, it is necessary to perform the following step to avoid hazard and ensure safety of personnel and equipment.

4 Remove the key from the door to ensure that no one inadvertently locks the enclosure with someone inside.
- The red **DO NOT ENTER** warning is extinguished and a green **ENTER** message is displayed inside the enclosure.

5 Upon leaving the enclosed area, insert the key in the access door and latch the door.
- The LED display indicates that the door is locked.

6 At the ACSLS host, type **vary lsm 0,0 online** and then press the **Return/Enter** key. After a few seconds, the archive robots execute an initialization sequence and the LSM is back online.

Table 17.8-4. Entering the Archive after AMASS is Started

Step	What to Do	Action to Take
1	Log in to the ACSLS host as **acssa**	**enter text; press Return/Enter**
2	**vary lsm 0,0 offline**	**enter text; press Return/Enter**
3	Unlock and open access door	**operate lock to unlatch with key**
4	Remove key from unlatched door	**remove key**
5	Insert key and latch door	**operate lock to latch with key**
6	**vary lsm 0,0 online**	**enter text; press Return/Enter**

17.8.2 Backing Up the ACSLS Database

ACSLS provides the **bdb.acsss** utility to back up the database. It is advisable to run this utility when there has been a change in the archive volume structure (e.g., upon addition or removal of volumes). In the event of database loss, it is possible to re-create the database even if there is no backup available, by using the **audit** command to inventory the archive. However, for a large storage facility, creating the database this way may take several hours. If there is a backup available, the database can be restored easily and quickly (refer to Section 17.8.3). Table 17.8-5 presents the steps required for backing up the ACSLS database. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the host for ACSLS (e.g., **e0drs03, g0drs03, l0drs02, n0drs03**), log in using the **acsss** user ID and password.
- The **acsss** command-process window is displayed with the **ACSSS>** prompt.

2 Ensure that there is a tape in the backup drive (device **dev/rmt/0**), a streaming tape drive attached to each ACSLS workstation.

3 Type **bdb.acsss**, and then press the **Return/Enter** key.

- If you enter **bdb.acsss** with no options, the backup utility defaults to the default tape device attached and configured to the ACSLS server.
- The system displays the following message.

```
Check tape device (/dev/rmt/0) to make sure you have a tape in the
tape drive.
[ Hit RETURN to continue or Ctrl-C to exit ]
```

4 Press the **Return/Enter** key.

- The bdb.acsss utility backs up the ACSLS database and miscellaneous library resource files.

Table 17.8-5. Backing Up the ACSLS Database

Step	What to Do	Action to Take
1	Log in to the ACSLS host as **acsss**	**enter text; press Return/Enter**
2	Ensure there is a tape in the backup drive	**mount tape**
3	**bdb.acsss**	**enter text; press Return/Enter**
4	**Return/Enter**	**press Return/Enter**

17.8.3 Restoring the ACSLS Database

ACSLS provides the **rdb.acsss** utility to restore the database in case of severe disk or data problems. If you have made regular backups, it should be possible to restore the database with little or no loss of data. Restoring the database is likely to be necessary if there has been a system crash, or if the database cannot be started or has a physical or logical error. Table 17.8-6 presents the steps required for restoring the ACSLS database. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the host for ACSLS (e.g., **e0drs03, g0drs03, l0drs02, n0drs03**), log in using the **acsss** user ID and password.

- The **acsss** command-process window is displayed with the **ACSSS>** prompt.

2 Load the restore tape into the backup drive.

3 Type **rdb.acsss**, and then press the **Return/Enter** key.

- If you enter **bdb.acsss** with no options, the backup utility defaults to the default tape device attached and configured to the ACSLS server.
- The system displays the following message.

```
Check tape device (/dev/rmt/0) to make sure you have a tape in the
tape drive.
[ Hit RETURN to continue or Ctrl-C to exit ]
```

4 Press the **Return/Enter** key.

- The rdb.acsss utility restores the ACSLS database and miscellaneous library resource files.

Table 17.8-6. Restoring the ACSLS Database

Step	What to Do	Action to Take
1	Log in to the ACSLS host as **acsss**	**enter text; press Return/Enter**
2	Load the restore tape into the backup drive	**mount tape**
3	**rdb.acsss**	**enter text; press Return/Enter**
4	**Return/Enter**	**press Return/Enter**

17.8.4 Checking Cleaning Cartridges

The Automated Cartridge System Library Software (ACSLS) schedules and implements routine cleaning of the system tape drives after a set usage time tracked by the software, using cleaning volumes from a cleaning volume group designated for that purpose. The ACSLS software also tracks the number of times a cleaning tape is used, and will not use a cleaning tape that has been used the maximum set number of times (usually set at 100 for the 9940 drives). It is the responsibility of the Archive Manager to monitor cleaning tape usage periodically, to ensure that usable cleaning tapes remain available to the system.

Table 17.8-7 presents the steps required to check cleaning cartridges for usage status. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the host for ACSLS (e.g., **e0drs03, g0drs03, l0drs02, n0drs03**), log in using the **acssa** user ID and password.

- The **acssa** command-process window is displayed with the **ACSSA>** prompt.

2 Type **query clean all**, and press the **Return/Enter** key.

- ***Note***: The command may be abbreviated to **qu cl a**.
- ACSLS displays information on the status of the cleaning volumes in format similar to the following:

```
2001-10-04 08:50:54        Cleaning Cartridge Status
 Identifier Home Location   Max Usage  Current Usage  Status  Type
 9840C1      0, 0, 3, 2, 2  100        38             home    STK1U
 9840C2      0, 0,13, 1, 3  100        0              home    STK1U
 9940C1      0, 0, 1, 4,19  100        7              home    STK2W
```

- ***Note***: If it is desirable or necessary to change the maximum number of uses permitted for a cleaning volume, the change can be accomplished with the command **set clean <*max_usage*> <*vol_id*>** where ***max_usage*** (e.g. 100) is the maximum number of uses for that volume and ***vol_id*** is the volume id of that cleaning cartridge.

Table 17.8-7. Checking Cleaning Cartridges

Step	What to Do	Action to Take
1	Log in as **acssa**	**enter text; press Return/Enter**
2	**query clean all** (or **qu cl a**)	**press Return/Enter**

17.9 Using the AMASS Graphical User Interface (GUI)

AMASS offers a Graphical User Interface (GUI) called the AMASS Administration Window (AAWin) through which operators can administer volumes and volume groups that are managed by AMASS. AAWin provides a point-and-click interface for identifying volumes their groups, and their configurable parameters. The AAWin main window is composed of a menu bar, a large middle section called the *workroom*, a utility bar at the right with icons for a trash can, a volume group, and a volume, and a status bar at the bottom with indicator "lights" that represent the current status of AMASS. Selecting the volume icon on the utility bar populates the workroom with icons for volumes. Moving the cursor over one of the icons results in the appearance of volume-related information in a pop-up display.

For large storage facilities, command-line interactions are likely to be faster and more responsive than interactions with the AMASS GUI. Therefore it is unlikely that extensive use of the GUI will be applied for most archive operations. However, it may be useful to have the GUI open for monitoring and easy access to volume information (refer to Section 17.9.1, **Launching the AMASS GUI and Viewing Volume Group and Volume Information**). Table 17.9-1 provides an activity checklist for some procedures that may be accomplished using the AMASS GUI.

Table 17.9-1. Activity Checklist for Using the AMASS GUI

Order	Role	Task	Section	Complete?
1	Archive Manager	Launching the AMASS GUI and Viewing Volume Group and Volume Information	(P) 17.9.1	
2	Archive Manager	Using the AMASS GUI to Modify a Volume Group	(P) 17.9.2	
3	Archive Manager	Using the AMASS GUI to Modify a Volume	(P) 17.9.3	

17.9.1 Launching the AMASS GUI and Viewing Volume Group and Volume Information

Table 17.9-2 presents the steps required to launch the AMASS GUI and view information about volume groups and volumes in the archive. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in as **amass** at the FSMS host (e0drg11, g0drg01, l0drg01, or n0drg01).

2 Type **/usr/amass/bin/aawin** and then press the **Return/Enter** key.
- The AMASS GUI main window is displayed.

3 Click on the **View by Volume Groups** button (middle button at the right of the *workroom*).
- The *workroom* is populated by icons for volume groups.
- The **Block List** window is displayed; it is a vertically scrolled list of blocks of items (in this case, volume groups). The *workroom* can display up to 256 icons; the **Block List** window provides access to additional items in blocks of 256.

4 Move the cursor over one of the icons for a volume group.
- A pop-up display shows data for the volume group (**Volume Group**, **Volumes in Group**, **Free Space**, **Dead Space**, **Error Count**).

5 Click on the **View by Volumes** button (at the bottom right side of the *workroom*).
- The *workroom* is populated by icons for volumes.
- The **Block List** window is also displayed; it is a vertically scrolled list of blocks of items (in this case, volumes).

6 Move the cursor over one of the icons for a volume.
- A pop-up display shows data for the volume group (**Volume**, **Library**, **Slot**, **Volume Group**, **Volume Status**, **Volume Label**).

Table 17.9-2. Launching the AMASS GUI and Viewing Volume Group and Volume Information (1 of 2)

Step	What to Do	Action to Take
1	Log in as **amass** at FSMS host	**enter text; press Return/Enter**
2	**aawin**	**enter text; press Return/Enter**
3	Select **View by Volume Groups** button	**single-click**
4	Move cursor over icon for a volume group	**hold left mouse button and drag**

Table 17.9-2. Launching the AMASS GUI and Viewing Volume Group and Volume Information (2 of 2)

Step	What to Do	Action to Take
5	Select **View by Volumes** button	**single-click**
6	Move cursor over icon for a volume	**hold left mouse button and drag**

17.9.2 Using the AMASS GUI to Modify a Volume Group

The **Modify a VG** window is opened by selecting **Modify a Volume Group** from the **Tasks** menu. The window is used to modify the characteristics of a volume group. The top portion of the window (not modifiable) lists root directories already configured for a volume group. The middle portion of the window permits adding directories to the list of root directories for the specified volume group. The third major portion of the window, near the bottom, contains indicators of the status of the volume group and buttons for selecting a volume group, as well as buttons across the very bottom of the window for accepting or canceling the modifications. (***Note***: The **Modify a VG** window also is opened if you have the *workroom* populated with volume group icons and you click on one of them. However, in this case you may only modify the volume group on which you clicked; the bottom of the window will not display buttons for selecting a volume group.)

As an example of using the GUI to modify a volume group, it is possible to assign a new root directory in the AMASS file system to a volume group. This requires first creating the directory and then using the GUI to assign it to a volume group. Table 17.9-3 presents the steps required for using the AMASS GUI to modify a volume group, in this example to assign a new root directory in the AMASS file system to a volume group. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the AMASS GUI (refer to Section 17.9.1, **Launching the AMASS GUI and Viewing Volume Group and Volume Information**).

2 Open a second terminal window (other than the one used to launch the AMASS GUI).

3 In the second terminal window, log in as **amass** at the FSMS host (e0drg11, g0drg01, l0drg01, or n0drg01).

4 To change to the **dss_amass** directory, type **cd /dss_amass**, and then press the **Return/Enter** key.

5 To create an empty directory with path **/dss_amass/*newdir*/**, where ***newdir*** is the name of the new directory to be created and assigned to the volume group, type **mkdir *newdir***, and then press the **Return/Enter** key.

6 On the AMASS GUI main window, click on the **View by Volume Groups** button (middle button at the right of the *workroom*).

- The *workroom* is populated by icons for volume groups.
- The **Block List** window is also displayed; it is a vertically scrolled list of blocks of items (in this case, volume groups).

7 Follow menu path **Tasks→Modify a Volume Group**.

- The **Modify a VG** window is displayed, showing data for Volume Group 0001.

8 In the area for choosing a volume group, near the bottom of the window, use the buttons to set the number displayed in the **Volume Group** field to the desired volume group.

- A click on the right-pointing arrow button or the left-pointing arrow button respectively increases or decreases the number by one. Buttons below the arrow buttons may be used to increase or decrease the number in multiples of 100 or 1000, as indicated on the buttons.

9 When the **Volume Group** field displays the number of the desired volume group, click on the **Fetch** button.

- The list of root directories already configured for the selected volume group is displayed in the **Existing Root Directories** field.
- The status indicators show the status of the selected volume group.

10 Click on the **File/Directory Selection** button (leftmost button after the label **Root Directories to Add**, with folder icon).

- A **File Selection** filter window is displayed.

11 In the **File Selection** filter window, click on the **Filter** button.

- The **Filter** field displays **/usr/amass/***, and directories and files are displayed in the **Directories** and **Files** windows, respectively.

12 Use the **Filter** button and selection of directories in the **Directories** window to display /**dss_amass/*newdir***/ in the **Selection** field.

- The **Selection** field displays **/dss_amass/*newdir*/**.

13 In the **File Selection** filter window, click the **OK** button.

- The **Root Directories to Add** field of the **Modify a VG** window displays **/dss_amass/*newdir*/**.

14 To examine the capability to edit the list of Directories to Add, click on the entry **/dss_amass/*newdir*/** to highlight it in the Root **Directories to Add**, then click on the **Remove a File/Directory from List** button (middle button after the label **Root Directories to Add,** with folder icon crossed out with a red line).

- The entry **/dss_amass/*newdir*/** is removed from the **Root Directories to Add** field.

15 Repeat Steps 11 through 13 to restore the entry **/dss_amass/*newdir*/** to the **Root Directories to Add** field.

- The **Root Directories to Add** field of the **Modify a VG** window displays **/dss_amass/*newdir*/**.

16 In the **Modify a VG** window, click on the **Accept** button at the bottom of the window.

- The entry **/dss_amass/*newdir*/** is removed from the **Root Directories to Add** field and appears in the **Existing Root Directories** field.
- The **Modify a VG** window is closed.

Table 17.9-3. Using the AMASS GUI to Modify a Volume Group

Step	What to Do	Action to Take
1	Launch the AMASS GUI	Use procedure in Section 17.9.1
2	Open a second terminal window	UNIX command
3	Log in as **amass** at FSMS host	**enter text; press Return/Enter**
4	**cd /dss_amass**	**enter text; press Return/Enter**
5	**mkdir *newdir***	**enter text; press Return/Enter**
6	Select **View by Volume Groups** button	**single-click**
7	Follow menu path **Tasks→Modify a Volume Group**	**menu selection**
8	Set **Volume Group**	**click on right or left arrow**
9	Select **Fetch** button	**single-click**
10	Select **File/Directory Selection** button	**single-click**
11	Select **Filter** button	**single-click**
12	Display **/dss_amass/*newdir*/** in **Selection** field	use **Filter** button and selection
13	In **File Selection** filter window, select **OK** button	**single-click**
14	Remove **/dss_amass/*newdir*/** from list	**highlight and click**
15	Restore **/dss_amass/*newdir*/** to list	**highlight and click**
16	Select **Accept** button	**single-click**

17.9.3 Modify a Volume

The **Modify a Volume** window is opened by selecting **Modify a Volume** from the **Tasks** menu. The window is used to modify the characteristics of a volume. The right side of the window shows the current set of statistics and configuration information (not modifiable) for the volume listed in the **Volume** field on the left side of the window (the **Volume** field looks like a button, but if you click on it, a "spinbox" is displayed, with arrow buttons permitting increases or

decreases to the volume number, and buttons at the bottom to **Accept** or **Cancel** the change; accepting the change closes the spinbox, displays the new number in the **Volume** field, and displays data for that volume). The left side of the **Modify a Volume** window provides access to modifiable characteristics of the volume. Changes made to the buttons and fields in the window do not take effect until the **Accept** button at the bottom of the window is clicked. (**Note**: The **Modify a Volume** window also is opened if you have the *workroom* populated with volume icons and you click on one of them. However, in this case you may only modify the volume on which you clicked; the **Volume** field does not look like a button and may not be changed.)

There are six fields that can be edited for a given volume:

- The first is a button for setting the **Volume Group**. Clicking the button opens a spinbox for selecting the volume group to which the volume is to be assigned.
- Below the Volume Group button is an **Online/Offline** indicator light with label. Clicking on the indicator toggles its state and updates the text field (label) next to it.
- Below the Online/Offline indicator is an **Active/Inactive** indicator light with label. Clicking on the indicator toggles its state and updates the text field (label) next to it.
- Next is a **Format Request** option button permitting selection of a formatting option for the volume.
- Next is the **Block Size** field, applicable only to tape libraries when a format is requested to be done on the volume. This field requires a numeric value, which should be a multiple of 16384.
- The last modifiable field is a text field for specifying the volume label.

Table 17.9-4 presents the steps required for using the AMASS GUI to modify a volume. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the AMASS GUI (refer to Section 17.9.1, **Launching the AMASS GUI and Viewing Volume Group and Volume Information**).

2 On the AMASS GUI main window, click on the **View by Volume Groups** button (middle button at the right of the *workroom*).

- The *workroom* is populated by icons for volume groups.
- The **Block List** window is also displayed; it is a vertically scrolled list of blocks of items (in this case, volume groups).

3 Click on the icon for a desired volume group.

- The *workroom* is populated with icons for the volumes in the selected volume group, and the **Modify a VG** window is displayed, showing data for the selected volume group.

4 Click on the icon for the volume to be modified.

- The **Modify a VG** window is closed and the **Modify a Volume** window is displayed, showing data for the selected volume.

5 If it is desired to change the volume group to which the volume is assigned, note the **Volume Group** number indicated on the **Volume Group** button, and then click on the button.

- A spinbox is displayed showing the **Volume Group** number, with right-pointing and left-pointing arrow buttons respectively to increase or decrease the number.

6 Use the arrow buttons to change the **Volume Group** number, and then click on the **Accept** button in the spinbox.

- The spinbox is closed and the new number appears in the **Modify a Volume** window as the **Volume Group** number.

7 To change the status of a volume indicated to be **Online**, click on the **Active/Inactive** indicator.

- The color and label of the **Active/Inactive** indicator toggle.

8 To change the status of a volume indicated to be **Inactive**, click on the **Online/Offline** indicator.

- The color and label of the **Online/Offline** indicator toggle.

9 Click on the **Format Request** option button.

- A pop-up option menu is displayed for selection of **Yes** or **No**, and when one of those options is clicked, the indicated choice is displayed on the option button.

10 Use the mouse to move the cursor to the **Block Size** field.

- A blinking cursor appears in the **Block Size** field.

11 Use the keyboard to enter or change the value in the **Block Size** field.

- The entered data appear in the **Block Size** field.

12 Use the mouse to move the cursor to the **Volume Label** field.

- A blinking cursor appears in the **Volume Label** field.

13 Use the keyboard to enter or change the value in the **Volume Label** field.

- The entered data appear in the **Volume Label** field.

14 If you wish to cancel any request for changes to the volume, click on the **Cancel** button at the bottom of the window. If you wish to accept the changes, click on the **Accept** button at the bottom of the window.

- When you click the **Accept** button, *AAWin* attempts to make the requested changes. For most changes, specifically changes to **Online/Offline** and **Active/Inactive** status, the requested **Volume Group** for the volume, and the **Volume Label**, the changes are made immediately. But if a format has been requested, then the **Online/Offline** and **Active/Inactive** status changes are not applied immediately. Instead, the requests for these status changes and the format changes are passed to the *AAWin* **Scheduler** daemon for processing. Changes made by the **Scheduler** occur when the job is processed, which depends on how many other jobs are currently scheduled.

Table 17.9-4. Using the AMASS GUI to Modify a Volume

Step	What to Do	Action to Take
1	Launch the AMASS GUI	Use procedure in Section 17.9.1
2	Select **View by Volume Groups** button	**single-click**
3	Select desired volume group	**single-click**
4	Select volume to be modified	**single-click**
5	To change volume group assignment, select **Volume Group** button	**single-click**
6	Set **Volume Group** number	**click** arrows on "spinbox"
7	Toggle **Active/Inactive** status of online volume	**single-click**
8	Toggle **Online/Offline** status of inactive volume	**single-click**
9	Select **Format Request** button	**single-click**
10	Move cursor to **Block Size** field	**single-click**
11	Enter **Block Size**	**enter text**
12	Move cursor to **Volume Label** field	**single-click**
13	Enter **Volume Lable**	**enter text**
14	Select **Cancel** button or **Accept** button	**single-click**

17.10 Data Pool Maintenance Tasks

Archive and/or engineering support personnel are directly involved in Data Pool monitoring and maintenance, and support User Services and/or Science Data Specialists in managing the content and retention of data in the Data Pool. A major tool used for these functions is the Data Pool Maintenance (DPM) GUI. There are also scripts and utilities for specific maintenance and monitoring functions, and the Spatial Subscription Server GUI can be used for some maintenance and monitoring functions. Table 17.10-1 provides an activity checklist for Data Pool procedures that are accomplished using the DPM GUI and Data Pool utility scripts. See Chapter 19 for procedures using the Spatial Subscription Server GUI (Launching the Spatial Subscription Server GUI; Use the Spatial Subscription Server GUI to List and View Subscriptions in the NSBRV

Database; Use the Spatial Subscription Server GUI to Extend the Period of Retention in a Data Pool Insert Subscription; Use the Spatial Subscription Server GUI to View the Acquire and Notification Actions Being Processed: Use the Spatial Subscription Server GUI to View Statistics on NSBRV Processing of Events and Actions).

Table 17.10-1. Activity Checklist for Data Pool Maintenance Tasks (1 of 4)

Order	Role	Task	Section	Complete?
1	Archive Manager/ Support Engineer [full-capability or limited-capability]	Launch the DPM GUI	(P) 17.10.1	
2	Archive Manager/ Support Engineer [full-capability or limited-capability]	Shut Down the DPM GUI (End a DPM GUI Session)	(P) 17.10.2	
3	Archive Manager/ Support Engineer [full-capability or limited-capability]	Use the DPM GUI to Monitor Data Pool Active Insert Processes	(P) 17.10.3	
4	Archive Manager/ Support Engineer [full-capability or limited-capability]	Use the DPM GUI to View a List of Data Pool File Systems	(P) 17.10.4	
5	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Modify a Data Pool File System	(P) 17.10.5	
6	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Add a Data Pool File System	(P) 17.10.6	
7	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Enable/Disable Data Compression	(P) 17.10.7	
8	Archive Manager/ Support Engineer [full-capability or limited-capability]	Use the DPM GUI to View a List of Compression Algorithms	(P) 17.10.8	
9	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Modify Compression Algorithms	(P) 17.10.9	
10	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Add a Compression Algorithm	(P) 17.10.10	
11	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Deactivate a Compression Algorithm	(P) 17.10.11	

Table 17.10-1. Activity Checklist for Data Pool Maintenance Tasks (2 of 4)

Order	Role	Task	Section	Complete?
12	Archive Manager/ Support Engineer [full-capability or limited-capability]	Use the DPM GUI to View Cloud Cover Information	(P) 17.10.12	
13	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Add New Cloud Cover Information	(P) 17.10.13	
14	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Modify Cloud Cover Source Descriptions	(P) 17.10.14	
15	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Delete Cloud Cover Information	(P) 17.10.15	
16	Archive Manager/ Support Engineer [full-capability or limited-capability]	Check the Status of Batch Inserts	(P) 17.10.16	
17	Archive Manager/ Support Engineer [full-capability (limited-capability check only)]	Check the Data Pool Insert Queue and Cancel a Data Pool Insert Action	(P) 17.10.17	
18	Archive Manager/ Support Engineer [full-capability or limited-capability]	View DPM Configuration Parameter Values	(P) 17.10.18	
19	Archive Manager/ Support Engineer [full-capability only]	Modify DPM Configuration Parameter Values	(P) 17.10.19	
20	Archive Manager/ Support Engineer [full-capability or limited-capability]	Use the DPM GUI to View Collection Group and Collection Information	(P) 17.10.20	
21	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Modify Collection Groups	(P) 17.10.21	
22	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Add a Collection Group	(P) 17.10.22	
23	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Add an ECS Collection to a Collection Group	(P) 17.10.23	

Table 17.10-1. Activity Checklist for Data Pool Maintenance Tasks (3 of 4)

Order	Role	Task	Section	Complete?
24	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Add a NON-ECS Collection to a Collection Group	(P) 17.10.24	
25	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Modify an ECS Collection	(P) 17.10.25	
26	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Modify a NON-ECS Collection	(P) 17.10.26	
27	Archive Manager/ Support Engineer [full-capability or limited-capability]	Use the DPM GUI to View a List of Themes	(P) 17.10.27	
28	Archive Manager/ Support Engineer [full-capability or limited-capability]	Filter a List of Themes	(P) 17.10.27.1	
29	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Modify a Theme	(P) 17.10.28	
30	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Add a Theme	(P) 17.10.29	
31	Archive Manager/ Support Engineer [full-capability only]	Use the DPM GUI to Delete a Theme	(P) 17.10.30	
32	Archive Manager/ Support Engineer	Use the Update Granule Utility to Extend the Retention for Selected Science Granules	(P) 17.10.31	
33	Archive Manager/ Support Engineer	Invoke the Data Pool Cleanup Utility Manually	(P) 17.10.32	
34	Archive Manager/ Support Engineer	Establish Data Pool Cleanup to Run with *cron*	(P) 17.10.33	
35	Archive Manager/ Support Engineer	Specify Data Pool Access Statistics Rollup Start Time and DPASU Execution with *cron*	(P) 17.10.34	
36	Archive Manager/ Support Engineer	Specify Data Pool Access Statistics Utility Execution from the Command Line	(P) 17.10.35	
37	Archive Manager/ Support Engineer	Archive Access Statistics using the Data Pool Archive Access Statistics Data Utility	(P) 17.10.36	
38	Archive Manager/ Support Engineer	Delete Access Statistics using the Data Pool Delete Access Statistics Data Utility	(P) 17.10.37	

Table 17.10-1. Activity Checklist for Data Pool Maintenance Tasks (4 of 4)

Order	Role	Task	Section	Complete?
39	Archive Manager/ Support Engineer	Restore Access Statistics using the Data Pool Restore Access Statistics Data Utility	(P) 17.10.38	
40	Archive Manager/ Support Engineer	Use the Batch Insert Utility for Batch Insert of Data into the Data Pool	(P) 17.10.39	
41	Archive Manager/ Support Engineer	Launch the DataPool Order Status & Control GUI	(P) 17.10.40	
42	Archive Manager/ Support Engineer	Use the DataPool Order Status & Control GUI to Review Orders and Order Items	(P) 17.10.41	
43	Archive Manager/ Support Engineer	Intervene in a Failed Data Pool Order Susceptible to Operator Intervention	(P) 17.10.42	
44	Archive Manager/ Support Engineer	Use DataPool Order Status & Control GUI to Manage HEG Converter Front End Server	(P) 17.10.43	

17.10.1 Launch the DPM GUI

The procedure for launching the DPM GUI is provided separately here and referenced in other procedures. Table 17.10-2 presents the steps required to launch the DPM GUI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the UNIX command shell prompt, type **setenv DISPLAY *clientname*:0.0** and then press the **Return/Enter** key.

- For ***clientname***, use either the local terminal/workstation IP address or its machine name.

2 Start the log-in to a Netscape host by typing **/tools/bin/ssh *hostname*** (e.g., g0ins02, e0ins02, l0ins02, n0ins02) at the UNIX command shell prompt, and press the **Return/Enter** key.

- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 3.
- If you have not previously set up a secure shell passphrase; go to Step 4.

3 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 5.

4 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.

- You are logged in and a UNIX command shell prompt is displayed.

5 Type **netscape &** then press **Return/Enter**.

- It may be necessary to type the path as well as the netscape command (e.g., **/tools/bin/netscape &**).
- It may be necessary to respond to dialogue boxes, especially if the browser is already being used by someone else who has logged in with the same user ID.
- The Netscape web browser is displayed.

6 If a bookmark has been created for the DPM GUI, select the appropriate bookmark from those listed on the browser's **Bookmarks** button (or the **Communicator → Bookmarks** pull-down menu).

- The security login **Prompt** is displayed.

7 If no bookmark has been created for the DPM GUI, type **http://*host*:*port*/*path*** in the browser's **Location (Go To)** field then press **Return/Enter**.

- For example:

  http://x0dps01.daac.ecs.nasa.gov:54321/DataPool.html

- The security login **Prompt** is displayed.

8 Type the appropriate ***username*** in the **User Name** box of the security login **Prompt**.

9 Type the appropriate ***password*** in the **Password** box of the security login **Prompt**.

NOTE: If the security login prompt reappears after the first time the user name and password have been entered (and the **OK** button has been clicked), it may not be due to a data entry problem. Try again to log in using the same user name and password. Sometimes it is necessary to enter the user name and password for the GUI more than once.

10 Click on the appropriate button from the following selections:

- **OK -** to complete the log-in and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The DPM GUI **Home Page** is displayed.
- **Cancel** - to dismiss the dialogue box without logging in.
  - The dialogue box is dismissed.
  - The Netscape web browser is displayed.

Table 17.10-2. Launch the DPM GUI

Step	What to Do	Action to Take
1	**setenv DISPLAY *clientname*:0.0**	**Enter text; press Return/Enter**
2	**/tools/bin/ssh *hostname***	**Enter text; press Return/Enter**
3	***Passphrase*** (or Step 4)	**Enter text; press Return/Enter**
4	***Password***	**Enter text; press Return/Enter**
5	**netscape &**	**Enter text; press Return/Enter**
6	***bookmark*** (for DPM GUI)	**Single-click**
7	**http://*host*:*port*/*path*** (if no bookmark is available)	**Enter text; press Return/Enter**
8	***username***	**Enter text**
9	***password***	**Enter text**
10	**OK** button	**Single-click**

17.10.2 Shut Down the DPM GUI (End a DPM GUI Session)

At some point it becomes necessary to shut down the DPM GUI (end a DPM GUI session). Table 17.10-3 presents the steps required to shut down the DPM GUI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Click on the **Home Page** link at the top of the DPM GUI.
- The DPM GUI **Home Page** is displayed.

2 Click on the **End Session** link at the top of the **Home Page**.
- A log-out page containing the message "Click on Button Below to End Session: NOTE: THIS WOULD ALSO SHUT DOWN THE BROWSER :" is displayed.

NOTE: To abort the log-out and return to the **Home Page**, click on the browser **Back** button.

3 Click on the **ShutDown** button.
- The Netscape browser is dismissed.

Table 17.10-3. Shut Down the DPM GUI (End a DPM GUI Session)

Step	What to Do	Action to Take
1	**Home Page** link	**single-click**
2	**End Session** link	**single-click**
3	**ShutDown** button	**single-click**

17.10.3 Use the DPM GUI to Monitor Data Pool Active Insert Processes

You may wish to keep an instance of the DPM GUI displayed to monitor Data Pool Active Insert Processes. The procedure for using the DPM GUI to monitor Data Pool active insert processes is applicable to both full-capability and limited-capability operators. Table 17.10-4 presents the steps required to use the DPM GUI to monitor Data Pool active insert processes. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is displayed.

2 Observe information displayed on the DPM GUI **Home Page**.

- The **Home Page** has the following links for access to Data Pool maintenance function pages:
  - **Data Pool File Systems.**
  - **Compression Algorithms.**
  - **Cloud Cover.**
  - **List Insert Queue.**
  - **Batch Summary.**
  - **Collection Groups.**
  - **Themes.**
  - **Configuration Parameters.**
  - **End Session.**
- The **Home Page** has a summary of Data Pool file systems with the following columns:
  - **File System Label** (label representing an existing Data Pool file system).
  - **Free Space Flag** (if set to "Y," free space is available for inserts; "N" means free space is not available).
  - **Availability** (if set to "Y," the file system is currently available for Data Pool insert; "N" means the file system is not available for Data Pool insert).
  - **Min Freed Space in MB** (value that represents the minimum amount of freed space in the file system in megabytes; it is an amount of space must remain free in order to make the file system available for insert).
- The **Home Page** has a summary of active processes with the following rows:
  - **Maximum allowed processes.**
  - **Maximum allowed processes from AMASS cache.**
  - **Maximum allowed processes from AMASS tape.**
  - **Total number of active insert processes running.**
  - **Number of active insert processes using AMASS cache.**
  - **Number of active insert processes using AMASS tape.**

- The **Home Page** has a table of active insert processes showing the following columns of detailed information for each process:
  - **Unix ProcessId** (UNIX process identifier).
  - **EcsID** (ECS identifier or Granule ID for the granule being processed).
  - **Collection** (to which the granule belongs).
  - **Version** (for the collection to which the granule belongs).
  - **StartTime** (time at which the insert processing started).
  - **StatusTime** (time at which the status listed in the **Status** column was achieved).
  - **Status** (current state of the insert process).
  - **AMASS Cache** [availability (**Y** or **N**) of the granule being processed].
  - **Retries** [number of attempts by the process to recover from retriable errors (e.g., Data Pool disk temporarily unavailable, Data Pool directory does not exist, or Data Pool database temporarily unavailable)].

NOTE: The system is designed for rapid insertion of data into the Data Pool by quickly processing data that are available in cache, such as data that are staged for archiving. If the insert processing is delayed and the data are removed from cache, the Data Pool insert is likely to fail.

3 To obtain an immediate screen refresh, click on the **Refresh Home Page** link near the upper right corner of the display.
- The displayed data are updated.

NOTE: The screen refreshes automatically at intervals determined by the number of seconds specified in the **Screen Refresh Rate** field.

4 To change the automatic screen refresh rate first type the desired number of seconds between refreshes in the **Screen Refresh Rate** text entry box.

5 To complete changing the automatic screen refresh rate click on the **Apply** button adjacent to the **Screen Refresh Rate** text entry box.
- The **Screen Refresh Rate** is changed to the new value.

6 To change the number of active insert processes displayed at a time in the **List of Active Insert Processes** table on the **Home Page** first type the desired number of rows to be displayed in the **Active Insert Processes** text entry box.

7 To complete changing the number of active insert processes displayed at a time in the **List of Active Insert Processes** table on the **Home Page** click on the **Apply** button adjacent to the **Active Insert Processes** text entry box.
- The number of active insert processes displayed at a time in the **List of Active Insert Processes** table is changed to the new value.

Table 17.10-4. Use the DPM GUI to Monitor Data Pool Active Insert Processes

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	Observe Data Pool information	**read text**
3	**Refresh Home Page** link (as necessary)	**single-click**
4	***seconds*** (in the **Screen Refresh Rate** text entry box) (if applicable)	**enter text**
5	**Apply** button (if applicable)	**single-click**
6	***rows*** (in the **Active Insert Processes** text entry box) (if applicable)	**enter text**
7	**Apply** button (if applicable)	**single-click**

17.10.4 Use the DPM GUI to View a List of Data Pool File Systems

The Synergy IV DPM GUI **File System Information** page permits both full-capability and limited-capability operators users to view a list of Data Pool file systems and obtain information on the status of the free space flag, availability for insert, and minimum freed space for each file system. In addition it has links that allow full-capability operators to add new Data Pool file systems or modify existing file system information.

Table 17.10-5 presents the steps required to use the DPM GUI to view a list of Data Pool file systems. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Data Pool File Systems** link.

- The **File System Information** page is displayed.

3 Observe data displayed on the **File System Information** page.

- The table on the **File System Information** page has columns containing the following types of Data Pool file system information:
  - **File System Label.**
  - **Absolute Path.**
  - **Free Space Flag.**

  - **Availability.**
  - **Min Free Space (in Megabytes).**
- The following links are available on the **File System Information** page:
  - **Add New File System.**
  - **Modify File System.**

Table 17.10-5. Use the DPM GUI to View a List of Data Pool File Systems

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Data Pool File Systems** link	**single-click**
3	Observe file system information	**read text**

17.10.5 Use the DPM GUI to Modify a Data Pool File System

The **DPM GUI** may be used to modify a Data Pool file system. This is useful if the Absolute Path, Free Space Flag, Availability (for Insert), and/or Min. Freed Space for a particular Data Pool file system need to be corrected or updated. Full-capability operators (only) can use the following procedure to modify a Data Pool file system:

Table 17.10-6 presents the steps required to use the DPM GUI to modify a Data Pool file system. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).
- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Data Pool File Systems** link.
- The **File System Information** page is displayed.

3 Click on the **Modify File System** link at the bottom of the list of file systems (scrolling down if necessary).
- The **Modify File System Information** page is displayed, providing a table of Data Pool file system information showing six columns: **File System Label**, **Absolute Path**, **Free Space Flag**, **Availability**, **Min Free Space (in Megabytes)**, and **Click on box to modify** (containing a check box to mark the file system for change).
- There is an **Apply Change** button at the bottom of the page to implement changes.

4 To change the absolute path for a file system type the desired path in the **Absolute Path** field for the file system.

- The basic ftp root directory path is shown above the text entry box; data entered in the box will be appended to the base path shown.

5 To change a file system's free space flag setting click on the appropriate button in the **Free Space Flag** column.

- The following choices are available:
  - **ON.**
  - **OFF.**

6 To change the setting for a file system's availability for data insert click on the appropriate button in the **Availability** column.

- The following choices are available:
  - **YES.**
  - **NO.**

7 To change the minimum freed space for a file system type the desired value (in megabytes) in the appropriate **Min Free Space (in Megabytes)** field.

8 Click in the check box at the end of the row containing file system information to be modified.

- The selected file system information is marked for subsequent modification.

9 Repeat Steps 4 through 8 for any additional file systems to be modified.

10 Click on the **Apply Change** button.

- The revised file system information is entered in the Data Pool database.
- The **File System Information** page is displayed with the modified file system information.

Table 17.10-6. Use the DPM GUI to Modify a Data Pool File System(1 of 2)

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Data Pool File Systems** link	**single-click**
3	**Modify File System** link	**single-click(s)**
4	***path*** (in the **Absolute Path** field for the file system) (if applicable)	**enter text**
5	**Free Space Flag** option (i.e., **ON** button or **OFF** button in the **Free Space Flag** column) (if applicable)	**single-click**

Table 17.10-6. Use the DPM GUI to Modify a Data Pool File System (2 of 2)

Step	What to Do	Action to Take
6	**Availability** option (i.e., **YES** button or **NO** button in the **Availability** column) (if applicable)	**single-click**
7	***value*** (in the appropriate **Min Free Space (in Megabytes)** field) (if applicable)	**enter text**
8	check box at the end of the appropriate row	**single-click**
9	Repeat Steps 4 through 8 (as necessary)	
10	**Apply Change** button	**single-click**

17.10.6 Use the DPM GUI to Add a Data Pool File System

Full-capability operators (only) can use the procedure that follows to add a Data Pool file system. Table 17.10-7 presents the steps required to use the DPM GUI to add a Data Pool file system. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Data Pool File Systems** link.

- The **File System Information** page is displayed.

3 Click on the **Add New File System** link at the bottom of the list of file systems (scrolling down if necessary).

- The **Add New File System Information** page is displayed, providing a table of Data Pool file system information showing five rows: **Label**, **Absolute Path**, **Free Space Flag**, **Availability**, and **Min Freed Space (in Megabytes)**.
- There is an **Apply Change** button at the bottom of the page to implement the new file system.

4 Type the desired file system label in the **Label** field.

- Enter a unique name with no more than 25 characters.

5 Type the desired path in the **Absolute Path** field.
- The basic ftp root directory path is shown adjacent to the text entry box; data entered in the box will be appended to the base path shown.

6 To display free space flag options click on the **Free Space Flag** option button.
- **Free Space Flag** options are displayed (i.e., **ON** and **OFF**).

7 To select a free space flag option click on the appropriate choice from the option list.
- **ON** should be selected if there is enough free space in the file system for inserts.
- **OFF** should be selected if there is not enough free space in the file system for inserts.

8 To display availability options click on the **Availability** option button.
- **Availability** options are displayed (i.e., **YES** and **NO**).

9 To select an availability option click on the appropriate choice from the option list.
- **YES** should be selected if the file system is currently available for inserts.
- **NO** should be selected if the file system is not currently available for inserts.

10 Type the desired value for minimum freed space (in megabytes) in the **Min Freed Space (in Megabytes)** field.
- **Min Freed Space** indicates how much space needs to be available to keep the file system available for insert.

11 Click on the **Apply Change** button.
- The file system information is entered in the Data Pool database.
- The **File System Information** page is displayed with the new file system information.

Table 17.10-7. Use the DPM GUI to Add a Data Pool File System

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Data Pool File Systems** link	**single-click**
3	**Add New File System** link	**single-click**
4	***label*** (in the **Label** field)	**enter text**
5	***path*** (in the **Absolute Path** field)	**enter text**
6	**Free Space Flag** option (i.e., **ON** or **OFF** on the **Free Space Flag** option button)	**single-click**
7	**Availability** option (i.e., **YES** or **NO** on the **Availability** option button)	**single-click**
8	***value*** (in the **Min Freed Space (in Megabytes)** field)	**enter text**
9	**Apply Change** button	**single-click**

17.10.7 Use the DPM GUI to Enable/Disable Data Compression

The Synergy IV release provides the data compression capability for Data Pool. This feature is accomplished using DAAC-provided compression algorithms. When compression is turned on at the Data Pool subsystem level, all science granules will be compressed at the time of Data Pool insert, if there is a compression algorithm associated with the granule's collection. For each compressed granule, the name and size of the granule's compressed file(s), the size of the original uncompressed file(s), and the compression type will be stored in the file table in the Data Pool database. If checksumming is turned on, the checksum of the compressed file(s) is stored in the Data Pool database. Metadata and browse files are not compressed on insert.

The procedure for using the DPM GUI to enable or disable data compression can be performed by full-capability operators only. It involves changing the value for the **CompressOnInsert** configuration parameter in the Data Pool database. Changing the value from OFF to ON enables data compression. Changing the value from ON to OFF disables data compression. Limited-capability operators are not allowed to change the values assigned to configuration parameters.

Table 17.10-8 presents the steps required to use the DPM GUI to enable/disable data compression. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Configuration Parameters** link.

- The **List of Configuration Parameters** page is displayed, providing a table of parameters showing three columns: **Parameter Name**, **Parameter Value** (including an entry field with current value, followed by a brief description of the parameter), and **Click on Box to Modify Parm** (containing a check box to mark the parameter for change).
- There is an **Apply Change** button at the bottom of the page to implement any selected change(s).

3 To display **CompressOnInsert** options click on the option button in **Parameter Value** column of the row for the **CompressOnInsert** parameter.

- The following choices are available:
  - **ON.**
  - **OFF.**

4 To select a **CompressOnInsert** option click on the appropriate choice from the option list.
- Selected option is displayed in the field.

5 In the row for the **CompressOnInsert** parameter click in the check box in the **Click on Box to Modify Parm** column.
- The box is filled to indicate selection.

6 Click on the **Apply Change** button.
- The screen is refreshed, the check box is unfilled, and the displayed **Parameter Value** for **CompressOnInsert** reflects the change.

Table 17.10-8. Use the DPM GUI to Enable/Disable Data Compression

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Configuration Parameters** link	**single-click**
3	**CompressOnInsert** option (i.e., **ON** or **OFF** in the **Parameter Value** column of the row for the **CompressOnInsert** parameter)	**single-click**
4	check box (in the **Click on Box to Modify Parm** column of the row for the **CompressOnInsert** parameter)	**single-click**
5	**Apply Change** button	**single-click**

17.10.8 Use the DPM GUI to View a List of Compression Algorithms

The **DPM GUI Manage Compression Algorithms** link permits both full-capability operators and limited-capability operators to view the current compression algorithms. The full-capability operator only may add, modify, or deactivate compression algorithms.

Table 17.10-9 presents the steps required to use the DPM GUI to view a list of compression algorithms. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).
- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Compression Algorithms** link.

- The **Compression Algorithms** page is displayed.

3 Observe data displayed on the **Compression Algorithms** page.

- The table on the **Compression Algorithms** page has columns containing the following types of compression algorithm information:
  - **Compression Label.**
  - **File Extension.**
  - **Compression Command.**
  - **Decompression Command.**
- The following links are available on the **Compression Algorithms** page:
  - **Add Compression Algorithm.**
  - **Modify Compression Algorithm.**
  - **Deactivate Compression Algorithm.**

Table 17.10-9. Use the DPM GUI to View a List of Compression Algorithms

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Compression Algorithms** link	**single-click**
3	Observe compression algorithms data	**read text**

17.10.9 Use the DPM GUI to Modify Compression Algorithms

The **DPM GUI** may be used to modify compression algorithms. This can be useful if the file extension, compression command, or decompression command needs to be modified or updated. A full-capability operator may use the procedure that follows to modify compression algorithms.

Table 17.10-10 presents the steps required to use the DPM GUI to modify compression algorithms. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Compression Algorithms** link.

- The **Compression Algorithms** page is displayed, providing a table listing all compression algorithms and showing algorithm-related information in four columns: **Compression Label**, **File Extension**, **Compression Command**, and **Decompression Command**. There are links (i.e., **Add Compression Algorithm**, **Modify Compression Algorithm** and **Deactivate Compression Algorithm**) that can be selected.

3 Click on the **Modify Compression Algorithm** link at the bottom of the list of **Compression Algorithms** (scrolling down if necessary).

- The **Modify Compression Algorithm** page is displayed.

4 To modify the default file extension for a compression algorithm type the desired file extension in the appropriate **File Extension** field.

- The file extension may have no more than ten characters.
- The typed entry is displayed in the field.

5 To modify the compression command for a compression algorithm type the desired compression command in the appropriate **Compression Command** field.

- The compression command may have no more than 255 characters.
- Include the full path and parameters.
- Use "%infile" to represent the file to be compressed.
  - For example:

    /usr/bin/gzip –1 %infile
- The typed entry is displayed in the field.

6 To modify the decompression command for a compression algorithm type the desired decompression command in the appropriate **Decompression Command** field.

- The decompression command may have no more than 255 characters.
- Include the full path and parameters.
- Use "%infile" to represent the file to be compressed.
  - For example:

    /usr/bin/gunzip –1 %infile
- The typed entry is displayed in the field.

7 Click in the check box at the end of the row containing modified compression algorithm information.

- The compression algorithm is marked for subsequent modification. (A check mark is displayed in the selected check box.)

8 Repeat Steps 4 through 7 as necessary to modify additional compression algorithms.

9 Click on the **Apply Change** button.

- The modified compression algorithm information is added to the Data Pool Database.
- The **Compression Algorithms** page is displayed with the revised compression algorithm information.

Table 17.10-10. Use the DPM GUI to Modify Compression Algorithms

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Compression Algorithms** link	**single-click**
3	**Modify Compression Algorithm** link	**single-click**
4	***extension*** (in the appropriate **File Extension** field) (if applicable)	**enter text**
5	***command*** (in the appropriate **Compression Command** field) (if applicable)	**enter text**
6	***command*** (in the appropriate **Decompression Command** field) (if applicable)	**enter text**
7	check box (at the end of the row containing modified compression algorithm information)	**single-click**
8	Repeat Steps 4 through 7 (as necessary)	
9	**Apply Change** button	**single-click**

17.10.10 Use the DPM GUI to Add a Compression Algorithm

A full-capability operator may use the procedure that follows to add a compression algorithm. Table 17.10-11 presents the steps required to use the DPM GUI to add a compression algorithm. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Compression Algorithms** link.

- The **Compression Algorithms** page is displayed, providing a table listing all compression algorithms and showing algorithm-related information in four columns: **Compression Label**, **File Extension**, **Compression Command**, and **Decompression Command**. There are links (i.e., **Add Compression Algorithm**, **Modify**

Compression Algorithm and **Deactivate Compression Algorithm**) that can be selected.

3 Click on the **Add Compression Algorithm** link at the bottom of the list of compression algorithms (scrolling down if necessary).

- The **Add Compression Algorithm** page is displayed, providing a table of compression algorithms showing four columns: **Compression Label**, **File Extension**, **Compression Command**, and **Decompression Command**.
- There is an **Add Algorithm** button at the bottom of the page to implement the new algorithm.

4 Type the desired compression label in the **Compression Label** field.

- The label may have no more than ten characters.
- The typed entry is displayed in the field.

5 If applicable, type the desired default file extension in the **File Extension** field.

- The file extension may have no more than ten characters.
- The typed entry is displayed in the field.

6 Type the compression command in the **Compression Command** field.

- The compression command may have no more than 255 characters.
- Include the full path and parameters.
- Use "%infile" to represent the file to be compressed.
  - For example:

    /usr/bin/gzip –1 %infile
- The typed entry is displayed in the field.

7 If applicable, type the decompression command in the **Decompression Command** field.

- The decompression command may have no more than 255 characters.
- Include the full path and parameters.
- Use "%infile" to represent the file to be compressed.
  - For example:

    /usr/bin/gunzip –1 %infile
- The typed entry is displayed in the field.

8 Click on the **Add Algorithm** button.

- The compression algorithm is added to the Data Pool Database.
- The **Compression Algorithms** page is displayed with the new compression algorithm.

Table 17.10-11. Use the DPM GUI to Add a Compression Algorithm

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Compression Algorithms** link	**single-click**
3	**Add Compression Algorithm** link	**single-click**
4	***label*** (in the **Compression Label** field)	**enter text**
5	***extension*** (in the **File Extension** field) (if applicable)	**enter text**
6	***command*** (in the **Compression Command** field)	**enter text**
7	***command*** (in the **Decompression Command** field) (if applicable)	**enter text**
8	**Add Algorithm** button	**single-click**

17.10.11 Use the DPM GUI to Deactivate a Compression Algorithm

A full-capability operator may use the procedure that follows to deactivate a compression algorithm. Table 17.10-12 presents the steps required to use the DPM GUI to deactivate a compression algorithm. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

NOTE: Deactivating a compression algorithm removes the algorithm from the list of compression algorithms and dissociates it from all collections. However, it will still be possible to decompress any granules compressed with the algorithm.

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Compression Algorithms** link.

- The **Compression Algorithms** page is displayed, providing a table listing all compression algorithms and showing algorithm-related information in four columns: **Compression Label**, **File Extension**, **Compression Command**, and **Decompression Command**. There are links (i.e., **Add Compression Algorithm**, **Modify Compression Algorithm** and **Deactivate Compression Algorithm**) that can be selected.

3 Click on the **Deactivate Compression Algorithm** link at the bottom of the list of **Compression Algorithms** (scrolling down if necessary).

- The **Deactivate Compression Algorithm** page is displayed, providing a table of compression algorithms showing five columns: **Compression Label**, **File Extension**, **Compression Command**, **Decompression Command**, and **Check Box to Deactivate** (containing check boxes to mark algorithms for deactivation).
- There is a **Deactivate Selected** button at the bottom of the page to implement the deactivation(s).

4 To select compression algorithms to be marked for deactivation click in the appropriate check box(es) in the column on the far right of the **Deactivate Compression Algorithm** page.

- The compression algorithm(s) is (are) marked for subsequent deactivation. (A check mark is displayed in each selected check box.)

5 Click on the **Deactivate Selected** button.

- The selected compression algorithms are deactivated.

Table 17.10-12. Use the DPM GUI to Deactivate a Compression Algorithm

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Compression Algorithms** link	**single-click**
3	**Deactivate Compression Algorithm** link	**single-click**
4	check box(es) (in the column on the far right of the **Deactivate Compression Algorithm** page) (as applicable)	**single-click**
5	**Deactivate Selected** button	**single-click**

17.10.12 Use the DPM GUI to View Cloud Cover Information

The Synergy IV release provides the capability for users to view all cloud cover information in the Data Pool database. The DPM GUI **Manage Cloud Cover** link permits both full-capability and limited-capability operators to view all cloud cover information in the Data Pool database. In addition it allows full-capability operators to add new cloud cover information, modify cloud cover source descriptions, or delete cloud cover information.

Table 17.10-13 presents the steps required to use the DPM GUI to view cloud cover information. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Cloud Cover** link.

- The **Cloud Cover Information** page is displayed.

3 Observe data displayed on the **Cloud Cover Information** page.

- The table on the **Cloud Cover Information** page has columns containing the following types of cloud cover information:
  - **Source Type.**
  - **Source Name.**
  - **Source Description.**
- The following links are available on the **Cloud Cover Information** page:
  - **Add New Cloud Cover.**
  - **Modify Source Description.**
- An **Apply Change** button is available for deleting cloud cover information from the Data Pool database.

Table 17.10-13. Use the DPM GUI to View Cloud Cover Information

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Cloud Cover** link	**single-click**
3	Observe data displayed on the **Cloud Cover Information**	**read text**

17.10.13 Use the DPM GUI to Add New Cloud Cover Information

A full-capability operator may use the procedure that follows to add new cloud cover information. Table 17.10-14 presents the steps required to use the DPM GUI to add new cloud cover information. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Cloud Cover** link.

- The **Cloud Cover Information** page is displayed, providing a table listing all cloud cover information; i.e., **Source Type**, **Source Name**, and **Source Description**.
- The following links are available: **Add New Cloud Cover** and **Modify Source Description**.
- An **Apply Change** button is available for deleting cloud cover information from the Data Pool database.

3 Click on the **Add New Cloud Cover** link at the bottom of the **Cloud Cover Information** page (scrolling down if necessary).

- The **Add New Cloud Cover** page is displayed, providing a table of cloud cover information showing three rows: **Source Type**, **Source Name**, and **Source Description**.
- There is an **Apply Change** button at the bottom of the page to implement changes.

4 To display source type options click on the **Source Type** option button.

- Source type options are displayed (e.g., **Core Metadata** and **PSA**).

5 To select a source type click on the appropriate source type from the option list.

- If **Core Metadata** was selected, the **Source Name** field is automatically filled in.

6 To specify a source name type the desired name in the **Source Name** field.

- If **Core Metadata** was selected as the source type, the **Source Name** field is automatically filled in and cannot be edited.

7 Type a description of the cloud cover information in the **Source Description** field.

- The description may be up to 255 characters in length.

8 Click on the **Apply Changes** button.

- The source name is validated against the Science Data Server database.
- The new cloud cover information is entered in the Data Pool database.
- The **Cloud Cover Information** page is displayed with the new cloud cover information.

Table 17.10-14. Use the DPM GUI to Add New Cloud Cover Information

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Cloud Cover** link	**single-click**
3	**Add New Cloud Cover** link	**single-click**
4	**Source Type** option (e.g., **Core Metadata** or **PSA** from the **Source Type** option list)	**single-click**
5	***name*** (in the **Source Name** field)	**enter text**
6	***description*** (in the **Source Description** field)	**enter text**
7	**Apply Changes** button	**single-click**

17.10.14 Use the DPM GUI to Modify Cloud Cover Source Descriptions

Full-capability operators may use the procedure that follows to modify cloud cover source descriptions. Table 17.10-15 presents the steps required to use the DPM GUI to modify cloud cover source descriptions. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Cloud Cover** link.

- The **Cloud Cover Information** page is displayed, providing a table listing all cloud cover information; i.e., **Source Type**, **Source Name**, and **Source Description**.
- The following links are available: **Add New Cloud Cover** and **Modify Source Description**.
- An **Apply Change** button is available for deleting cloud cover information from the Data Pool database.

3 Click on the **Modify Source Description** link at the bottom of the **Cloud Cover Information** page (scrolling down if necessary).

- The **Modify Source Description** page is displayed, providing a table of cloud cover information showing four columns: **Source Type**, **Source Name**, **Source Description**, and **Click on box to modify** (containing a check box to mark the source description for change).

- There is an **Apply Change** button at the bottom of the page to implement changes.

4 To start the process of changing a source description type the desired description in the appropriate **Source Description** field.

5 To continue the process of changing a source description click in the check box at the end of the row containing modified source description information.
- The source description is marked for subsequent modification. (A check mark is displayed in the selected check box.)

6 Repeat Steps 4 and 5 for any additional source descriptions to be modified.

7 Click on the **Apply Change** button.
- The revised source description information is entered in the Data Pool database.
- The **Cloud Cover Information** page is displayed with the modified cloud cover information.

Table 17.10-15. Use the DPM GUI to Modify Cloud Cover Source Descriptions

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Cloud Cover** link	**single-click**
3	**Modify Source Description** link	**single-click**
4	***description*** (in the appropriate **Source Description** field)	**enter text**
5	check box (at the end of the row containing modified source description information)	**single-click**
6	Repeat Steps 4 and 5 (as necessary)	
7	**Apply Change** button	**single-click**

17.10.15 Use the DPM GUI to Delete Cloud Cover Information

A full-capability operator may use the procedure that follows to delete cloud cover information. Table 17.10-16 presents the steps required to use the DPM GUI to delete cloud cover information. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Cloud Cover** link.

- The **Cloud Cover Information** page is displayed, providing a table listing all cloud cover information; i.e., **Source Type**, **Source Name**, and **Source Description**.
- The following links are available: **Add New Cloud Cover** and **Modify Source Description**.
- An **Apply Change** button is available for deleting cloud cover information from the Data Pool database.

3 Click in the check box(es) at the end of the row(s) containing cloud cover information to be deleted.

- The selected source(s) is (are) marked for subsequent deletion.

4 Click on the **Apply Change** button.

- The selected source(s) is (are) deleted from the Data Pool database.
- If any cloud cover information is associated with any collection, it will not be deleted.
- The **Cloud Cover Information** page is displayed with the modified cloud cover information.

Table 17.10-16. Use the DPM GUI to Delete Cloud Cover Information

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Cloud Cover** link	**single-click**
3	check box(es) (at the end of the row(s) containing cloud cover information to be deleted)	**single-click**
4	**Apply Change** button	**single-click**

17.10.16 Check the Status of Batch Inserts

The DPM GUI provides a page to display a summary of the status of batch Data Pool inserts made using the Synergy batch insert utility. The procedure that follows is applicable to both full-capability and limited-capability operators.

Table 17.10-17 presents the steps required to use the DPM GUI to check the status of batch inserts. If you are already familiar with the procedure, you may prefer to use this quick-step

table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Batch Summary** link.

- The **Batch Summary** page is displayed.
- The GUI displays the **Batch Summary** page, providing for each batch label the numbers of inserts for that label that are **New**, **Completed**, **Failed**, in **Retry**, and **Canceled**.
- The page also shows the screen refresh rate in minutes; the rate may be changed by clicking in the **Screen Refresh Rate** field, replacing the displayed value with the desired value, and clicking on the **Apply Refresh Rate** button.

3 Observe data displayed on the **Batch Summary** page.

- The table on the **Batch Summary** page has columns containing the following types of information:
  - **Batch Label.**
  - **New (number of inserts for the label that are new).**
  - **Completed (number of inserts for the label that have been completed).**
  - **Failed (number of inserts for the label that have failed).**
  - **Retry (number of inserts for the label that have been retried).**
  - **Canceled (number of inserts for the label that have been canceled).**

4 To change the automatic screen refresh rate first type the desired number of minutes between refreshes in the **Screen Refresh Rate** text entry box.

5 To complete changing the automatic screen refresh rate click on the **ApplyRefreshRate** button adjacent to the **Screen Refresh Rate** text entry box.

- The **Screen Refresh Rate** is changed to the new value.

6 Return to Step 3.

Table 17.10-17. Check the Status of Batch Inserts

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Batch Summary** link	**single-click**
3	Observe batch summary data	**read text**
4	***minutes*** (in the **Screen Refresh Rate** text entry box) (if applicable)	**enter text**
5	**ApplyRefreshRate** button (if applicable)	**single-click**
6	Return to Step 3	

17.10.17 Check the Data Pool Insert Queue and Cancel a Data Pool Insert Action

The **List Insert Queue** page of the DPM GUI provides a list of Data Pool inserts left to process that both full-capability and limited-capability operators can view. It also provides for each listed insert a check box permitting a full-capability operator to mark queued inserts for cancellation, and an **Apply Change** button to implement the cancellation.

Table 17.10-18 presents the steps required to use the DPM GUI to check the Data Pool insert queue and cancel a Data Pool insert action. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **List Insert Queue** link.

- The **List Insert Queue** page is displayed.

3 Observe data displayed on the **List Insert Queue** page.

- The **List Insert Queue** page shows how many inserts are left to process as of the current date.
- The table on the **List Insert Queue** page has columns containing the following types of insert queue information:
  - **Data Source.**
  - **Batch Label.**

- **Dispatch Priority.**
- **RequestID.**
- **SubID (subscription identifier of the subscription selected by the software for processing).**
- **ECSID (ECS identifier or Granule ID for the granule to be processed).**
- **Collection (to which the granule belongs).**
- **Version (for the collection to which the granule belongs).**
- **Science Granules and/or Metadata (indication of whether the insert is to include science granules and metadata or just the metadata).**
- **Enqueue Time (time when the insert was placed in the insert queue).**
- **Retries [number of attempts by the process to recover from retriable errors (e.g., Data Pool disk temporarily unavailable, Data Pool directory does not exist, Data Pool database temporarily unavailable)].**
- **Status.**
- **Click on Box to Cancel (containing a check box to mark the insert for cancellation).**

NOTE: There may be multiple subscriptions specifying insertion of specific data into the Data Pool, but only one insert is needed; therefore, only one of the subscriptions serves as the basis for the insert action. The **SubID** is of no particular significance to an operator and may safely be ignored.

- There is an **Apply Change** button at the bottom of the page for implementing cancellations.
- There is a **Continue** link at the bottom of the page; if there are more inserts than can be displayed in the space of one page, the **Continue** link displays the next page of the list.

4 To cancel an insert first click on the check box at the end of the row of information for the insert to be canceled.
- The insert is marked for subsequent cancellation.
- The check box for the selected insert is filled to indicate selection.

5 Repeat Step 4 for any additional insert to be canceled.

6 To implement the cancellation of insert(s) click on the **Apply Change** button.
- A confirmation message is displayed; it asks "Are you ready to cancel the insert for . . ." and there are links displayed for **Yes, cancel insert** and **No, return to previous page**.

7 To confirm cancellation, click on the **Yes, cancel insert** link.

- The **List Insert Queue** page is displayed with the canceled insert(s) removed and the count of inserts left to process reduced by the number of inserts canceled.

Table 17.10-18. Check the Data Pool Insert Queue and Cancel a Data Pool Insert Action

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**List Insert Queue** link	**single-click**
3	Observe list insert queue data	**read text**
4	check box (at the end of the row of information for the insert to be canceled)	**single-click**
5	Repeat Step 4 (as necessary)	enter text
6	**Apply Change** button	**single-click**
7	**Yes, cancel insert** link	**single-click**

17.10.18 View DPM Configuration Parameter Values

The **List of Configuration Parameters** page on the **DPM GUI** allows a full-capability operator to set or change values assigned to Data Pool Management configuration parameters. Limited-capability operators have read-only access to the page.

The following parameters are examples of the types of parameters in the Data Pool database that the full-capability operator can modify:

- **ActionQueueCleanupFrequency** - frequency in seconds when the action queue is checked for completed actions and those older than the configured retention period are removed.
- **BatchSummaryAutoRefresh** – autorefresh rate for the **Batch Summary** page.
- **CompressOnInsert** - turns compression **ON** or **OFF**.
- **DefaultRetentionPeriod** - default retention period in days for all Data Pool Insert Actions.
- **DefaultRetentionPriority** - default retention priority for all Data Pool Inserts actions. The range of valid values is 1 – 255.
- **DeleteCompletedActionsAfter** - time in minutes that operators let completed actions stay in the insert action queue before making them eligible for removal. The delay is intended to provide the operator with some ability to check on past actions. The time period should not be too long.
- **DisplayAIPChunkSize** - number of rows to return per chunk for the AIP list.
- **HEGCleanupAge** – HDF-EOS to GeoTIF Converter (HEG) cleanup age in days.

- **IdleSleep** - number of seconds to sleep when there is nothing to do.
- **InCacheTimeLimit** - maximum time in minutes that operators are willing to wait for a Data Pool Insert Utility (DPIU) process to complete when its files are in cache. When the time limit is reached, the Data Pool Action Driver (DPAD) kills the process and retries the action.
- **InsertRetryWait** - number of seconds to wait before an insert that failed should be resubmitted (if it can be retried).
- **MFSOnInsert** – specifies whether or not (**YES** or **NO**) DPAD should use the Multiple File System table.
- **MaxInsertRetries** - maximum number of times an insert should be tried again (-1 means forever).
- **MaxReadDrivesPerArchive** - maximum number of tape drives in use simultaneously.
- **MaxTapeMountPerRequest** - maximum number of tape mounts allowed per request.
- **NewActionCheckFrequency** – number of seconds before checking for new actions. DPAD always checks to determine whether we are out of actions that can be dispatched, so unless getting things queued up in memory is urgent, this could be a time interval of minutes.
- **NumOfAllowedCacheProcesses** - maximum number of insert processes that require access to cache.
- **NumOfAllowedInsertProcesses** - maximum number of insert processes running at any time.
- **NumOfAllowedNonCacheProcesses** - maximum number of insert processes that require access to tape.
- **OnTapeTimeLimit** - maximum time in hours operators are willing to wait for a DPIU process to complete when its files are not in cache. After the time limit, DPAD kills the process and retries the action.
- **RefreshRate** - DPM **Home Page** refresh rate in seconds.
- **RunAwayCheckFrequency** – number of seconds before checking again for runaway processes. It is recommended that **RunAwayCheckFrequency** not be much less than **InCacheTimeLimit**.
- **SizeOfInsertQueueList** - number of Data Pool Insert Queue entries that the **DPM GUI** can display on a page at any one time.
- **StartUpWait** - number of seconds to delay start-up while trying to clean out left-over DPIU processes.

Section 17.10.3, **Use the DPM GUI to Monitor Data Pool Active Insert Processes**, addresses changing the **Screen Refresh Rate** parameter using an entry field on the **Home Page**. The parameter may also be changed using an entry field on the **Manage Configuration Parameters** page. Section 17.10.7, **Use the DPM GUI to Enable/Disable Data Compression**, describes the procedure for changing the **CompressOnInsert** parameter was described.

Although most of the parameters managed on the **Manage Configuration Parameters** page are not likely to be changed frequently, the operator may want to change some of them for tuning the Data Pool. Data Pool tuning parameters can be used to help meter the flow of data into the Data Pool and to adjust retention priority and duration to maintain optimum usage of Data Pool storage. To determine the best settings, it is necessary to monitor Data Pool inserts and disk space and adjust the parameters based on experience and projected functioning.

Both full-capability operators and limited-capability operators can view DPM configuration parameter values. Table 17.10-19 presents the steps required to use the DPM GUI to view DPM configuration parameter values. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Configuration Parameters** link.

- The **List of Configuration Parameters** page is displayed.

3 Observe data displayed on the **List of Configuration Parameters** page.

- The table on the **List of Configuration Parameters** page has columns containing the following types of Data Pool file system information:
  - **Parameter Name.**
  - **Parameter Value** (including an entry field with current value, followed by a brief description of the parameter).
  - **Click on Box to Modify Parm** (containing a check box to mark the parameter for change).
- The rows in the table indicate the current values and descriptions of the parameters.
- There is an **Apply Change** button at the bottom of the page for implementing changes.

Table 17.10-19. View DPM Configuration Parameter Values

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Configuration Parameters** link	**single-click**
3	Observe configuration parameters data	**read text**

17.10.19 Modify DPM Configuration Parameter Values

Full-capability operators (only) can modify DPM configuration parameter values. Table 17.10-20 presents the steps required to use the DPM GUI to modify DPM configuration parameter values. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Configuration Parameters** link.

- The **List of Configuration Parameters** page is displayed, providing a table of DPM configuration parameters showing three columns: **Parameter Name**, **Parameter Value** (including an entry field with current value, followed by a brief description of the parameter), and **Click on Box to Modify Parm** (containing a check box to mark the parameter for change).
- There is an **Apply Change** button at the bottom of the page for implementing changes.

3 If there is an option list for the parameter value to be changed, first click on the corresponding option button.

- Options are displayed (e.g., **ON** and **OFF**).

4 If there is an option list for the parameter value to be changed, click on the appropriate choice (e.g., **ON**).

5 If there is no option list for the parameter value to be changed, type the desired value in the corresponding text entry box.

6 Click in the check box at the end of the row containing the parameter value to be modified.

- The selected file system information is marked for modification.

7 Repeat Steps 3 through 6 for any additional parameter values to be modified.

8 To implement the modification of parameter value(s) click on the **Apply Change** button.

- The **List of Configuration Parameters** page is refreshed, the check box(e) is (are) unfilled, and the displayed **Parameter Value**(s) reflect(s) the change(s) implemented.

Table 17.10-20. Modify DPM Configuration Parameter Values

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Configuration Parameters** link	**single-click**
3	option (from the appropriate option list) (if applicable)	**single-click**
4	***value*** (in the appropriate text entry box) (if applicable)	**enter text**
5	check box (at the end of the row containing the parameter value to be modified)	**single-click**
6	Repeat Steps 3 through 5 (as necessary)	
7	**Apply Change** button	**single-click**

17.10.20 Use the DPM GUI to View Collection Group and Collection Information

The conceptual structure of the data pool is set up for each DAAC based on the collections and granules archived at the DAAC. Related collections are grouped in **Collection Groups** (e.g., ASTER collections and granules from the Terra mission, MODIS Oceans collections and granules from the Terra Mission, MISR collections and granules from the Terra mission, MODIS Snow and Ice collections and granules from the Terra mission). Each collection group initially consists of a number of collections that have been specified as valid for Data Pool insertion (i.e., granules of the data types in the collection may be inserted into the Data Pool).

The **Collection Groups** page of the **DPM GUI** allows both full-capability operators and limited-capability operators to view collection groups. It also provides access to pages for viewing collections within a collection group. In addition, the page has links that allow a full-capability operator to modify or add a collection group or collection in the Data Pool database.

Both full-capability operators and limited-capability operators can use the procedure that follows to display the list of collection groups that have collections specified as valid for Data Pool insertion and to view information about those collections. Table 17.10-21 presents the steps required to use the DPM GUI to view collection group and collection information. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Collection Groups** link.

- The **Collection Groups** page is displayed.

3 Observe data displayed on the **Collection Groups** page.

- The table on the **Collection Groups** page has columns containing the following types of collection group information:
  - **Data Source** (i.e., ECS or NON-ECS).
  - **Group ID.**
  - **Display Name.**
  - **Description.**
- The following links are available on the **Collection Groups** page:
  - Each collection listed in the **Group ID** column links to a **Collection Group Detail** page.
  - **Add Collection Group.**
  - **Modify Collection Group.**

4 To obtain more information about the collections in one of the groups, click on its link in the **Group ID** column.

- The **Collection Group Detail** page is displayed.

5 Observe data displayed on the **Collection Group Detail** page.

- Near the top of the **Collection Group Detail** page is the following basic collection group information:
  - **Data Source** (i.e., ECS or NON-ECS).
  - **Group ID.**
  - **Display Name.**
  - **Description.**
- There is a file system filter (and associated **Apply Filter** button) for displaying data on the **Collection Group Detail** page for all file systems or by individual file system.
- The table on the **Collection Group Detail** page has columns containing the following types of collection group information:
  - **Collection**.
  - **Version.**
  - **Compression Command Label.**
  - **Science Granules and/or Metadata.**
  - **Data Pool Insertion.**
  - **HEG Processing.**
  - **Export Urls to ECHO.**
  - **Quality Summary Url.**
  - **Spatial Search Type.**

  - **Global Coverage.**
  - **Day/Night Coverage.**
  - **24 Hour Coverage.**
  - **Cloud Coverage.**
- The following links are available on the **Collection Group Detail** page:
  - Each collection listed in the **Collection** column links to a **Collection Detail** page.
  - **Add New Collection.**
  - **Return to previous page.**

6 To filter data displayed on the **Collection Group Detail** page first click on the **File System** filter option button.
- Options are displayed.

7 To select a file system filter option click on the appropriate choice from the option list.

8 To implement the filtering of data displayed on the **Collection Group Detail** page click on the **Apply Filter** button.
- The **Collection Group Detail** page is displayed with the filtered collection group information.

9 If data displayed on the **Collection Group Detail** page were filtered, observe data displayed on the **Collection Group Detail** page.
- Refer to Step 5.

10 To obtain more information about one of the collections in the collection group, click on its link in the **Collection** column.
- The **Collection Detail** page is displayed.

11 Observe data displayed on the **Collection Detail** page.
- Near the top of the **Collection Detail** page is the following basic collection group information:
  - **Data Source** (i.e., ECS or NON-ECS).
  - **Group ID.**
  - **Display Name.**
  - **Description.**
- The table on the **Collection Detail** page has rows containing the following types of collection information:
  - **Collection**.
  - **Version.**
  - **Description.**
  - **File System.**
  - **Compression Command Label.**

  - **Science Granules and/or Metadata.**
  - **Data Pool Insertion.**
  - **HEG Processing.**
  - **Export Urls to ECHO.**
  - **Quality Summary Url.**
  - **Spatial Search Type.**
  - **Global Coverage.**
  - **Day/Night Coverage.**
  - **24 Hour Coverage.**
  - **Cloud Cover Type.**
  - **Cloud Cover Source.**
  - **Cloud Cover Description.**
- The following links are available on the **Collection Detail** page:
  - **Modify Collection.**
  - **Return to previous page.**

12 To view a description for another collection in the same group first click on the **Return to previous page** link.

- The **Collection Group Detail** page is displayed again.

13 To view a description for another collection in the same group return to Step 10.

14 To view a description for another collection in another group return to Step 2.

Table 17.10-21. Use the DPM GUI to View Collection Group and Collection Information

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Collection Groups** link	**single-click**
3	**Collection Groups** page	**single-click**
4	***group*** link (in the **Group ID** column)	**single-click**
5	Observe collection group detail information	**read text**
6	File system filter option (from the the option list) (if applicable)	**single-click**
7	**Apply Filter** button (if applicable)	**single-click**
8	Observe collection group detail information	**read text**
9	***collection*** link in the **Collection** column	**single-click**
10	Observe collection detail information	**read text**
11	**Return to previous page** link (if applicable)	**single-click**
12	Return to Step 9 (if applicable)	
13	Return to Step 2 (if applicable)	

17.10.21 Use the DPM GUI to Modify Collection Groups

Rarely, it may be desirable to modify the description of one or more of the collection groups listed on the **Collection Groups** page. If there is a need to modify a collection group description, there is a link at the bottom of the list on that page providing access to a page that permits the descriptions to be modified. Full-capability operators (only) can use the procedure that follows to modify collection groups.

Table 17.10-22 presents the steps required to use the DPM GUI to modify collection groups. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Collection Groups** link.

- The **Collection Groups** page is displayed, providing a table listing collection group information; i.e., **Source Type**, **Group ID**, **Display Name**, and **Description**.

- The following links are available: **Add Collection Group**, **Modify Collection Group**, and each collection listed in the **Group ID** column links to a **Collection Group Detail** page.

3 Click on the **Modify Collection Group** link at the bottom of the page.

- The **Modify Collection Group** page is displayed, providing a table of collection group information showing five columns: **Data Source**, **Group ID**, **Display Name**, **Description**, and **Check box to modify** (containing a check box to mark the collection group for change).
- There is an **Apply Change** button at the bottom of the page for implementing changes.

4 To change the display name for the collection group type the desired name in the **Display Name** field for the group ID.

- The **Display Name** may have no more than 12 characters.
  - Valid characters include A-Z, 0-9, underscore and space.

5 To change the description of the collection group type the desired description in the **Description** field for the group ID.

- The **Description** may have no more than 255 characters.

6 Click in the check box at the end of the row containing collection group information to be modified.

- The selected collection group information is marked for modification.

7 Repeat Steps 4 through 6 for any additional collection groups to be modified.

8 Click on the **Apply Change** button.

- The revised collection group information is entered in the Data Pool database.
- The **Collection Groups** page is displayed with the modified collection group information.

Table 17.10-22. Use the DPM GUI to Modify Collection Groups

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Collection Groups** link	**single-click**
3	**Modify Collection Group** link	**single-click**
4	***name*** (in the **Display Name** field for the group ID) (if applicable)	**enter text**
5	***description*** (in the **Description** field for the group ID) (if applicable)	**single-click**
6	check box (at the end of the row containing collection group information to be modified)	**single-click**
7	Repeat Steps 4 through 6 (as necessary)	
8	**Apply Change** button	**single-click**

17.10.22 Use the DPM GUI to Add a Collection Group

From time to time, it may be necessary to add a collection group (e.g., if a DAAC begins archiving data from a new instrument). If a collection group is to be added to the list of collection groups, it is necessary to use the **Add Collection Group** link at the bottom of the **Manage Collection Groups** page. Full-capability operators (only) can use the procedure that follows to modify collection groups.

NOTE: Although the following procedure is applicable, most of the time new collection groups will be added only during releases of new software versions and you will not use this procedure often.

Caution

The Add Collection Group function is to be exercised judiciously because the **DPM GUI** does not provide any means of deleting collection groups.

Table 17.10-23 presents the steps required to use the DPM GUI to add a collection group. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Collection Groups** link.

- The **Collection Groups** page is displayed, providing a table listing collection group information; i.e., **Source Type**, **Group ID**, **Display Name**, and **Description**.
- The following links are available: **Add Collection Group**, **Modify Collection Group**, and each collection listed in the **Group ID** column links to a **Collection Group Detail** page.

3 Click on the **Add Collection Group** link at the bottom of the page.

- The screen displays a page with four columns of text-entry fields: **Data Source**, **Group ID**, **Display Name**, and **Description**.

4 To display data source options click on the **Data Source** option button.

- **Data Source** options are displayed (i.e., **ECS** and **NON-ECS**).

5 To select a data source option click on the appropriate choice from the option list.

6 Type a unique identifier for the new collection group in the **Group ID** field.

- The **Group ID** may have no more than 12 characters.
  - Valid characters include A-Z, 0-9, and underscore.
- The **Group ID** will be compared with the existing **Group IDs** to ensure that it is not a duplicate of another ID.

7 To provide a display name that is different from the **Group ID** type a name in the **Display Name** field.

- The **Display Name** is the name for the collection as displayed on the **Data Pool Web Access GUI**.
- If no **Display Name** is entered, the **Group ID** will be used as the **Display Name**.
- The **Display Name** may have no more than 12 characters.
  - Valid characters include A-Z, 0-9, underscore and space.

8 Type the description for the new collection group in the **Description** field.

- The **Description** may have no more than 255 characters.

9 Click on the **Apply Change** button.

- The new collection group information is entered in the Data Pool database.
- The **Collection Groups** page is displayed with the new collection group information.

Table 17.10-23. Use the DPM GUI to Add a Collection Group

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Collection Groups** link	**single-click**
3	**Add Collection Group** link	**single-click**
4	**Data Source** option (i.e., **ECS** or **NON-ECS** from the **Data Source** option list)	**single-click**
5	***identifier*** (in the **Group ID** field)	**enter text**
6	***name*** in the **Display Name** field) (if applicable)	**enter text**
7	***description*** (in the **Description** field)	**enter text**
8	**Apply Change** button	**single-click**

17.10.23 Use the DPM GUI to Add an ECS Collection to a Collection Group

Although an initial Data Pool structure is provided, not all collections are necessarily specified as eligible for Data Pool insertion. Based on experience, or on changes in demand, a DAAC may wish to add one or more collections to a data group. The procedure for adding ECS collections to a collection group is somewhat different from the procedure for adding a non-ECS collection to a collection group. Full-capability operators (only) can use the procedure that follows to add an ECS collection to an existing collection group.

Table 17.10-24 presents the steps required to use the DPM GUI to add an ECS collection to a collection group. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Collection Groups** link.

- The **Collection Groups** page is displayed, providing a table listing collection group information; i.e., **Source Type**, **Group ID**, **Display Name**, and **Description**.
- The following links are available: **Add Collection Group**, **Modify Collection Group**, and each collection listed in the **Group ID** column links to a **Collection Group Detail** page.

3 Click on the **Group ID** link for the ECS collection group to which the collection is to be added.

- The **Collection Group Detail (List of Collections)** page is displayed with the following basic collection group information near the top of the page: **Data Source** (i.e., ECS), **Group ID**, **Display Name**, and **Description.**
- There is a file system filter (and associated Apply Filter button) for displaying data on the Collection Group Detail page for all file systems or by individual file system.
- The table on the Collection Group Detail page has 13 columns containing the following types of collection group information: Collection, Version, Compression Command Label, Science Granules and/or Metadata, Data Pool Insertion, HEG Processing, Export Urls to ECHO, Quality Summary Url, Spatial Search Type, Global Coverage, Day/Night Coverage, 24 Hour Coverage, and Cloud Coverage.
- The following links are available: Add New Collection, Return to previous page, and each collection listed in the Collection column links to a Collection Detail page.

4 Click on the **Add New Collection** link at the bottom of the **Collection Group Detail (List of Collections)** page.

- The **Collections Not in Data Pool** page is displayed with the following basic collection group information near the top of the page: **Data Source** (i.e., ECS), **Group ID**, **Display Name**, and **Description.**
- The table on the **Collections Not in Data Pool** page has three columns containing the following types of collection group information: **Collection**, **Version**, and **Description**.
- The following links are available: **Return to previous page** and each collection listed in the **Collection** column links to a **Collection Detail** page.

5 Click on the link (in the **Collection** column) of the collection to be added to the collection group.

- The **Add New Collection** page is displayed with the following basic collection group information near the top of the page: **Data Source** (i.e., ECS), **Group ID**, **Display Name**, and **Description.**
- The **Add New Collection** page has a table of collection information showing 13 rows: **Collection**, **Version**, **Description**, **File System**, **Compression Command Label**, **Science Granules and/or Metadata**, **Data Pool Insertion**, **Quality**

Summary Url, **Spatial Search Type**, **Global Coverage**, **Day/Night Coverage**, **24 Hour Coverage**, and **Cloud Cover Type & Source**.

- There is an **Apply Change** button at the bottom of the page to implement the new collection in the collection group.

NOTE: On the ECS collection version of the **Add New Collection** page the **Collection**, **Version**, **Description**, and **Spatial Search Type** fields are already filled in using information from the Data Pool database.

6 To display file system options (if applicable) click on the **File System** option button.

- **File System** options are displayed (if there are multiple Data Pool file systems).

7 To select a file system option (if applicable) click on the appropriate choice from the **File System** option list.

8 To display compression command label options (if applicable) click on the **Compression Command Label** option button.

- **Compression Command Label** options are displayed.
- Selection of a compression command label is not required.

9 To select a compression command label option (if applicable) click on the appropriate choice from the **Compression Command Label** option list.

10 To display science granules and/or metadata options click on the **Science Granules and/or Metadata** option button.

- **Science Granules and/or Metadata** options (i.e., **Science and Metadata** and **Metadata Only**) are displayed.

11 To select a science granules and/or metadata option click on the appropriate choice from the **Science Granules and/or Metadata** option list.

- **Science and Metadata** is the default option.

12 To display data pool insertion options click on the **Data Pool Insertion** option button.

- **Data Pool Insertion** options (i.e., **Invalid for Data Pool** and **Valid for Data Pool**) are displayed.

13 To select a data pool insertion option click on the appropriate choice from the **Data Pool Insertion** option list.

- **Invalid for Data Pool** is the default option.
- **Valid for Data Pool** must be selected if the collection is to be eligible for insertion into the Data Pool.

14 If the collection is to be linked to a quality summary web site, enter the URL in the **Quality Summary** text entry field.

- Ensure that **http://** is included in the **Quality Summary** text entry field.

15 To display global coverage options click on the **Global Coverage** option button.

- **Global Coverage** options are displayed.

16 To select a global coverage option click on the appropriate choice from the **Global Coverage** option list.

- **Yes** indicates no spatial searches for the collection.
- **No** indicates that spatial searches are allowed for the collection.

17 To display day/night coverage options click on the **Day/Night Coverage** option button.

- **Day/Night Coverage** options are displayed.

18 To select a day/night coverage option click on the appropriate choice from the **Day/Night Coverage** option list.

- **Yes** indicates that day/night searches are allowed for the collection.
- **No** indicates that the collection is excluded from day/night searches.

19 To display 24-hour coverage options click on the **24 Hour Coverage** option button.

- **24 Hour Coverage** options are displayed.

20 To select a 24-hour coverage option click on the appropriate choice from the **24 Hour Coverage** option list.

- **Yes** indicates that the collection is excluded from time of day searches.
- **No** indicates that time of day searches are allowed for the collection.

21 To display cloud cover type and source options click on the **Cloud Cover Type & Source** option button.

- **Cloud Cover Type & Source** options are displayed.

22 To select a cloud cover type and source option click on the appropriate choice from the **Cloud Cover Type & Source** option list.

- All cloud cover information in the Data Pool database is listed.
- If the desired cloud cover type/source is not listed, it can be entered using the **Use the DPM GUI to Add New Cloud Cover Information** procedure (Section 17.10.13).

23 To view details of cloud cover type and source (if applicable) click on the **View Details** link adjacent to the **Cloud Cover Type & Source** option list.

24 Click on the **Apply Change** button.

- The new collection information is entered in the Data Pool database.
- The **Collection Group Detail** page is displayed with the new collection information.

Table 17.10-24. Use the DPM GUI to Add an ECS Collection to a Collection Group

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Collection Groups** link	**single-click**
3	***group*** link (in the **Group ID** column)	**single-click**
4	**Add New Collection** link	**single-click**
5	***collection*** link (in the **Collection** column)	**single-click**
6	**File System** option (from the **File System** option list) (if applicable)	**single-click**
7	**Compression Command Label** option (from the **Compression Command Label** option list) (if applicable)	**single-click**
8	**Science Granules and/or Metadata** option (from the **Science Granules and/or Metadata** option list)	**single-click**
9	**Data Pool Insertion** option (from the **Data Pool Insertion** option list)	**single-click**
10	***URL*** (in the **Quality Summary** text entry field)	**enter text**
11	**Global Coverage** option (from the **Global Coverage** option list)	**single-click**
12	**Day/Night Coverage** option (from the **Day/Night Coverage** option list)	**single-click**
13	**24 Hour Coverage** option (from the **24 Hour Coverage** option list)	**single-click**
14	**Cloud Cover Type & Source** option (from the **Cloud Cover Type & Source** option list)	**single-click**
15	**View Details** link (if applicable)	**single-click**
16	**Apply Change** button	**single-click**

17.10.24 Use the DPM GUI to Add a NON-ECS Collection to a Collection Group

Full-capability operators (only) can use the procedure that follows to add a NON-ECS collection to an existing collection group. Table 17.10-25 presents the steps required to use the DPM GUI to add a NON-ECS collection to a collection group. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Collection Groups** link.

- The **Collection Groups** page is displayed, providing a table listing collection group information; i.e., **Source Type**, **Group ID**, **Display Name**, and **Description**.
- The following links are available: **Add Collection Group**, **Modify Collection Group**, and each collection listed in the **Group ID** column links to a **Collection Group Detail** page.

3 Click on the **Group ID** link for the non-ECS collection group to which the collection is to be added.

- The **Collection Group Detail (List of Collections)** page is displayed with the following basic collection group information near the top of the page: **Data Source** (i.e., NON-ECS), **Group ID**, **Display Name**, and **Description.**
- There is a file system filter (and associated Apply Filter button) for displaying data on the Collection Group Detail page for all file systems or by individual file system.
- The table on the Collection Group Detail page has 13 columns containing the following types of collection group information: Collection, Version, Compression Command Label, Science Granules and/or Metadata, Data Pool Insertion, HEG Processing, Export Urls to ECHO, Quality Summary Url, Spatial Search Type, Global Coverage, Day/Night Coverage, 24 Hour Coverage, and Cloud Coverage.
- The following links are available: Add New Collection, Return to previous page, and each collection listed in the Collection column links to a Collection Detail page.

4 Click on the **Add New Collection** link at the bottom of the **Collection Group Detail (List of Collections)** page.

- The **Add New Collection** page is displayed with the following basic collection group information near the top of the page: **Data Source** (i.e., NON-ECS), **Group ID**, **Display Name**, and **Description.**
- The **Add New Collection** page has a table of collection information showing 13 rows: **Collection**, **Version**, **Description**, **File System**, **Compression Command Label**, **Science Granules and/or Metadata**, **Data Pool Insertion**, **Quality Summary Url**, **Spatial Search Type**, **Global Coverage**, **Day/Night Coverage**, **24 Hour Coverage**, and **Cloud Cover Type & Source**.
- There is an **Apply Change** button at the bottom of the page to implement the new collection in the collection group.

5 Type a name for the new collection in the **Collection** text entry field.
- The name for the new collection may have no more than eight characters.
  - Valid characters include A-Z, 0-9, and underscore.
- The name must start with a letter.
- The name will be compared with the existing collection names to ensure that it is not a duplicate of another one.

6 Type a version number for the new collection in the **Version** text entry field.

7 Type a description for the new collection in the **Description** text entry field.
- The description for the new collection may have no more than 255 characters.

8 To display file system options (if applicable) click on the **File System** option button.
- **File System** options are displayed (if there are multiple Data Pool file systems).

9 To select a file system option (if applicable) click on the appropriate choice from the **File System** option list.

10 To display compression command label options click on the **Compression Command Label** option button.
- **Compression Command Label** options are displayed.
- Selection of a compression command label is not required.

11 To select a compression command label option click on the appropriate choice from the **Compression Command Label** option list.

12 To display science granules and/or metadata options click on the **Science Granules and/or Metadata** option button.
- **Science Granules and/or Metadata** options (i.e., **Science and Metadata** and **Metadata Only**) are displayed.

13 To select a science granules and/or metadata option click on the appropriate choice from the **Science Granules and/or Metadata** option list.
- **Science and Metadata** is the default option.

14 To display data pool insertion options click on the **Data Pool Insertion** option button.
- **Data Pool Insertion** options (i.e., **Invalid for Data Pool** and **Valid for Data Pool**) are displayed.

15 To select a data pool insertion option click on the appropriate choice from the **Data Pool Insertion** option list.
- **Invalid for Data Pool** is the default option.

- **Valid for Data Pool** must be selected if the collection is to be eligible for insertion into the Data Pool.

16 If the collection is to be linked to a quality summary web site, enter the URL in the **Quality Summary** text entry field.
- Ensure that **http://** is included in the **Quality Summary** text entry field.

17 To display spatial search type options click on the **Spatial Search Type** option button.
- **Spatial Search Type** options (e.g., **Not Supported**, **Orbit**, **Rectangle**, and **GPolygon**) are displayed.

18 To select a spatial search type option click on the appropriate choice from the **Spatial Search Type** option list.
- **Not Supported** is the default spatial search type.

19 To display global coverage options click on the **Global Coverage** option button.
- **Global Coverage** options are displayed.

20 To select a global coverage option click on the appropriate choice from the **Global Coverage** option list.
- **Yes** indicates no spatial searches for the collection.
- **No** indicates that spatial searches are allowed for the collection.

21 To display day/night coverage options click on the **Day/Night Coverage** option button.
- **Day/Night Coverage** options are displayed.

22 To select a day/night coverage option click on the appropriate choice from the **Day/Night Coverage** option list.
- **Yes** indicates that day/night searches are allowed for the collection.
- **No** indicates that the collection is excluded from day/night searches.

23 To display 24-hour coverage options click on the **24 Hour Coverage** option button.
- **24 Hour Coverage** options are displayed.

24 To select a 24-hour coverage option click on the appropriate choice from the **24 Hour Coverage** option list.
- **Yes** indicates that the collection is excluded from time of day searches.
- **No** indicates that time of day searches are allowed for the collection.

25 To display cloud cover type and source options click on the **Cloud Cover Type and Source** option button.
- **Cloud Cover Type & Source** options are displayed.

26 To select a cloud cover type and source option click on the appropriate choice from the **Cloud Cover Type & Source** option list.

- All cloud cover information in the Data Pool database is listed.
- If the desired cloud cover type/source is not listed, it can be entered using the **Use the DPM GUI to Add New Cloud Cover Information** procedure (Section 17.10.13).

27 To view details of cloud cover type and source (if applicable) click on the **View Details** link adjacent to the **Cloud Cover Type & Source** option list.

28 Click on the **Apply Change** button.

- The new collection information is entered in the Data Pool database.
- The **Collection Group Detail** page is displayed with the new collection information.

Table 17.10-25. Use the DPM GUI to Add a NON-ECS Collection to a Collection Group

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Collection Groups** link	**single-click**
3	***group*** link (in the **Group ID** column)	**single-click**
4	**Add New Collection** link	**single-click**
5	***collection*** link (in the **Collection** column)	**single-click**
6	***version*** (in the **Version** text entry field)	**enter text**
7	***description*** (in the **Description** text entry field)	**enter text**
8	**File System** option (from the **File System** option list) (if applicable)	**single-click**
9	**Compression Command Label** option (from the **Compression Command Label** option list) (if applicable)	**single-click**
10	**Science Granules and/or Metadata** option (from the **Science Granules and/or Metadata** option list)	**single-click**
11	**Data Pool Insertion** option (from the **Data Pool Insertion** option list)	**single-click**
12	***URL*** (in the **Quality Summary** text entry field)	**enter text**
13	**Spatial Search Type** option (from the **Spatial Search Type** option list)	**single-click**
14	**Global Coverage** option (from the **Global Coverage** option list)	**single-click**
15	**Day/Night Coverage** option (from the **Day/Night Coverage** option list)	**single-click**
16	**24 Hour Coverage** option (from the **24 Hour Coverage** option list)	**single-click**
17	**Cloud Cover Type & Source** option (from the **Cloud Cover Type & Source** option list)	**single-click**
18	**View Details** link (if applicable)	**single-click**
19	**Apply Change** button	**single-click**

17.10.25 Use the DPM GUI to Modify an ECS Collection

As part of managing the Data Pool storage and retention of data, making adjustments based on experience and/or changes in demand, it may be desirable to modify a collection. The modification may mean specifying that metadata only may continue to be inserted and science granules may no longer be inserted, or declaring the collection no longer valid for data pool insertion at all.

The procedure for modifying an ECS collection is somewhat different from the procedure for modifying a non-ECS collection. Full-capability operators (only) can use the procedure that follows to modify an ECS collection.

Table 17.10-26 presents the steps required to use the DPM GUI to modify an ECS collection. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Collection Groups** link.

- The **Collection Groups** page is displayed, providing a table listing collection group information; i.e., **Source Type**, **Group ID**, **Display Name**, and **Description**.
- The following links are available: **Add Collection Group**, **Modify Collection Group**, and each collection listed in the **Group ID** column links to a **Collection Group Detail** page.

3 Click on the **Group ID** link for the collection group containing the collection to be modified.

- The **Collection Group Detail (List of Collections)** page is displayed with the following basic collection group information near the top of the page: **Data Source** (i.e., ECS), **Group ID**, **Display Name**, and **Description.**
- There is a file system filter (and associated Apply Filter button) for displaying data on the Collection Group Detail page for all file systems or by individual file system.
- The table on the Collection Group Detail page has 13 columns containing the following types of collection group information: Collection, Version, Compression Command Label, Science Granules and/or Metadata, Data Pool Insertion, HEG Processing, Export Urls to ECHO, Quality Summary Url, Spatial Search Type, Global Coverage, Day/Night Coverage, 24 Hour Coverage, and Cloud Coverage.
- The following links are available: Add New Collection, Return to previous page, and each collection listed in the Collection column links to a Collection Detail page.

4 Click on the link (in the **Collection** column) of the collection to be modified.

- The **Collection Detail** page is displayed with the following basic collection group information near the top of the page: **Data Source** (i.e., ECS), **Group ID**, **Display Name**, and **Description.**

- The **Collection Detail** page has a table of collection information showing 17 rows: **Collection**, **Version**, **Description**, **File System**, **Compression Command Label**, **Science Granules and/or Metadata**, **Data Pool Insertion**, **HEG Processing**, **Export Urls to ECHO**, **Quality Summary Url**, **Spatial Search Type**, **Global Coverage**, **Day/Night Coverage**, **24 Hour Coverage**, **Cloud Cover Type**, **Cloud Cover Source**, and **Cloud Cover Description**.
- There is a **Modify Collection** link and a **Return to previous page** link at the bottom of the page.

5 Click on the **Modify Collection** link.

- The **Modify Collection** page is displayed with the following basic collection group information near the top of the page: **Data Source** (i.e., ECS), **Group ID**, **Display Name**, and **Description.**
- The **Modify Collection** page has a table of collection information showing 15 rows: **Collection**, **Version**, **Description**, **File System**, **Compression Command Label**, **Science Granules and/or Metadata**, **Data Pool Insertion**, **HEG Processing**, **Export Urls to ECHO**, **Quality Summary Url**, **Spatial Search Type**, **Global Coverage**, **Day/Night Coverage**, **24 Hour Coverage**, and **Cloud Cover Type & Source**.
- There is an **Apply Change** button at the bottom of the page to implement the new collection in the collection group.

NOTE: On the ECS collection version of the **Modify Collection** page the **Collection**, **Version**, **Description**, and **Spatial Search Type** fields cannot be edited.

6 To display file system options (if applicable) click on the **File System** option button.

- **File System** options are displayed (if there are multiple Data Pool file systems).

7 To select a file system option (if applicable) click on the appropriate choice from the **File System** option list.

8 To display compression command label options (if applicable) click on the **Compression Command Label** option button.

- **Compression Command Label** options are displayed.

9 To select a compression command label option (if applicable) click on the appropriate choice from the **Compression Command Label** option list.

10 To display science granules and/or metadata options (if applicable) click on the **Science Granules and/or Metadata** option button.

- **Science Granules and/or Metadata** options (i.e., **Science and Metadata** and **Metadata Only**) are displayed.

11 To select a science granules and/or metadata option (if applicable) click on the appropriate choice from the **Science Granules and/or Metadata** option list.

- **Science and Metadata** is the default option.

12 To display data pool insertion options (if applicable) click on the **Data Pool Insertion** option button.

- **Data Pool Insertion** options (i.e., **Invalid for Data Pool** and **Valid for Data Pool**) are displayed.

13 To select a data pool insertion option (if applicable) click on the appropriate choice from the **Data Pool Insertion** option list.

- **Valid for Data Pool** must be selected if the collection is to be eligible for insertion into the Data Pool.

14 If the collection is to be linked to a quality summary web site, enter the URL in the **Quality Summary** text entry field.

- Ensure that **http://** is included in the **Quality Summary** text entry field.

15 To display global coverage options (if applicable) click on the **Global Coverage** option button.

- **Global Coverage** options are displayed.

16 To select a global coverage option (if applicable) click on the appropriate choice from the **Global Coverage** option list.

- **Yes** indicates no spatial searches for the collection.
- **No** indicates that spatial searches are allowed for the collection.

17 To display day/night coverage options (if applicable) click on the **Day/Night Coverage** option button.

- **Day/Night Coverage** options are displayed.

18 To select a day/night coverage option (if applicable) click on the appropriate choice from the **Day/Night Coverage** option list.

- **Yes** indicates that day/night searches are allowed for the collection.
- **No** indicates that the collection is excluded from day/night searches.

19 To display 24-hour coverage options (if applicable) click on the **24 Hour Coverage** option button.

- **24 Hour Coverage** options are displayed.

20 To select a 24-hour coverage option (if applicable) click on the appropriate choice from the **24 Hour Coverage** option list.
- **Yes** indicates that the collection is excluded from time of day searches.
- **No** indicates that time of day searches are allowed for the collection.

21 To display cloud cover type and source options (if applicable) click on the **Cloud Cover Type & Source** option button.
- **Cloud Cover Type & Source** options are displayed.

22 To select a cloud cover type and source option (if applicable) click on the appropriate choice from the **Cloud Cover Type & Source** option list.
- All cloud cover information in the Data Pool database is listed.
- If the desired cloud cover type/source is not listed, it can be entered using the **Use the DPM GUI to Add New Cloud Cover Information** procedure (Section 17.10.13).

23 To view details of cloud cover type and source (if applicable) click on the **View Details** link adjacent to the **Cloud Cover Type & Source** option list.

24 Click on the **Apply Change** button.
- The modified collection information is entered in the Data Pool database.
- The **Collection Group Detail** page is displayed with the modified collection information.

Table 17.10-26. Use the DPM GUI to Modify an ECS Collection (1 of 2)

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Collection Groups** link	**single-click**
3	***group*** link (in the **Group ID** column)	**single-click**
4	***collection*** link (in the **Collection** column)	**single-click**
5	**Modify Collection** link	**single-click**
6	**File System** option (from the **File System** option list) (if applicable)	**single-click**
7	**Compression Command Label** option (from the **Compression Command Label** option list) (if applicable)	**single-click**
8	**Science Granules and/or Metadata** option (from the **Science Granules and/or Metadata** option list) (if applicable)	**single-click**
9	**Data Pool Insertion** option (from the **Data Pool Insertion** option list) (if applicable)	**single-click**
10	***URL*** (in the **Quality Summary** text entry field) (if applicable)	**enter text**

Table 17.10-26. Use the DPM GUI to Modify an ECS Collection (2 of 2)

Step	What to Do	Action to Take
11	**Global Coverage** option (from the **Global Coverage** option list) (if applicable)	**single-click**
12	**Day/Night Coverage** option (from the **Day/Night Coverage** option list) (if applicable)	**single-click**
13	**24 Hour Coverage** option (from the **24 Hour Coverage** option list) (if applicable)	**single-click**
14	**Cloud Cover Type & Source** option (from the **Cloud Cover Type & Source** option list) (if applicable)	**single-click**
15	**View Details** link (if applicable)	**single-click**
16	**Apply Change** button	**single-click**

17.10.26 Use the DPM GUI to Modify a NON-ECS Collection

Full-capability operators (only) can use the procedure that follows to modify a non-ECS collection.

Table 17.10-27 presents the steps required to use the DPM GUI to modify a NON-ECS collection. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Collection Groups** link.

- The **Collection Groups** page is displayed, providing a table listing collection group information; i.e., **Source Type**, **Group ID**, **Display Name**, and **Description**.
- The following links are available: **Add Collection Group**, **Modify Collection Group**, and each collection listed in the **Group ID** column links to a **Collection Group Detail** page.

3 Click on the **Group ID** link for the collection group containing the collection to be modified.

- The **Collection Group Detail (List of Collections)** page is displayed with the following basic collection group information near the top of the page: **Data Source** (i.e., NON-ECS), **Group ID**, **Display Name**, and **Description.**

- There is a file system filter (and associated Apply Filter button) for displaying data on the Collection Group Detail page for all file systems or by individual file system.
- The table on the Collection Group Detail page has 13 columns containing the following types of collection group information: Collection, Version, Compression Command Label, Science Granules and/or Metadata, Data Pool Insertion, HEG Processing, Export Urls to ECHO, Quality Summary Url, Spatial Search Type, Global Coverage, Day/Night Coverage, 24 Hour Coverage, and Cloud Coverage.
- The following links are available: Add New Collection, Return to previous page, and each collection listed in the Collection column links to a Collection Detail page.

4 Click on the link (in the **Collection** column) of the collection to be modified.

- The **Collection Detail** page is displayed with the following basic collection group information near the top of the page: **Data Source** (i.e., NON-ECS), **Group ID**, **Display Name**, and **Description.**
- The **Collection Detail** page has a table of collection information showing 17 rows: **Collection**, **Version**, **Description**, **File System**, **Compression Command Label**, **Science Granules and/or Metadata**, **Data Pool Insertion**, **HEG Processing**, **Export Urls to ECHO**, **Quality Summary Url**, **Spatial Search Type**, **Global Coverage**, **Day/Night Coverage**, **24 Hour Coverage**, **Cloud Cover Type**, **Cloud Cover Source**, and **Cloud Cover Description**.
- There is a **Modify Collection** link and a **Return to previous page** link at the bottom of the page.

5 Click on the **Modify Collection** link.

- The **Modify Collection** page is displayed with the following basic collection group information near the top of the page: **Data Source** (i.e., NON-ECS), **Group ID**, **Display Name**, and **Description.**
- The **Modify Collection** page has a table of collection information showing 15 rows: **Collection**, **Version**, **Description**, **File System**, **Compression Command Label**, **Science Granules and/or Metadata**, **Data Pool Insertion**, **HEG Processing**, **Export Urls to ECHO**, **Quality Summary Url**, **Spatial Search Type**, **Global Coverage**, **Day/Night Coverage**, **24 Hour Coverage**, and **Cloud Cover Type & Source**.
- There is an **Apply Change** button at the bottom of the page to implement the new collection in the collection group.

NOTE: On the NON-ECS collection version of the **Modify Collection** page the **Collection** and **Version** fields cannot be edited.

6 If applicable, type a description for the collection in the **Description** text entry field.

- The description for the collection may have no more than 255 characters.

7 To display file system options (if applicable) click on the **File System** option button.
- **File System** options are displayed (if there are multiple Data Pool file systems).

8 To select a file system option (if applicable) click on the appropriate choice from the **File System** option list.

9 To display compression command label options (if applicable) click on the **Compression Command Label** option button.
- **Compression Command Label** options are displayed.

10 To select a compression command label option (if applicable) click on the appropriate choice from the **Compression Command Label** option list.

11 To display science granules and/or metadata options (if applicable) click on the **Science Granules and/or Metadata** option button.
- **Science Granules and/or Metadata** options (i.e., **Science and Metadata** and **Metadata Only**) are displayed.

12 To select a science granules and/or metadata option (if applicable) click on the appropriate choice from the **Science Granules and/or Metadata** option list.
- **Science and Metadata** is the default option.

13 To display data pool insertion options (if applicable) click on the **Data Pool Insertion** option button.
- **Data Pool Insertion** options (i.e., **Invalid for Data Pool** and **Valid for Data Pool**) are displayed.

14 To select a data pool insertion option (if applicable) click on the appropriate choice from the **Data Pool Insertion** option list.
- **Valid for Data Pool** must be selected if the collection is to be eligible for insertion into the Data Pool.

15 If the collection is to be linked to a quality summary web site, enter the URL in the **Quality Summary** text entry field.
- Ensure that **http://** is included in the **Quality Summary** text entry field.

16 To display spatial search type options (if applicable) click on the **Spatial Search Type** option button.
- **Spatial Search Type** options (e.g., **Not Supported**, **Orbit**, **Rectangle**, and **GPolygon**) are displayed.
- **Spatial Search Type** can be changed only when the collection is not currently enabled for insert and the Data Pool contains no granules belonging to the collection.

17 To select a spatial search type option (if applicable) click on the appropriate choice from the **Spatial Search Type** option list.

18 To display global coverage options (if applicable) click on the **Global Coverage** option button.

- **Global Coverage** options are displayed.

19 To select a global coverage option (if applicable) click on the appropriate choice from the **Global Coverage** option list.

- **Yes** indicates no spatial searches for the collection.
- **No** indicates that spatial searches are allowed for the collection.

20 To display day/night coverage options (if applicable) click on the **Day/Night Coverage** option button.

- **Day/Night Coverage** options are displayed.

21 To select a day/night coverage option (if applicable) click on the appropriate choice from the **Day/Night Coverage** option list.

- **Yes** indicates that day/night searches are allowed for the collection.
- **No** indicates that the collection is excluded from day/night searches.

22 To display 24-hour coverage options (if applicable) click on the **24 Hour Coverage** option button.

- **24 Hour Coverage** options are displayed.

23 To select a 24-hour coverage option (if applicable) click on the appropriate choice from the **24 Hour Coverage** option list.

- **Yes** indicates that the collection is excluded from time of day searches.
- **No** indicates that time of day searches are allowed for the collection.

24 To display cloud cover type and source options (if applicable) click on the **Cloud Cover Type and Source** option button.

- **Cloud Cover Type & Source** options are displayed.

25 To select a cloud cover type and source option (if applicable) click on the appropriate choice from the **Cloud Cover Type & Source** option list.

- All cloud cover information in the Data Pool database is listed.
- If the desired cloud cover type/source is not listed, it can be entered using the **Use the DPM GUI to Add New Cloud Cover Information** procedure (Section 17.10.13).

26 To view details of cloud cover type and source (if applicable) click on the **View Details** link adjacent to the **Cloud Cover Type & Source** option list.

27 Click on the **Apply Change** button.

- The modified collection information is entered in the Data Pool database.
- The **Collection Group Detail** page is displayed with the modified collection information.

Table 17.10-27. Use the DPM GUI to Modify a NON-ECS Collection

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Collection Groups** link	**single-click**
3	***group*** link (in the **Group ID** column)	**single-click**
4	***collection*** link (in the **Collection** column)	**single-click**
5	**Modify Collection** link	**single-click**
6	***description*** (in the **Description** text entry field) (if applicable)	**enter text**
7	**File System** option (from the **File System** option list) (if applicable)	**single-click**
8	**Compression Command Label** option (from the **Compression Command Label** option list) (if applicable)	**single-click**
9	**Science Granules and/or Metadata** option (from the **Science Granules and/or Metadata** option list) (if applicable)	**single-click**
10	**Data Pool Insertion** option (from the **Data Pool Insertion** option list) (if applicable)	**single-click**
11	***URL*** (in the **Quality Summary** text entry field) (if applicable)	**enter text**
12	**Spatial Search Type** option (from the **Spatial Search Type** option list) (if applicable)	**single-click**
13	**Global Coverage** option (from the **Global Coverage** option list) (if applicable)	**single-click**
14	**Day/Night Coverage** option (from the **Day/Night Coverage** option list) (if applicable)	**single-click**
15	**24 Hour Coverage** option (from the **24 Hour Coverage** option list) (if applicable)	**single-click**
16	**Cloud Cover Type & Source** option (from the **Cloud Cover Type & Source** option list) (if applicable)	**single-click**
17	**View Details** link (if applicable)	**single-click**
18	**Apply Change** button	**single-click**

17.10.27 Use the DPM GUI to View a List of Themes

Users may search the Data Pool for data associated with themes. As data are inserted into the Data Pool, it is possible to associate the data with themes. The **DPM GUI Detailed List of Data Pool Themes** page permits both full-capability and limited-capability operators users to view a list of Data Pool themes. In addition it has links that allow full-capability operators to add new themes, modify existing themes, or delete themes.

Table 17.10-28 presents the steps required to use the DPM GUI to view a list of themes. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Themes** link.

- The **Detailed List of Data Pool Themes** page is displayed.

3 Observe data displayed on the **Detailed List of Data Pool Themes** page.

- The table on the **Detailed List of Data Pool Themes** page has columns containing the following types of Data Pool file system information:
  - **Theme Name/Description.**
  - **Web Visible.**
  - **Insert Enabled.**
  - **Click on Box to Delete** (containing a check box to mark the theme for deletion).
- There are theme filters (and associated **Apply Filter** button) for displaying data on the **Detailed List of Data Pool Themes** page depending on whether or not the themes…
  - Are web visible.
  - Are insert enabled.
  - Have certain letters at the beginning of the theme name.
- Filters can be applied individually or in any combination.
- The following links are available on the **Detailed List of Data Pool Themes** page:
  - **Add New Theme.**
  - **Modify Theme.**
- There is an **Apply Change** button at the bottom of the page to implement the deletion of selected themes.

4 To filter data displayed on the **Detailed List of Data Pool Themes** page use the **Filter a List of Themes** procedure (Section 17.10.27.1).

5 If data displayed on the **Detailed List of Data Pool Themes** page were filtered, return to Step 3.

Table 17.10-28. Use the DPM GUI to View a List of Themes

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Themes** link	**single-click**
3	Observe Data Pool themes data	**read text**
4	Filter the list of themes (if applicable)	Use procedure in Section 17.10.27.1
5	Return to Step 3 (if applicable)	**single-click**

17.10.27.1 Filter a List of Themes

The procedure to **Filter a List of Themes** is subordinate to other theme-related procedures (i.e., Section 17.10.27, **Use the DPM GUI to View a List of Themes**, Section 17.10.28, **Use the DPM GUI to Modify a Theme**, and Section 17.10.30, **Use the DPM GUI to Delete a Theme**). Both full-capability and limited-capability operators users may filter data displayed on the Themes pages to which they have access.

Table 17.10-29 presents the steps required to filter a list of themes. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 To filter data displayed on one of the Themes pages on the basis of whether or not the themes are enabled for web drill-down (if applicable) first click on the **Web Visible** option button in the filter area of the page.

2 To select a theme filter option on the basis of whether or not the themes are enabled for web drill-down (if applicable) click on the appropriate choice from the option list.

- **Yes** (View all themes enabled for web drill-down).
- **No** (View all themes disabled for web drill-down).
- **ALL** (View all themes regardless of whether web drill-down is enabled or disabled).

3 To filter data displayed on one of the **Themes** pages on the basis of whether or not the themes are enabled for insertion into the Data Pool (if applicable) first click on the **Insert Enabled** option button.

4 To select a theme filter option on the basis of whether or not the themes are enabled for web drill-down (if applicable) click on the appropriate choice from the option list.
- **Yes** (View all themes enabled for insertion into the Data Pool).
- **No** (View all themes disabled for insertion into the Data Pool).
- **ALL** (View all themes regardless of whether insertion into the Data Pool is enabled or disabled).

5 To select a theme filter option on the basis of the beginning letters of the theme (if applicable) type the beginning letter(s) of the theme in the **Beginning Letters** text entry field.

6 To implement the filtering of data displayed on one of the **Themes** pages click on the **Apply Filter** button.
- The page is displayed with the filtered theme information.

7 Return to the procedure that specified the **Filter a List of Themes** procedure.

Table 17.10-29. Filter a List of Themes

Step	What to Do	Action to Take
1	**Web Visible** option (from the **Web Visible** option list) (if applicable)	**single-click**
2	**Insert Enabled** option (from the **Insert Enabled** option list) (if applicable)	**single-click**
3	***letter(s)*** (in the **Beginning Letters** text entry field)	**enter text**
4	**Apply Filter** button	**single-click**
5	Return to the procedure that specified the **Filter a List of Themes** procedure	

17.10.28 Use the DPM GUI to Modify a Theme

Full-capability operators can use the **DPM GUI** to modify a theme. This can be useful if, for example, it is noted that access frequency for granules referencing a theme has declined to the point that the thematic collection should be removed from the Data Pool, but there are a few web users that still use it. In that case, it may be appropriate to change the description of the theme to alert users that the theme will be phased out soon.

Table 17.10-30 presents the steps required to use the DPM GUI to modify a theme. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Themes** link.

- The **Detailed List of Data Pool Themes** page is displayed.

3 Click on the **Modify Theme** link.

- The **Modify Theme** page is displayed, providing a table of theme information showing five columns: **Theme Name**, **Description**, **Web Visible**, **Insert Enabled**, and **Click on Box to Modify** (containing a check box to mark the theme for change).
- There are theme filters (and associated **Apply Filter** button) for displaying data on the **Modify Theme** page.
- There is an **Apply Change** button at the bottom of the page for implementing changes.
- The following links are available: **Return to previous page** and **Return to Main Theme Page**.

4 To filter data displayed on the **Modify Theme** page use the **Filter a List of Themes** procedure (Section 17.10.27.1).

5 To change the description of a theme (if applicable) type the desired description in the **Description** field for the theme name.

- The **Description** may have no more than 255 characters.

6 To change the theme from enabled for web drill-down to disabled (or vice versa) (if applicable) click on the toggle button box in the **Web Visible** column in the row for the theme.

- A check mark in the box indicates that the theme is enabled for web drill-down.
- The absence of a check mark in the box indicates that the theme is not enabled for web drill-down.

7 To change the theme from enabled for insert into the Data Pool to disabled (or vice versa) (if applicable) click on the toggle button box in the **Insert Enabled** column in the row for the theme.

- A check mark in the box indicates that the theme is enabled for insert into the Data Pool.
- The absence of a check mark in the box indicates that the theme is not enabled for insert into the Data Pool.

8 Click in the check box at the end of the row containing the theme to be modified.
- The selected theme is marked for modification.

9 Repeat Steps 5 through 8 as necessary for any additional themes to be modified.

10 To implement the modification of theme(s) click on the **Apply Change** button.
- The theme information is entered in the Data Pool database.
- The **Detailed List of Data Pool Themes** page is displayed with the modified theme information.

Table 17.10-30. Use the DPM GUI to Modify a Theme

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Themes** link	**single-click**
3	**Modify Theme** link.	**single-click**
4	Filter the list of themes (if applicable)	Use procedure in Section 17.10.27.1
5	***description*** (in the appropriate **Description** field) (if applicable)	**enter text**
6	**Web Visible** check box (in the **Web Visible** column for the appropriate theme) (if applicable)	**single-click**
7	**Insert Enabled** check box (in the **Insert Enabled** column for the appropriate theme) (if applicable)	**single-click**
8	check box (at the end of the row containing the theme to be modified)	**single-click**
9	Repeat Steps 5 through 8 (as necessary)	
10	**Apply Change** button	**single-click**

17.10.29 Use the DPM GUI to Add a Theme

Full-capability operators (only) can use the procedure that follows to add a theme. Table 17.10-31 presents the steps required to use the DPM GUI to add a theme. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).
- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Themes** link.

- The **Detailed List of Data Pool Themes** page is displayed.

3 Click on the **Add New Theme** link.

- The **Add New Theme** page is displayed, providing a table of theme information showing four columns: **Theme Name**, **Description**, **Web Visible**, and **Insert Enabled**.
- There are theme filters (and associated **Apply Filter** button) for displaying data on the **Modify Theme** page.
  - The filters serve no real function on this page (there is nothing to filter).
- There is an **Apply Change** button at the bottom of the page for implementing changes.
- The following link is available: **Return to theme list**.

4 Type a unique name for the theme in the **Theme Name** text entry field.

- The **Theme Name** may have no more than 40 characters.
- The **Theme Name** may not start with a number.
- The **Theme Name** may not duplicate the name of a collection, an ESDT, or another theme,.

5 To enter a description of the theme type the desired description in the **Description** text entry field.

- The **Description** may have no more than 255 characters.

6 To enable the theme for web drill-down click on the toggle button box in the **Web Visible** column.

- A check mark in the box indicates that the theme is enabled for web drill-down.
- The absence of a check mark in the box indicates that the theme is not enabled for web drill-down.

7 To enable the theme for insert into the Data Pool click on the toggle button box in the **Insert Enabled** column.

- A check mark in the box indicates that the theme is enabled for insert into the Data Pool.
- The absence of a check mark in the box indicates that the theme is not enabled for insert into the Data Pool.

8 Click on the **Apply Change** button.

- The new theme information is entered in the Data Pool database.
- The **Detailed List of Data Pool Themes** page is displayed with the new theme information.

Table 17.10-31. Use the DPM GUI to Add a Theme

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Themes** link	**single-click**
3	**Add New Theme** link	**single-click**
4	***name*** (in the **Theme Name** text entry field)	**enter text**
5	***description*** (in the **Description** text entry field)	**enter text**
6	**Web Visible** check box (in the **Web Visible** column for the appropriate theme) (if applicable)	**single-click**
7	**Insert Enabled** check box (in the **Insert Enabled** column for the appropriate theme) (if applicable)	**single-click**
8	**Apply Change** button	**single-click**

17.10.30 Use the DPM GUI to Delete a Theme

Full-capability operators (only) can use the procedure that follows to delete a theme. Table 17.10-32 presents the steps required to use the DPM GUI to delete a theme. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DPM GUI (refer to Section 17.10.1, **Launch the DPM GUI**).

- The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Compression Algorithms**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters,** and **End Session**).

2 Click on the **Themes** link.

- The **Detailed List of Data Pool Themes** page is displayed, with columns containing the following types of Data Pool file system information:
  - **Theme Name/Description.**
  - **Web Visible.**
  - **Insert Enabled.**
  - **Click on Box to Delete** (containing a check box to mark the theme for deletion).
- There are theme filters (and associated **Apply Filter** button) for displaying data on the **Detailed List of Data Pool Themes** page depending on whether or not the themes…
  - Are web visible.
  - Are insert enabled.

  - Have certain letters at the beginning of the theme name.
- Filters can be applied individually or in any combination.
- The following links are available on the **Detailed List of Data Pool Themes** page:
  - **Add New Theme.**
  - **Modify Theme.**
- There is an **Apply Change** button at the bottom of the page to implement the deletion of selected themes.

3 To filter data displayed on the **Detailed List of Data Pool Themes** page use the **Filter a List of Themes** procedure (Section 17.10.27.1).

4 Click in the check box at the end of the row containing the theme to be deleted.
- The selected theme is marked for deletion.

5 Repeat Step 4 as necessary for any additional themes to be deleted.

6 To implement the deletion of theme(s) click on the **Apply Change** button.
- The theme deletion information is entered in the Data Pool database.
- The **Detailed List of Data Pool Themes** page is displayed with the modified theme information.

Table 17.10-32. Use the DPM GUI to Delete a Theme

Step	What to Do	Action to Take
1	Launch the DPM GUI	Use procedure in Section 17.10.1
2	**Themes** link.	**single-click**
3	Filter the list of themes (if applicable)	Use procedure in Section 17.10.27.1
4	check box (at the end of the row containing the theme to be deleted)	**single-click**
5	Repeat Step 4 (as necessary)	
6	Fill the toggle button box in the **Click on Box to Delete** column	**single-click**
6	**Apply Change** button	**single-click**

17.10.31 Use the Update Granule Utility to Extend the Retention for Selected Science Granules

A change in user interest in data from a particular location may make it desirable to retain certain data already in the Data Pool for a longer period of time than originally specified. Data Pool maintenance personnel can run the Update Granule Utility to update the expiration date for

selected science granules. This utility also permits modifying a granule's retention priority, which can affect how soon the Data Pool Cleanup Utility removes the granule from the Data Pool.

When updating the granules associated with a theme, the utility updates the expiration date of a granule associated with that theme if and only if the new expiration date specified is later than the current expiration date of the granule. It updates the retention priority of a granule associated with that theme if and only if the new expiration priority specified is higher than the current retention priority of the granule.

The Update Granule Utility permits updating granule information using a command-line interface. The following options may be used:

- **-noprompt**: suppressing prompts and detailed information display.
- **-theme**: specifies a valid theme name (i.e., a character string that matches an existing theme name in the Data Pool inventory).

A single granule may be updated using manual input. Multiple granule updates can be handled using an input file containing a list of granules to be updated, or by specifying a theme. The input file must be structured as a list of granules to be processed, one per line. Each line contains a granule ID (reflecting the Sybase entry in the Data Pool database), an expiration date, and (optionally) a new retention priority, the value of which may be null (i.e., left blank). The fields are separated by a single space. There should be no blank lines before the first or after the last granule in the list. The file contents should be similar to the following example.

```
GRANULE_ID_4832 EXP_DATE=2002/2/28 RETENTION=255
GRANULE_ID_4876 EXP_DATE=2002/2/28 RETENTION=200
GRANULE_ID_4883 EXP_DATE=2002/2/28 RETENTION=
GRANULE_ID_4937 EXP_DATE=2002/2/28
GRANULE_ID_4966 EXP_DATE=2002/2/28 RETENTION=255
```

The Update Granule Utility connects to the Data Pool database and calls Sybase stored procedures to perform the requested updates. Therefore, the utility runs only if the Data Pool database server is running and if the database is available. It also assumes the stored procedures are present. The Granule Update Utility may be run as a background process, with suppression of all warning/error messages and confirmation prompts if desired. When the utility is run, it writes information, any warnings, any errors, and messages to a log file about granules as they are updated.

Table 17.10-33 presents the steps required to use the Update Granule Utility to extend the retention for selected science granules. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in at the machine on which the Update Granule Utility is installed (e.g., e0dps01, g0dps01, l0dps01, n0dps01).

2 To change to the directory for starting the Update Granule Utility, type **cd /usr/ecs/<*MODE*>/CUSTOM/utilities** and then press the **Return/Enter** key.

- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/utilities**.

3 At the UNIX prompt, enter the command to start the Update Granule Utility, in the form **EcDlUpdateGranule.pl <*command line parameters*>**. (***Note***: The first command-line parameter specified must be **<*MODE*>**, a valid, existing Data Pool mode [e.g., OPS, TS1, TS2]).

- The following six permutations are valid command-line entries for initiating the Update Granule utility:
  - **EcDlUpdateGranule.pl <*MODE*> -file <*filename*>** (to update granules listed in an input file named **<*filename*>** while displaying all summary information to the operator, and asking confirmation of the update).
  - **EcDlUpdateGranule.pl <*MODE*> -grnid <*granuleID*> -exp <*expiration date*> [-ret <*retention priority*>]** (to update a granule identified by its **<*granuleID*>** with a new expiration date and, optionally, a new retention priority while displaying all summary information to the operator, and asking confirmation of the update).
  - **EcDlUpdateGranule.pl <*MODE*> -noprompt -file <*filename*>** (to update granules listed in an input file named **<*filename*>** with no confirmation or information displayed to the operator).
  - **EcDlUpdateGranule.pl <*MODE*> -noprompt -grnid <*granuleID*> -exp <*expiration date*> [-ret <*retention priority*>]** (to update a granule identified by its **<*granuleID*>** with a new expiration date and, optionally, a new retention priority with no confirmation or information displayed to the operator).
  - **EcDlUpdateGranule.pl <*MODE*> -theme <*themename*> -exp <*expiration date*> [-ret <*retention priority*>]** (to update a granule identified by its **<*themename*>** with a new expiration date and, optionally, a new retention priority while displaying all summary information to the operator, and asking confirmation of the update).
  - **EcDlUpdateGranule.pl <*MODE*> -noprompt -theme <*themename*> -exp <*expiration date*> [-ret <*retention priority*>]** (to update a granule identified by its **<*themename*>** with a new expiration date and, optionally, a new retention priority with no confirmation or information displayed to the operator.
- The utility executes and displays a confirmation prompt similar to the following:

```
You are about to start updating granules.
-----------------------------------------------
   Total number of granules: 11
     Total size of granules: 8.61339673772454 MB
Do you wish to continue processing the update? [y/n]y
```

4 Type **y** and then press the **Return/Enter** key.

- The utility completes execution and displays output similar to the following:

```
Update completed.
Please check the database to ensure proper completion.

Update took 2 seconds to complete


Gracefully exiting...
```

- To check the database, have the Database Administrator use ***isql*** commands on the Data Pool database host to query the DlGranuleExpirationPriority table. It may also be useful to examine the Update Granule Utility log file to determine whether there were any problems with the execution. To examine that log file, go to Steps 5 and 6.

5 To change to the directory containing the Update Granule Utility log file and other log files, type **cd /usr/ecs/<*MODE*>/CUSTOM/logs**, and then press the **Return/Enter** key.

- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/logs**.

6 To examine the Update Granule Utility log file, type **pg EcDlUpdateGranule.log** and then press the **Return/Enter** key.

- The first page of the log file is displayed; additional sequential pages can be displayed by pressing the **Return/Enter** key at the **:** prompt. It is also possible to search forward by typing **/<*search item*>**. For example, to search the log file for reference to one of the granules updated, type **/<*granuleID*>** and then press the **Return/Enter** key.
- Although this procedure is written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view**, **more**, **tail**) can be used to review the log.
- The log entries have a time and date stamp; about the time that the update was executed, the log should show entries similar to the following:

```
2001/11/29 15:52:50.814:Update started...

2001/11/29 15:52:50.964:Granule 4871 updated
2001/11/29 15:52:51.083:Granule 4954 updated
2001/11/29 15:52:51.212:Granule 4955 updated
2001/11/29 15:52:51.346:Granule 4956 updated
2001/11/29 15:52:51.409:Granule 4957 updated
2001/11/29 15:52:51.688:Granule 4959 updated
2001/11/29 15:52:51.778:Granule 4961 updated
2001/11/29 15:52:51.998:Granule 4963 updated
2001/11/29 15:52:52.107:Granule 4963 updated
2001/11/29 15:52:52.394:Granule 4964 updated
2001/11/29 15:52:52.569:Granule 4966 updated
2001/11/29 15:52:52.590:Update ended.

2001/11/29 15:52:52.608:This update took approximately 2 seconds
```

- If the log indicates errors or warnings, it may be necessary to correct the condition identified in the entry (e.g., edit the data in the granule list in the input file) and run the utility again. Specific error entries depend on the error that occurred; examples of error entries in the log may be similar to the following:

```
4959     AST_04       1 0.03962299 Jul 30 2001 12:00AM Feb  2 1998
11:59PM        255          2
Warning: The new expiration date for the above granule is less than
or equal to today's date.

DATABASE ERROR:Server message number=120001 severity=16 state=1
line=33 server=f2acg01_srvr procedure=ProcSelectGrExpiration
text=ProcSelectGrExpiration: Requested granule id not in database.

2001/11/29 15:50:36.647:Sybase Lookup ==> ERRORS WERE FOUND WITH
GRANULE "4654". (It may not exist or contains the wrong format).

2001/11/29 15:50:36.663:

EcDlUpdateGranule_1.pl aborted due to insufficient processing data:
All the granule triplets had errors.
```

Table 17.10-33. Use the Update Granule Utility to Extend the Retention for Selected Science Granules

Step	What to Do	Action to Take
1	Log in at host for Update Granule Utility	**enter text; press Return/Enter**
2	**cd /usr/ecs/<*MODE*>/CUSTOM/utilities**	**enter text; press Return/Enter**
3	**EcDlUpdateGranule.pl <*command line parameters*>**	**enter text; press Return/Enter**
4	Enter **y**	**enter text; press Return/Enter**
5	**cd /usr/ecs/<*MODE*>/CUSTOM/logs**	**enter text; press Return/Enter**
6	**pg EcDlUpdateGranule.log** (or other editor or visualizing command	**enter text; press Return/Enter**

17.10.32 Invoke the Data Pool Cleanup Utility Manually

The Data Pool Cleanup Utility permits ECS Operations Staff to remove expired granules from the Data Pool disks and inventory. In addition, the Data Pool Cleanup Utility reports (via an external utility) to the EOS Clearing House (ECHO) the granules that are to be (or that have been) deleted.

The Cleanup Utility may be executed using a **-noprompt** argument to suppress all confirmations and warnings normally displayed to standard output.

The Cleanup Utility must be executed on the machine where the granules are located. Qualification for cleanup is based on two criteria: expiration date/time and retention priority.

To determine whether a granule qualifies for deletion, the utility first compares the granule's expiration date (insert date plus retention period in days specified in the insert subscription) with a cut-off date/time. If a granule's expiration date is prior to the cut-off, the granule qualifies as expired.

- The default cut-off date/time is set to midnight of the previous day.
- The operator is permitted to specify an **offset** (from the previous midnight) in hours to add or subtract hours to determine a cut-off date/time for deletion.
  - For example, **-offset -5** would delete all granules that had expired as of 7:00 P.M. yesterday.

Next, the utility compares the granule's retention priority with any priority **limit** the operator has specified to identify those granules that should be retained in the Data Pool even though their expiration date has passed.

- Retention priority is an integer from 1 to 255.
  - For example, **-limit 150** would delete all granules with priority less than or equal to 150.
- Retention priority for granules already in the Data Pool may be modified using the granule expiration update script.

The Data Pool Cleanup Utility removes those granules with expiration date prior to the cut-off date/time and with retention priority less than or equal to the specified limit. If a priority limit is not specified in command-line input parameters at the time it is invoked, the Cleanup Utility reads the parameter 'DEFAULT_LIMIT' from its configuration file to get a priority limit. If the operator does not wish to use retention priority as a criterion for deletion, the default limit should be set to 255. If the operator specifies a theme name, the utility applies the removal criteria only to those granules associated with the theme.

The Cleanup Utility can alternatively take as input a file listing granuleId's for granules to be deleted. The file can contain single or multiple granuleId's per line separated by white space. The **–file** option may not be used with any other options other than the **-noprompt** option.

Another file option is **-geoidfile** (e.g., **-geoidfile geoid20040304**). It specifies the name of a file containing geoids, which are a combination of science type, ESDT short name and version ID, and ECS Science Data Server database ID. Granules in the file whose ECS ID match those in the Data Pool are candidates for Data Pool cleanup if specified by this option. The **-geoidfile** option may not be used in conjunction with any other options other than the **-noprompt** option. Note that the geoid file can contain science granules as well as non-science granules because the science data server may delete these types of granules. The input value for this parameter is logically defined to be the output of any Science Data Server Phase 1 (EcDsBulkDelete.pl)

granule deletion run. This causes the Data Pool cleanup utility to clean up any Science Data Server granules found in the geoid input file to be removed from the Data Pool database.

The Cleanup Utility cleans up non-ECS data just as it does ECS data. It can remove granule cross references associated with a given theme, and also remove the granules associated with the theme. The option **-themexref** specifies a theme for which all cross-references are to be removed from the Data Pool. The option **-theme** specifies a theme for which associated granules are to be removed. If a granule is referenced to more than one theme, the **-theme** option removes only the cross-reference to the specified theme, without removing the granule. The theme name must be enclosed in quotes (e.g., **-theme "Ocean Temperatures"** or **–themexref "Surface Reflectance"**). The **-themexref** option cannot be used with any options other than the **-noprompt** option.

The **-ecsgrandel** option indicates that only granules removed in the ECS system from the Science Data Server inventory are to be removed from the Data Pool if they exist. The option may not be used in conjunction with any options other than the **-noprompt** option. No other cleanup occurs when the **-ecsgrandel** option is specified.

The **-echomode** parameter specifies the method by which the Cleanup Utility reports deletion candidates to ECHO. The **-echomode** parameter takes one of three values; i.e., **predelete**, **delete** or **deleteall**.

When **predelete** is specified, the Cleanup Utility builds the list of items to clean up from the Data Pool and reports them to ECHO through the EcBmBulkURL utility. No data is actually cleaned up from the disks or database inventory using **predelete**.

When **delete** is specified as the value for **-echomode**, the Cleanup Utility deletes all of the data that was last found during a run with the **predelete** parameter. The difference is that the EcBmBulkURL utility is not invoked because this run performs the actual cleanup of the database inventory and disks of what was presumably reported to ECHO during the previous run.

When **deleteall** is specified as the value for **-echomode**, the Cleanup Utility builds its list of items to clean up, actually cleans them up, and notifies ECHO via the EcBmBulkURL utility. The **deleteall** value does not allow for a time lag between the Cleanup Utility deleting the granules and ECHO performing its own clean up of URLs.

The normal sequence for cleanup is to run the Cleanup Utility twice: specifying **predelete** for the first run and **delete** for the second run. Note that an **-echomode** parameter with a value of **delete** can only be specified by itself because the list of items to delete will have already been determined by the previous (**predelete**) run.

If a **predelete** run is performed, the subsequent run *must* specify **delete** in order to perform the actual deletions. The Cleanup Utility enforces the requirement to avoid operator error. The **predelete/delete** run sequence can be viewed as a logical run done in two parts. The values of **predelete** and **deleteall** may be used with each of the other parameters specific to performing Data Pool Cleanup except **themexref**.

There are three types of runs that can be performed with the Cleanup Utility:

- **Cleanup only.**
- **Validation only.**
- **Cleanup followed by validation.**

When involved in "cleanup" processing, the Cleanup Utility performs the following actions:

- Removes from the Data Pool disks and inventory all Data Pool granules, associated browse files, and browse links that meet the specified cleanup criteria (provided that no other granules are cross-referenced to them – i.e., linked by a theme). This occurs when the **-echomode** parameter has a value of **delete** or **deleteall**. (No actual deletion occurs during **predelete**.)
- Removes all recent insert files (with names prefixed with DPRecentInsert) that are older than seven days. The relevant files are found in /datapool/<mode>/user/<fs1> and /datapool/<mode>/user/<fs1>/<group>/<esdt>.
- Exports a list of deleted granules for ECHO accessibility by invoking an external utility (i.e., EcBmBulkURLStart) when the Cleanup Utility **-echomode** parameter has a value of either **delete** or **deleteall**.
  - If there are granules being deleted that qualify for ECHO export, the Cleanup Utility generates an XML file containing a list of those granules and stores it in the /datapool/<mode>/user/URLExport directory for files that are ftp pulled and ftp pushes files when Bulk URL is configured to ftp push the data to ECHO.
  - If the Data Pool Cleanup Utility is run in **-echomode delete**, the EcBmBulkURLStart utility is not called.
- Removes all HEG conversion files associated with the HEG order IDs that have the status of "DONE" or "FAILED" and a timestamp older than a certain cleanup age.
  - The HEG order IDs are provided in the DlCartOrder table and the cleanup age is specified by the "HEGCleanupAge" parameter in the DlConfig table of the Data Pool database.
  - The HEG conversion files for each order ID are stored in the /datapool/<mode>/user/downloads/<orderID> directory. (HEG orders and conversion files are generated when end users request HEG-converted data using the Data Pool Web Access tool.)

When involved in "validation" processing, the Data Pool Cleanup Utility performs the following actions:

- Validates the Data Pool inventory and disk content by checking for the existence of orphans and/or phantoms and either removing them or just logging them depending on the command line options specified.

Validation requires either the **–orphan** parameter or the **–phantom** parameter or both. The **-orphan** parameter finds/removes data in the Data Pool that is not represented by entries in the Data Pool inventory. The **-phantom** parameter finds/removes entries in the Data Pool inventory that have one or more science or metadata files, or associated browse files, missing from the Data Pool. To specify just logging of the discrepancies, the operator uses the option **-nofix**.

The **-maxorphanage** validation option specifies the maximum orphan age in days (e.g., **-maxorphanage 5**). The value specified must be greater than or equal to three days. The Data Pool inventory validation function will consider only those files on disk as orphans whose age is equal to or larger than the maximum orphan age specified. If the parameter is omitted, the default value specified in the configuration file is used.

The **-collgroup** validation option limits the Data Pool validation to the specified collection group(s). Single or multiple collection groups can be specified on the command line. If multiple collection groups are specified, they must be separated by commas, with the string enclosed in double quotes (e.g., "MOAT, ASTT"). By default all collection groups in the Data Pool inventory are included in the validation if the **-collgroup** option is not specified.

A validation run can be time-consuming and should not be run as often as the cleanup runs, because it potentially involves the checking of all files in the entire Data Pool inventory against those on the Data Pool disk in order to find and remove the discrepancies. It is advised that the validation function be run using the **-collgroup** option whenever possible to limit the validation to a limited number of collection groups.

If the Cleanup Utility is interrupted during execution, upon restart it continues from the point of interruption. Furthermore, in the interest of low database contention, the Cleanup Utility allows only one instance of itself to execute concurrently.

Table 17.10-34 presents the steps required to invoke the Data Pool Cleanup Utility manually. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in at the machine where the Data Pool Cleanup Utility is installed (e.g., e0dps01, g0dps01, l0dps01, n0dps01).
- ***Note***: The operator who is executing the script must have privileges for removing science, metadata, and browse files from the Data Pool disks.

2 To change to the directory for starting the Data Pool Cleanup Utility, type **cd /usr/ecs/<*MODE*>/CUSTOM/utilities** and then press the **Return/Enter** key.
- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/utilities**.

NOTE: There are three types of runs that can be performed with the Cleanup Utility; i.e., "cleanup only," "validation only," or "cleanup followed by validation."

NOTE: The normal sequence for cleanup is to run the Cleanup Utility twice: specifying **predelete** for the first run and **delete** for the second run. Note that an **-echomode** parameter with a value of **delete** can only be specified by itself because the list of items to delete will have already been determined by the previous (**predelete**) run.

NOTE: If a **predelete** run is performed, the subsequent run *must* specify **delete** in order to perform the actual deletions. The Cleanup Utility enforces that requirement to

avoid operator error. The **predelete/delete** run sequence can be viewed as a logical run done in two parts.

3 To perform a "cleanup only" run, at the UNIX prompt enter:

EcDlCleanupDataPool.pl <*MODE*> -echomode <*echomode*> [-noprompt] [-offset <*hours*>] [-limit <*priority*>] [-theme <*themeName*>]

OR

EcDlCleanupDataPool.pl <*MODE*> -echomode <*echomode*> [-noprompt] -file <*fileName*>

OR

EcDlCleanupDataPool.pl <*MODE*> -echomode <*echomode*> [-noprompt] -geoidfile <*fileName*>

OR

EcDlCleanupDataPool.pl <*MODE*> -echomode <*echomode*> [-noprompt] -ecsgrandel

OR

EcDlCleanupDataPool.pl <*MODE*> [-noprompt] -themexref <*themeName*>

- **<*echomode*>** is the value specified for the ECHO mode. The value is either **predelete**, **delete**, or **deleteall** (e.g., **-echomode predelete**).
- **<*hours*>** is the value of the offset. It can be either a positive number (e.g., **-offset 2**) or a negative number (e.g., **-offset -5**). If the **–offset** option is not specified, the Cleanup Utility uses the default value of 0 (zero).
- **<*priority*>** is the value of the priority limit. It is a number from 1 through 255 (e.g., **-limit 200**). If the **–limit** option is not specified, the Cleanup Utility uses the default value specified in the configuration file.
- **<*themeName*>** is the name of a theme to be associated with either the **–theme** option or the **–themexref** option. The name of the theme must be in quotes (e.g., **-theme "Ocean Temperatures"** or **–themexref "Surface Reflectance"**).
- **<*fileName*>** is the name of a file to be associated with either the **–file** option or the **-geoidfile** option (e.g., **-file clean20040404** or **-geoidfile geoid20040304**). The file will be read by the Cleanup Utility to determine what granules to clean up.
- The **-ecsgrandel** option indicates that only granules removed in the ECS system from the Science Data Server inventory will be removed from the Data Pool if they exist. No other cleanup occurs.
- The Cleanup Utility runs and the Cleanup Utility log file **EcDlCleanup.log** records errors, warnings, and information about utility events.

4 To perform a "validation only" run, at the UNIX prompt enter:

EcDlCleanupDataPool.pl <*MODE*> -orphan | -phantom [-noprompt] [-collgroup <*groupList*>] [-maxorphanage <*days*>] [-nofix]

- For validation either the **–orphan** parameter or the **–phantom** parameter or both must be specified.
- **<*groupList*>** is the name of the collection group(s) to be validated (e.g., "MOAT, ASTT"). The collection group(s) must be enclosed in quotes and if there are multiple groups, they must be separated by commas. If the **–collgroup** option is not specified, all collection groups in the Data Pool inventory are included in the validation.
- **<*days*>** is the number of days (at least 3) after which files on the Data Pool disks are considered orphans if they do not have corresponding entries in the Data Pool inventory. The default value in the configuration file (e.g., 3) is used if the **-maxorphanage** option is not specified.
- The **–nofix** option prevents reconciling any discrepancies found during validation. The validation results are logged.

5 To perform a "cleanup followed by validation" run, at the UNIX prompt enter a command line with valid options from Steps 3 and 4 plus the **–cleanvalidate** parameter.

- For example:

  EcDlCleanupDataPool.pl OPS -echomode predelete -offset 5 -limit 200 -orphan -phantom -cleanvalidate

6 If **predelete** was specified as the value for the **–echomode** parameter in Step 3 or Step 5, after the Cleanup Utility has run to completion repeat Step 3 (or Step 5) to perform a cleanup using **delete** as the value for the **–echomode** parameter.

Table 17.10-34. Invoke the Data Pool Cleanup Utility Manually (1 of 2)

Step	What to Do	Action to Take
1	Log in at host for Data Pool Cleanup Utility	**enter text; press Return/Enter**
2	**cd /usr/ecs/<*MODE*>/CUSTOM/utilities**	**enter text; press Return/Enter**
3	**EcDlCleanupDataPool.pl <*MODE*> -echomode <*echomode*> [-option1 <*value1*> . . . -optionN <*valueN*>]** (Options: **-noprompt**, **-limit**, **-offset**, **-file, -geoidfile, -theme, -themexref**) (for a "cleanup only" run)	**enter text; press Return/Enter**
4	**EcDlCleanupDataPool.pl <*MODE*> -echomode <*echomode*> [-option1 <*value1*> . . . -optionN <*valueN*>]** (Options: **-noprompt**, **-orphan, -phantom, -collgroup, -nofix, -cleanvalidate**) (for a "validation only" run)	**enter text; press Return/Enter**

Table 17.10-34. Invoke the Data Pool Cleanup Utility Manually (2 of 2)

Step	What to Do	Action to Take
5	**EcDlCleanupDataPool.pl <*MODE*> -echomode <*echomode*> [-option1 <*value1*> . . . -optionN <*valueN*>] -cleanvalidate** (Options: **-noprompt**, **-limit**, **-offset**, **-file, -geoidfile, -theme, -themexref, -orphan, -phantom, -collgroup, -nofix**) (for a "cleanup followed by validation" run)	**enter text; press Return/Enter**
6	Repeat Step 3 (or Step 5) (as necessary)	

17.10.33 Establish Data Pool Cleanup to Run with *cron*

In normal operations, the Cleanup Utility is run once a day as a cron job as a "cleanup only" run executing in echo mode of **predelete**. This builds the list of cleanup candidates (based on the expiration date and retention priority) that are reported to ECHO as those that will be deleted in the next run of cleanup. Also, the granules that have been entered in the Science Data Server's deleted granules table will be reported. On a subsequent run within the same 24-hour period, the cleanup utility is run in **delete** mode to perform the actual cleanup processing that was reported to ECHO in the **predelete** mode.

Table 17.10-35 presents the steps required to establish Data Pool Cleanup to run with *cron*. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in at an ECS platform using an account with privileges to remove science, metadata, and browse files from Data Pool disks.

2 To ensure that the **crontab** command launches the vi editor, type **setenv EDITOR vi** and then press the **Return/Enter** key.

- It may be desirable to include this command in the operator's **.cshrc** file to set the **crontab** editor to **vi** as part of the environmental settings normally used routinely.

3 Type **crontab -e** and then press the **Return/Enter** key.

- The contents of the file are displayed, and the cursor is displayed on the first character at the upper left corner of the file. ***Note***: If the operator has no **crontab** file on the current platform, this command opens a new one for editing.

4 If necessary, use the down arrow key on the keyboard to move the cursor down to a blank line.

- The cursor is displayed at the beginning of the selected line.

5 Type **i** to put the **vi** editor into the insert mode.

- The **vi** editor is in the insert mode, but no feedback is provided.

6 Type the crontab entry, including the appropriate Cleanup Utility command (as described in Section 17.10.32, **Invoke the Data Pool Cleanup Utility Manually**).

- For example:

  0 1 * * * /usr/ecs/OPS/CUSTOM/utilities/EcDlDataPoolCleanup.pl OPS -echomode predelete -noprompt

- The example would start a **predelete** cleanup run at 1:00 A.M. every day.

7 Repeat Step 6 as necessary to enter additional crontab entries, including the appropriate Cleanup Utility command (e.g., to run a **delete** cleanup run at 4:00 A.M. every day).

8 Press the **Esc** key.

- The cursor moves one character to the left and the **vi** editor is in the command mode.

9 Type **:wq** and then press the **Return/Enter** key.

- UNIX displays a message identifying the number of lines and characters in the **crontab** file (stored in the directory **/var/spool/cron/crontabs**) and then displays the UNIX prompt.

Table 17.10-35. Establish Data Pool Cleanup to Run with cron

Step	What to Do	Action to Take
1	Log in at an ECS host using an account with privileges to remove science, metadata, and browse files from Data Pool disks	**enter text; press Return/Enter**
2	**setenv EDITOR vi**	**enter text; press Return/Enter**
3	**crontab –e**	**enter text; press Return/Enter**
4	If necessary, use **down arrow key** to move cursor to a blank line	**press arrow key on keyboard**
5	To put **vi editor** in **insert** mode, type **I**	**enter text command**
6	crontab entry, including the appropriate Cleanup Utility command, for example: **0 1 * * * /usr/ecs/OPS/CUSTOM/utilities/EcDlData PoolCleanup.pl OPS -echomode predelete -noprompt**	**enter text**
7	Repeat Step 6 (as necessary)	
8	To put **vi editor** in **command** mode, press **Esc** key	**press Esc key on keyboard**
9	Exit **vi editor** with **:wq**	**enter text; press Return/Enter**

17.10.34 Specify Data Pool Access Statistics Rollup Start Time (at 1:00 am) and DPASU Execution (at 2:00 am), OPS Mode, with *cron*

The Data Pool Access Statistics Utility (DPASU) parses logs of the Data Pool Web Access service and the FTP access service and stores the results in tables in the Data Pool database. The DPASU is a command-line utility that permits an option of entering input parameters. It is intended to be run with ***cron*** to cover an arbitrary 24-hour period starting at a time specified as a configuration parameter in a configuration file. However, an operator may run the utility from the command line specifying a start date as an input parameter to cover a period other than the normal 24-hour period addressed by ***cron*** or to cover that normal period if ***cron*** failed to process the logs for that period.

There are two versions of the DPASU, one for each type of log processed. The script named **EcDlRollupWebLogs.pl** processes the Web Access log; its configuration file is **EcDlRollupWebLogs.CFG**. The script named **EcDlRollupFtpLogs.pl** processes the SYSLOG with FTP access entries; its configuration file is **EcDlRollupFtpLogs.CFG**. These scripts capture data on downloads from the Data Pool, including date and time of access, path and file name of the file, and size of the file. The captured data are written to a temporary "flat file" -- a tab-delimited text file -- stored in the directory /<ECS_HOME>/<*MODE*>/CUSTOM/data/DPL/. The flat file is then exported to Sybase and stored in a table. The DPASU calls Sybase stored procedures to generate a separate rollup table, removes the flat file, and enters a record in a separate table identifying which periods have been rolled up in order to prevent inadvertent reprocessing of that period.

To prevent potential table locking, ***cron*** runs of the DPASU scripts should be separated so that they are not both running concurrently (e.g., separate their start times by at least 20 minutes). Use the following procedure to specify a 1:00 a.m. start time for the rollup and add a line to the ***crontab*** files to run the DPASU for the OPS mode beginning at 2:00 a.m. every day with a 20-minute separation between the scripts.

Table 17.10-36 presents the steps required to specify Data Pool access statistics rollup start time and DPASU execution with *cron*. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in at the host for the DPASU scripts and their configuration files (e.g., e0dps01, g0dps01, l0dps01, n0dps01).

2 To change to the directory containing the configuration files, type the command **cd /usr/ecs/OPS/CUSTOM/cfg** and then press the **Return/Enter** key.

- The working directory is changed to **/usr/ecs/OPS/CUSTOM/cfg**.

3 To look at the Rollup Start Time specified in the configuration file for EcDlRollupWebLogs.pl, type **vi EcDlRollupWebLogs.CFG** and then press the **Return/Enter** key.

- The contents of the file are displayed, and the last line of the file indicates the start time in format similar to the following:
  `ROLLUP_START_TIME=3:00`
- and the cursor is displayed on the first character at the upper left corner of the file.
- If the start time is correct, exit **vi** by typing **:q!** and pressing the **Return/Enter** key; then go to Step 10. Otherwise, to change the time, execute Steps 4 through 9.

4 Use the arrow keys on the keyboard to move the cursor down to the line specifying the **ROLLUP_START_TIME** and to move it to the right until it is located over the first character in the time value.

- The cursor is moved to the start time location; the line should look similar to the following:
  `ROLLUP_START_TIME=3:00`

5 Type **x** to delete the number under the cursor.

- The number is deleted; the line should look similar to the following.
  `ROLLUP_START_TIME=:00`
- ***Note***: If more characters in the time value are to be changed, you can type **x** repeatedly to delete additional characters. For this exercise, you need only delete one character.

6 Type **i** to put the **vi** editor into the insert mode.

- The **vi** editor is in the insert mode, but no feedback is provided.

7 Type **1**.

- The typed entry appears to the left of the cursor.

8 Press the **Esc** key.

- The cursor moves one character to the left and the **vi** editor is in the command mode.

9 Type **ZZ** (be sure to use upper case).

- The file is saved and the UNIX prompt is displayed.

10 To ensure that the **crontab** command launches the **vi** editor, type **setenv EDITOR vi** and then press the **Return/Enter** key.

- It may be desirable to include this command in the operator's **.cshrc** file to set the **crontab** editor to **vi** as part of the environmental settings normally used routinely.

11 Type **crontab -e** and then press the **Return/Enter** key.

- The contents of the file are displayed, and the cursor is displayed on the first character at the upper left corner of the file. ***Note***: If the operator has no **crontab** file on the current platform, this command opens a new one for editing.

12 If necessary, use the down arrow key on the keyboard to move the cursor down to a blank line.

- The cursor is displayed at the beginning of the selected line.

13 Type **i** to put the **vi** editor into the insert mode.

- The **vi** editor is in the insert mode, but no feedback is provided.

14 Type **0 2 * * * /usr/ecs/OPS/CUSTOM/utilities/EcDlRollupWebLogs.pl OPS -noprompt**.

- The typed entry appears to the left of the cursor.

15 Press the **Esc** key.

- The cursor moves one character to the left and the **vi** editor is in the command mode.

16 Type **:wq** and then press the **Return/Enter** key.

- UNIX displays a message identifying the number of lines and characters in the **crontab** file (stored in the directory **/var/spool/cron/crontabs**) and then displays the UNIX prompt.

17 To look at the Rollup Start Time specified in the configuration file for EcDlRollupFtpLogs.pl, type **vi EcDlRollupFtpLogs.CFG** and then press the **Return/Enter** key.

- The contents of the file are displayed, and the last line of the file indicates the start time in format similar to the following:
  `ROLLUP_START_TIME=3:00`
- and the cursor is displayed on the first character at the upper left corner of the file.
- If the start time is correct, exit **vi** by typing **:q!** and pressing the **Return/Enter** key; then go to Step 21. Otherwise, to change the time, execute Step 20.

18 Repeat Steps 4 through 9 to change the time in **EcDlRollupFtpLogs.CFG**.

19 To ensure that the crontab command launches the **vi** editor, type **setenv EDITOR vi** and then press the **Return/Enter** key.

- It may be desirable to include this command in the operator's **.cshrc** file to set the **crontab** editor to **vi** as part of the environmental settings normally used routinely.

20 Type **crontab -e** and then press the **Return/Enter** key.

- The contents of the file are displayed, and the cursor is displayed on the first character at the upper left corner of the file. ***Note***: If the operator has no **crontab** file on the current platform, this command opens a new one for editing.

21 If necessary, use the down arrow key on the keyboard to move the cursor down to a blank line.

- The cursor is displayed at the beginning of the selected line.

22 Type **i** to put the **vi** editor into the insert mode.

- The **vi** editor is in the insert mode, but no feedback is provided.

23 Type **20 2 * * * /usr/ecs/OPS/CUSTOM/utilities/EcDlRollupFtpLogs.pl OPS -noprompt**.

- The typed entry appears to the left of the cursor.

24 Press the **Esc** key.

- The cursor moves one character to the left and the **vi** editor is in the command mode.

25 Type **:wq** and then press the **Return/Enter** key.

- UNIX displays a message identifying the number of lines and characters in the **crontab** file (stored in the directory **/var/spool/cron/crontabs**) and then displays the UNIX prompt.

Table 17.10-36. Specify Data Pool Access Statistics Rollup Start Time (at 1:00 am) and DPASU Execution (at 2:00 am), OPS Mode, with cron (1 of 2)

Step	What to Do	Action to Take
1	Log in at the host for the DPASU scripts and their configuration files	**enter text; press Return/Enter**
2	**cd /usr/ecs/OPS/CUSTOM/cfg**	**enter text; press Return/Enter**
3	**vi EcDlRollupWebLogs.CFG**	**enter text; press Return/Enter**
4	Move cursor **down** to line for **ROLLUP_START_TIME** and **right** until it is over first character in time value	**press keyboard arrow keys**
5	To delete the number under the cursor, type **x**	**enter text command**
6	To put **vi editor** in **insert** mode, type **i**	**enter text command**
7	**1** (for **ROLLUP_START_TIME** of 1:00 am)	**enter text**
8	To put **vi editor** in **command** mode, press **Esc** key	**press Esc key on keyboard**
9	**ZZ**	**enter text command**

Table 17.10-36. Specify Data Pool Access Statistics Rollup Start Time (at 1:00 am) and DPASU Execution (at 2:00 am), OPS Mode, with cron (2 of 2)

Step	What to Do	Action to Take
10	**setenv EDITOR vi**	**enter text; press Return/Enter**
11	**crontab –e**	**enter text; press Return/Enter**
12	If necessary, use **down arrow key** to move cursor to a blank line	**press arrow key on keyboard**
13	To put **vi editor** in **insert** mode, type **i**	**enter text command**
14	**0 2 * * * /usr/ecs/OPS/CUSTOM/utilities/EcDlRollup WebLogs.pl OPS –noprompt**	**enter text**
15	To put **vi editor** in **command** mode, press **Esc** key	**press Esc key on keyboard**
16	Exit **vi editor** with **:wq**	**enter text; press Return/Enter**
17	**vi EcDlRollupFtpLogs.CFG**	**enter text; press Return/Enter**
18	Repeat Steps 4 through 9 to change the time in **EcDlRollupFtpLogs.CFG**	
19	**setenv EDITOR vi**	**enter text; press Return/Enter**
20	**crontab –e**	**enter text; press Return/Enter**
21	If necessary, use **down arrow key** to move cursor to a blank line	**press arrow key on keyboard**
22	To put **vi editor** in **insert** mode, type **i**	**enter text command**
23	**0 2 * * * /usr/ecs/OPS/CUSTOM/utilities/EcDlRollup FtpLogs.pl OPS –noprompt**	**enter text**
24	To put **vi editor** in **command** mode, press **Esc** key	**press Esc key on keyboard**
25	Exit **vi editor** with **:wq**	**enter text; press Return/Enter**

17.10.35 Specify Data Pool Access Statistics Utility Execution from the Command Line

Although the Data Pool Access Statistics Utility scripts are intended to be run with **cron**, if it is necessary to run them from the command line, it is possible to do so. For example, if **cron** fails to complete successfully for any reason, no entry is made into the record table to indicate that a period was processed. In that event, the statistics can be captured for the missing interval by running the utility manually.

There are seven command-line parameters for use with the utility scripts:

- The **<*MODE*>** parameter indicates the mode (must specify a valid directory path) in which the script is to run; it is mandatory, unlabeled, and must be the first parameter following the command.
- The **-noprompt** parameter optionally specifies suppression of output to the screen.
- The **-nodelete** parameter optionally prevents the flat file from being deleted upon completion of the run.
- The **-flatfile <*path/file*>** parameter optionally provides an alternative path/file name for the flat file produced by the parser (useful only with the **-nodelete** option).
- The **-ftp <*path/file*>** parameter optionally indicates an alternative ftp log path/file(s) to be used instead of the configured default path/file (for the **EcDlRollupFtpLogs.pl** script only). Wildcards may be used, but must be escaped (i.e., preceded with a \).
- The **-web <*path/file*>** parameter optionally indicates an alternative web log path/file(s) to be used instead of the configured default path/file (for the **EcDlRollupWebLogs.pl** script only). Wildcards may be used, but must be escaped (i.e., preceded with a \).
- The **-start <*date*>** parameter optionally indicates an alternative start date for the rollup period, using the format MM/DD, and may be used to process a previously uncovered period.

With the exception of the mandatory **<*MODE*>** parameter, which must appear first after the command, the other parameters may be used in various orders and combinations. For example, to run without screen prompts or information, starting from December 22, and to retain the flat file, the command for accumulating statistics on web access should be entered as follows:

EcDlRollupWebLogs.pl OPS -noprompt -nodelete -start 12/22.

To run with normal screen information display, starting from February 15, but using an alternative file with wildcards for the web log, the command should be similar to the following:

EcDlRollupWebLogs.pl OPS - start 2/15 -web /usr/var/*.log.

Table 17.10-37 presents the steps required to specify Data Pool Access Statistics Utility execution from the command line, with normal screen information display. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in at the host for the DPASU scripts and their configuration files (e.g., e0dps01, g0dps01, l0dps01, n0dps01).

2 To change directory to the directory containing the scripts, type the command **cd /usr/ecs/<*MODE*>/CUSTOM/utilities** and then press the **Return/Enter** key.
- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/utilities**.

3 Type **EcDlRollupWebLogs.pl <*MODE*>** and then press the **Return/Enter** key.

- The utility runs and displays information to the screen as it executes, in form similar to the following:

```
A Synergy II/Data Pool product
 ___  __  __  __  _   _
|   \| _\/  |/ _\| | | |
| 0  |  / 0 |\ \ | | | |
|    | | /| |_\ \| \_/ |
|___/|_|/ |_|__ / \___/
Data Pool Access Statistics Utility


Connecting to database...

The DPASU will examine the logs for access entries between the
following times:
       Month    Day     Hour    Minute
-------------------------------------------
START: 11       26      03      00
  END: 11       27      02      59

Checking for already covered rollup periods...

File list:
/usr/ecs/OPS/COTS/www/ns-home/www/logs/access
Processing Web logs...
No access entries found in any of the Web logs

Cleaning up table "DlWebAccessLog"...OK

Exporting flat file to Sybase...OK

No access data was available to roll up.
DPASU will skip this step.

Rollup successful!
Removing flat file...OK
Gracefully exiting...
```

4 Type **EcDlRollupFtpLogs.pl <*MODE*>** and then press the **Return/Enter** key.

- The utility runs and displays information to the screen as it executes, in form similar to the following:

```
A Synergy II/Data Pool product
 ___  __  __  __  _   _
|   \| _\/  |/ _\| | | |
| 0  |  / 0 |\ \ | | | |
|    | | /| |_\ \| \_/ |
|___/|_|/ |_|__ / \___/
Data Pool Access Statistics Utility


Connecting to database...
```

```
The DPASU will examine the logs for access entries between the
following times:
       Month    Day     Hour    Minute
-----------------------------------------
START: 11       26      03      00
  END: 11       27      02      59

Checking for already covered rollup periods...

File list:
/var/adm/SYSLOG
Processing FTP logs...
No access entries found in any of the FTP logs

Cleaning up table "DlFtpAccessLog"...OK

Exporting flat file to Sybase...OK

No access data was available to roll up.
DPASU will skip this step.

Rollup successful!
Removing flat file...OK
Gracefully exiting...
```

Table 17.10-37. Specify Data Pool Access Statistics Utility Execution from the Command Line

Step	What to Do	Action to Take
1	Log in at the host for the DPASU scripts and their configuration file	**enter text; press Return/Enter**
2	**cd /usr/ecs/<*MODE*>/CUSTOM/utilities**	**enter text; press Return/Enter**
3	**EcDlRollupWebLogs.pl <*MODE*>** (Results in normal information display; options include: **-noprompt**, **-nodelete**, **-flatfile <*path/file*>**, **-web <*path/file*> -start <*date*>**)	**enter text; press Return/Enter**
4	**EcDlRollupFtpLogs.pl <*MODE*>** (Results in normal information display; options include: **-noprompt**, **-nodelete**, **-flatfile <*path/file*>**, **-ftp <*path/file*> -start <*date*>**)	**enter text; press Return/Enter**

17.10.36 Archive Access Statistics Using the Data Pool Archive Access Statistics Data Utility

The three remaining utilities are shell scripts for archiving, deleting, and restoring information in database tables populated by the DPASU. The **Data Pool Archive Access Statistics Data Utility** is run from the command line as needed or desirable to connect to the Data Pool database and write granule access data for a specified time range from the DlGranuleAccess,

DlGranuleSubscription, and DlAccessRollup tables to an ASCII file. Once this is done, the operator can run the **Data Pool Delete Access Statistics Data Utility** from the command line to delete the archived data from the Data Pool database. If it is desirable to restore deleted data to the database, the **Data Pool Restore Access Statistics Data Utility** can be run from the command line to restore the data.

Table 17.10-38 presents the steps required to archive access statistics using the Data Pool Archive Access Statistics Data Utility. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in at the host for the Data Pool database (e.g., e0acg11, g0acg01, l0acg02, n0acg01).

2 To change directory to the directory containing the Data Pool Archive Access Statistics Data Utility, type **cd /usr/ecs/<*MODE*>/CUSTOM/dbms/DPL** and then press the **Return/Enter** key.

- The working directory is changed to **cd /usr/ecs/<*MODE*>/CUSTOM/dbms/DPL**.

3 Type **DlDbArchiveAccessStat <*MODE*> <*STARTDATE*> <*STOPDATE*> <*ARCHIVEDIR*> <*USERNAME*> <*SERVER*> <*DBNAME*>** and then press the **Return/Enter** key.

- ***Note***: **<*MODE*>** is the mode in which the utility is being executed (e.g., OPS, TS1, TS2). **<*STARTDATE*>** is the start date time range, in format ***yyyymmdd***, for the data to be archived. **<*STOPDATE*>** is the stop date time range, in format ***yyyymmdd***, for the data to be archived. **<*ARCHIVEDIR*>** is the absolute path where the generated ASCII files are to be stored. **<*USERNAME*>** is the Sybase login name. **<*SERVER*>** is the Sybase Server for the Data Pool database (e.g., e0acg11_srvr, g0acg01_srvr, l0acg02_srvr, n0acg01_srvr). **<*DBNAME*>** is the name of the Data Pool database (e.g., DataPool_OPS).
- The script displays a prompt for entry of the password for the Sybase login.

4 Type **<*password*>** and then press the **Return/Enter** key (***Note*:** This may require input from the Database Administrator).

- The script runs and and the Archive Access Statistics Utility log file **DlDbArchiveAccessStat.log** records errors, warnings, and information about utility events.

Table 17.10-38. Archive Access Statistics Using the Data Pool Archive Access Statistics Data Utility

Step	What to Do	Action to Take
1	Log in at the host for the Data Pool database	**enter text; press Return/Enter**
2	**cd /usr/ecs/<*MODE*>/CUSTOM/dbms/DPL**	**enter text; press Return/Enter**
3	**DlDbArchiveAccessStat <*MODE*> <*STARTDATE*> <*STOPDATE*> <*ARCHIVEDIR*> <*USERNAME*> <*SERVER*> <*DBNAME*>**	**enter text; press Return/Enter**
4	**<*password*>** (from Database Administrator)	**enter text; press Return/Enter**

17.10.37 Delete Access Statistics Using the Data Pool Delete Access Statistics Data Utility

Table 17.10-39 presents the steps required to delete access statistics using the Data Pool Delete Access Statistics Data Utility. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in at the host for the Data Pool database (e.g., e0acg11, g0acg01, l0acg02, n0acg01).

2 To change directory to the directory containing the Data Pool Delete Access Statistics Data Utility, type **cd /usr/ecs/<*MODE*>/CUSTOM/dbms/DPL** and then press the **Return/Enter** key.

- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/dbms/DPL**.

3 Type **DlDbDeleteAccessStat** <***MODE***> <***STARTDATE***> <***STOPDATE***> <***USERNAME***> <***SERVER***> <***DBNAME***> and then press the **Return/Enter** key.

- ***Note***: <***MODE***> is the mode in which the utility is being executed (e.g., OPS, TS1, TS2). <***STARTDATE***> is the start date time range, in format ***yyyymmdd***, for the data to be deleted. <***STOPDATE***> is the stop date time range, in format ***yyyymmdd***, for the data to be deleted. <***USERNAME***> is the Sybase login name. <***SERVER***> is the Sybase Server for the Data Pool database (e.g., e0acg11_srvr, g0acg01_srvr, l0acg02_srvr, n0acg01_srvr). <***DBNAME***> is the name of the Data Pool database (e.g., DataPool_OPS).
- The script displays a prompt for entry of the password for the Sybase login.

4 Type **<*password*>** and then press the **Return/Enter** key (***Note*:** This may require input from the Database Administrator).

- The script runs and the Delete Access Statistics Utility log file **DlDbDeleteAccessStat.log** records errors, warnings, and information about utility events.

Table 17.10-39. Delete Access Statistics Using the Data Pool Delete Access Statistics Data Utility

Step	What to Do	Action to Take
1	Log in at the host for the Data Pool database	**enter text; press Return/Enter**
2	**cd /usr/ecs/<*MODE*>/CUSTOM/dbms/DPL**	**enter text; press Return/Enter**
3	**DlDbDeleteAccessStat <*MODE*> <*STARTDATE*> <*STOPDATE*> <*ARCHIVEDIR*> <*USERNAME*> <*SERVER*> <*DBNAME*>**	**enter text; press Return/Enter**
4	**<*password*>** (from Database Administrator)	**enter text; press Return/Enter**

17.10.38 Restore Access Statistics Using the Data Pool Restore Access Statistics Data Utility

Table 17.10-40 presents the steps required to restore access statistics using the Data Pool Restore Access Statistics Data Utility. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in at the host for the Data Pool database (e.g., e0acg11, g0acg01, l0acg02, n0acg01).

2 To change directory to the directory containing the Data Pool Restore Access Statistics Data Utility, type **cd /usr/ecs/<*MODE*>/CUSTOM/dbms/DPL** and then press the **Return/Enter** key.

- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/dbms/DPL**.

3 Type **DlDbRestoreAccessStat <*MODE*> <*STARTDATE*> <*STOPDATE*> <*ARCHIVEDIR*> <*USERNAME*> <*SERVER*> <*DBNAME*>** and then press the **Return/Enter** key.

- ***Note***: **<*MODE*>** is the mode in which the utility is being executed (e.g., OPS, TS1, TS2). **<*STARTDATE*>** is the start date time range, in format ***yyyymmdd***, for the data to be restored. **<*STOPDATE*>** is the stop date time range, in format ***yyyymmdd***, for the data to be restored. **<*ARCHIVEDIR*>** is the absolute path of the storage location for the ASCII files containing the data to be restored. **<*USERNAME*>** is the Sybase

login name. ***<SERVER>*** is the Sybase Server for the Data Pool database (e.g., e0acg11_srvr, g0acg01_srvr, l0acg02_srvr, n0acg01_srvr). ***<DBNAME>*** is the name of the Data Pool database (e.g., DataPool_OPS).

- The script displays a prompt for entry of the password for the Sybase login.

4 Type ***<password>*** and then press the **Return/Enter** key (***Note*:** This may require input from the Database Administrator).

- The script runs and the Archive Access Statistics Utility log file **DlDbRestoreAccessStat.log** records errors, warnings, and information about utility events.

Table 17.10-40. Restore Access Statistics Using the Data Pool Restore Access Statistics Data Utility

Step	What to Do	Action to Take
1	Log in at the host for the Data Pool database	**enter text; press Return/Enter**
2	**cd /usr/ecs/*<MODE>*/CUSTOM/dbms/DPL**	**enter text; press Return/Enter**
3	**DlDbRestoreAccessStat *<MODE>* *<STARTDATE>* *<STOPDATE>* *<ARCHIVEDIR>* *<USERNAME>* *<SERVER>* *<DBNAME>***	**enter text; press Return/Enter**
4	***<password>*** (from Database Administrator)	**enter text; press Return/Enter**

17.10.39 Use the Batch Insert Utility for Batch Insert of Data into the Data Pool

The Batch Insert Utility allows operators to specify Data Pool insert for granules residing in the ECS archive, as well as data from outside ECS (non-ECS granules). The utility queues the granules up for dispatch by the Data Pool Action Dispatcher (DPAD) for insertion by the Data Pool Insert Utility (DPIU). It accepts either a list of ECS granule identifiers or a list of non-ECS names; the list can be provided either as an input file or as standard input. A label identifying a batch of granules is specified as a command-line parameter, using the option **-label**, so that operators can monitor a batch with the DPM GUI.

Granules to be inserted can also be linked to a theme, using the option **-theme**. In fact, the Batch Insert Utility can also be used with that option to link granules already present in the Data Pool to a theme, or to additional themes. However, it is important to note that if the granules were originally inserted into the Data Pool using the Batch Insert Utility, you must use a different batch label when linking the granules to the theme than was used for the original insert. This is necessary because the Batch Insert Utility is designed to reject inserts that are in a batch with a label identical to one for which granules are already being processed. So, even if the batch has been inserted, if the inserts are still in the queue (e.g., with a status of **Completed**), you cannot run another batch with the same label to link them to a theme.

Table 17.10-41 presents the steps required to use the Batch Insert Utility for Batch Insert of Data into the Data Pool. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Log in at the machine where the Data Pool Batch Insert Utility is installed (e.g., e0dps01, g0dps01, l0dps01, n0dps01).

- ***Note***: The login must be as either cmshared or allmode to ensure correct permissions.

2 To change to the directory for starting the Batch Insert Utility, type **cd /usr/ecs/<*MODE*>/CUSTOM/utilities** and then press the **Return/Enter** key.

- The working directory is changed to **/usr/ecs/<*MODE*>/CUSTOM/utilities**.

3 At the UNIX prompt, enter the command to start the Batch Insert Utility, in the form **EcDlBatchInsert.pl <*MODE*> -ecs | -nonecs [-file <*pathname*>] [*options*]**.

- ***Note***: The following are examples of valid command-line entries for initiating the Batch Insert Utility:
  - **EcDlBatchInsert.pl <*MODE*> -ecs -file /home/cmshared/<*filename*>** (to add actions to the action insert queue for all ECS granules specified by granule IDs in the specified file. Because the command does not specify a **-label** parameter, the label is formed from the first 16 characters of the input file name).
  - **EcDlBatchInsert.pl <*MODE*> -nonecs -file /home/cmshared/<*filename*> -label Chig_volcano -theme "Chiginagak Volcano 2002"** (to add actions to the insert action queue for all non-ECS granules specified by XML pathnames in the specified input file, with all granules linked with the theme name **"Chiginagak Volcano 2002"** in the Data Pool database). ***Note***: The theme name must already be in the Data Pool database in the DlThemes table; if necessary, use the DPM GUI **Manage Themes** tab to define the theme before running the batch insert.
  - ***Note***: You can use Batch Insert with the **-theme** option to link granules already in the Data Pool to a theme, but if the granules were originally inserted using the Batch Insert Utility, you must use a different batch label than was used for the original insert; otherwise, the insert of the theme links may be rejected.
  - **EcDlBatchInsert.pl <*MODE*> -ecs -file /home/cmshared/<*filename*> -mdonly** (to add actions to the action insert queue for all ECS granules specified by granule IDs in the specified file, but insert metadata only. Because the command does not specify a **-label** parameter, the label is formed from the first 16 characters of the input file name).
  - **EcDlBatchInsert.pl <*MODE*> -ecs -file /home/cmshared/<*filename*> -rpriority 255** (to add actions to the action insert queue for all ECS granules specified by granule IDs in the specified file, and to set their retention priority to 255. Because the command does not specify a **-label** parameter, the label is formed from the first 16 characters of the input file name).

- **EcDlBatchInsert.pl <*MODE*> -ecs -file /home/cmshared/<*filename*> -rpriority 255 -rperiod 10 -dpriority 5** to add actions to the action insert queue for all ECS granules specified by granule IDs in the specified file, and to set their retention priority to 255 and their retention period to 10 days, with dispatch priority set to 5. Because the command does not specify a **-label** parameter, the label is formed from the first 16 characters of the input file name).

- The Batch Insert Utility runs and events and errors are recorded in the Batch Insert Utility log file **EcDlBatchInsert.log**.

Table 17.10-41. Use the Batch Insert Utility for Batch Insert of Data into the Data Pool

Step	What to Do	Action to Take
1	Log in at the host for EcDlBatchInsert.pl	**enter text; press Return/Enter**
2	**cd /usr/ecs/<*MODE*>/CUSTOM/utilities**	**enter text; press Return/Enter**
3	**EcDlBatchInsert.pl <*MODE*> -ecs | -nonecs [-file <*pathname*>] [*options*]**	**enter text; press Return/Enter**

17.10.40 Launch the DataPool Order Status & Control GUI

The **DataPool Order Status & Control** application is a set of HTML pages that allows the operator to view the status of orders and order items for Data Pool orders (*i.e.*, orders placed using the Data Pool Web Access GUI Shopping Cart order capability or the single granule converter dialog). It also allows the operator to control key aspects of the order process such as the queue control. The application is split into four functional areas: **Queue Control**, **Orders**, **Order Items**, and **Help**. Each page of the DataPool Order Status & Control application provides access to these four functions through links at the top of the page. The **help** function is the primary source of information in this section of the Archive Procedures and is therefore not addressed separately.

Table 17.10-42 presents the steps required to launch the DataPool Order Status & Control GUI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the UNIX command shell prompt, type **setenv DISPLAY *clientname*:0.0** and then press the **Return/Enter** key.

- For ***clientname***, use either the local terminal/workstation IP address or its machine name.

2 Start the log-in to a Netscape host by typing **/tools/bin/ssh *hostname*** (e.g., g0ins02, e0ins02, l0ins02, n0ins02) at the UNIX command shell prompt, and press the **Return/Enter** key.

- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 3.
- If you have not previously set up a secure shell passphrase; go to Step 4.

3 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 5.

4 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.

- You are logged in and a UNIX command shell prompt is displayed.

5 Type **netscape** and then press the **Return/Enter** key.

- The Netscape web browser is displayed.

6 Click in the **Netsite:** field.

- The field is highlighted.

7 Type the Universal Resource Locator (URL) for the DataPool Order Status & Control GUI and then press the **Return/Enter** key.

- The DataPool Order Status & Control GUI **Orders** page is displayed, offering links to access Data Pool order status and control functions (**Queue Control**, **Orders**, **Order Items**, and **Help**) and a table of information on orders currently in the order queue.

Table 17.10-42. Launch the DataPool Order Status & Control GUI

Step	What to Do	Action to Take
1	**setenv DISPLAY *clientname*:0.0**	**enter text; press Return/Enter**
2	**/tools/bin/ssh *hostname***	**enter text; press Return/Enter**
3	***Passphrase*** (or Step 4)	**enter text; press Return/Enter**
4	***Password***	**enter text; press Return/Enter**
5	**Netscape**	**enter text; press Return/Enter**
6	Move cursor to **Netsite:** field	**single-click**
7	**http://*<URL>***	**enter text; press Return/Enter**

17.10.41 Use the DataPool Order Status & Control GUI to Review Orders and Order Items

Table 17.10-43 presents the steps required to use the DataPool Order Status & Control GUI to review orders and associated order items. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DataPool Order Status & Control GUI (refer to Section 17.10.40, **Launch the DataPool Order Status & Control GUI**).

- The DataPool Order Status & Control GUI **Orders** page is displayed, offering links to access Data Pool order status and control functions (**Queue Control**, **Orders**, **Order Items**, and **Help**) as well as a table of information on orders currently in the order queue.
- You can observe an order of interest by locating it in the **Order ID** column, scrolling if necessary.
- Filtering and sorting capabilities are available through controls in the table header and footer.

2 It may be useful to filter the list. For example, if you receive notice that an order failed and you want to restrict the listed orders to display only those that have failed and for which notice has been sent to you, click on the pull-down arrow at the end of the **By Status** field, select FAILOPERN, and then click on the **Do Filtering** button.

- The table displays only failed orders for which a notice has been sent to the operator.

3 It may be helpful to sort the list, using the column-heading links. For example, if the window displays many failed orders and you are looking for a failed order from a specific user, click on the **User_Name** link at the top of the column listing user names.

- The listed orders are sorted by user name, permitting the operator to see all the failed orders from the user of interest in a single contiguous block.

4 If desired, in the **Order_ID** column click on the magnifier icon ( ) for the order of interest to obtain the **Order Details Viewer**.

- The **Order Details Viewer** is displayed with additional details concerning the order of interest.

5 To close the **Order Details Viewer**, click on the folder icon ( ) in the viewer.

- The **Order Details Viewer** is closed.

6 To check the status of items in the order of interest, click on the **order ID** link in the **Order ID** column.

- The system displays the **Order Items** page with the **Items** table listing the items in the order for which the Order ID was clicked.

- For each listed item, the **Items** table shows the **Item_ID**, **Status**, any **Error Code**, the **Granule_ID**, the **Input_File**, and the **Order_ID**.

7 If desired, click on the magnifier icon ( ) to obtain the **Order Item Details Viewer**.

- The **Order Item Details Viewer** is displayed with additional details concerning the selected order item.

8 To close the **Order Item Details Viewer**, click on the folder icon ( ) in the viewer.

- The **Order Item Details Viewer** is closed.

Table 17.10-43. Use the DataPool Order Status & Control GUI to Review Orders and Order Items

Step	What to Do	Action to Take
1	Launch the DataPool Order Status & Control GUI	Use procedure in Section 17.10.40
2	To filter the list, use pull-down arrow to select filter category and activate **Do Filtering** button	**clicks**
3	To sort the list, activate the link at top of column	**single-click**
4	To view details of an order, activate its magnifier icon ( )	**single-click**
5	To close order details viewer, activate folder icon ( )	**single-click**
6	To view items of an order, activate its order ID link	**single-click**
7	To view the details of an item, activate its magnifier icon ( )	**single-click**
8	To close item details viewer, activate folder icon ( )	**single-click**

17.10.42 Intervene in a Failed Data Pool Order Susceptible to Operator Intervention

The DataPool Order Status & Control GUI provides icons permitting the operator to take action on orders and/or order items that have failed in a way that may allow an operator intervention to reprocessing of the items that failed. The system is designed to send the operator an e-mail notification of the necessity for intervention. The operator may intervene to re-try the order or order items, or may choose to mark the order in question as complete, which results in the order being placed in one of the following states:

- DONE – some items are successfully completed and any failed items are left in the failed state.
- FAILED – all items were failed and are left in the failed state.

Table 17.10-44 presents the steps required to intervene in a failed data pool order susceptible to operator intervention. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DataPool Order Status & Control GUI (refer to Section 17.10.40, **Launch the DataPool Order Status & Control GUI**).

- The DataPool Order Status & Control GUI **Orders** page is displayed, offering links to access Data Pool order status and control functions (**Queue Control**, **Orders**, **Order Items**, and **Help**) as well as a table of information on orders currently in the order queue.
- You can observer an order of interest by locating it in the **Order ID** column, scrolling if necessary.
- Filtering and sorting capabilities are available through controls in the table header and footer.

2 Locate the order of interest (e.g., an order for which you receive e-mail notification of failure that may permit intervention to recover).

- See Section 17.10.41 **Use the DataPool Order Status & Control GUI to Review Orders and Order Items**, Steps 2 and 3).
- The **Status** column for a failed order of which the operator is notified indicates **FAILOPERN** and also contains two icon links: retry ( ) and "mark as complete" ( ).

3 If desirable, review detailed information on the order and its order items (see the Section 17.10.41, **Use the DataPool Order Status & Control GUI to Review Orders and Order Items**, Steps 4 through 8).

4 To retry a failed order, click on the retry icon ( ).

- A retry confirmation message asks **You have opted to retry an order. This will automatically retry all of the failed items within the order if there are any. Are you sure you want to do this?** and offers **Yes** and **No** buttons.

5 Click on the **Yes** button in the retry confirmation message.

- A confirmation message indicates **Your request has been submitted. Please reload the corresponding page.** and offers a **Reload** button.

6 Click on the **Reload** button in the confirmation message.

- On the **Orders** page, the **Status** of the order is shown as **ENTERED**.
- On the **Order Items** page, the **Status** of the items in the order should be **NULL** (entered but not yet being processed) or **PROCESSING**.

7 To mark a failed order as complete, click on the “Mark as Complete” icon ( ).

- A “Mark as Complete” confirmation message asks **You have opted to complete this order despite its failure status. This means that at least some granules in this order will not be delivered to the user as requested. Marking this order for completion means that it will never be able to be retried (at least from this user**

interface). Note that the user e-mail notice will automatically be sent at this point. If you wish to enter comments FOR THE USER regarding this order, please enter them below. (A text entry box is provided for the entry.) **Change order status and send e-mail?** The message then offers **Yes** and **No** buttons.

8 Click on the **Yes** button in the "Mark as Complete" confirmation message.

- A confirmation message indicates **Your request has been submitted. Please reload the corresponding page.** and offers a **Reload** button.

9 Click on the **Reload** button in the confirmation message.

- On the **Orders** page, the **Status** of the order is shown as **DONE**.
- On the **Order Items** page, the **Status** of the items in the order is shown as **FAILED**.

Table 17.10-44. Intervene in a Failed Data Pool Order Susceptible to Operator Intervention

Step	What to Do	Action to Take
1	Launch the DataPool Order Status & Control GUI	Use procedure in Section 17.10.40
2	Locate the order of interest	Use Steps 2 and 3 of procedure in Section 17.10.41
3	If desirable, review details of the order and its items	Use Steps 4 through 8 of procedure in Section 17.10.41
4	To retry a failed order order, activate its retry icon ( )	**single-click**
5	Activate the **Yes** button in the retry confirmation	**single-click**
6	Activate the **Reload** button in the confirmation message	**single-click**
7	To mark a failed order as complete, activate its "Mark as Complete" icon ( )	**single-click**
8	Activate the **Yes** button in the "Mark as Complete" confirmation	**single-click**
9	Activate the **Reload** button in the confirmation message	**single-click**

17.10.43 Use DataPool Order Status & Control GUI to Manage HEG Converter Front End Server

The DataPool Order Status & Control GUI **Queue Control** function provides a means for starting and stopping the HEG Front End Server (there is also a script named **EcDlHEGFrontEndControl** on the Data Pool host that provides an alternative method of starting and stopping the HEG Front End). The Queue Control function of the GUI also permits an operator to set the HEG Front End Processing State to process orders in the converter order

queue or not, and to set limits on the maximum number of HEG Converter processes and the maximum number of orders in the Order Queue.

Table 17.10-45 presents the steps required to use the DataPool Order Status & Control GUI to Manage the HEG Converter Front End Server. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the DataPool Order Status & Control GUI (refer to Section 17.10.40, **Launch the DataPool Order Status & Control GUI**).

- The DataPool Order Status & Control GUI **Orders** page is displayed, offering links to access Data Pool order status and control functions (**Queue Control**, **Orders**, **Order Items**, and **Help**) as well as a table of information on orders currently in the order queue.

2 Click on the **Queue Control** link near the top of the display.

- The **Processing and Queue Status** page is displayed.

3 To check the status of the HEG Front End Processing Server, observe the **HEG Front End Processing Server** line on the display.

- The appearance of the line provides indication of the status, as follows:
  - If the server is up, the line indicates **UP** and there are two control buttons one labeled **Exit Gracefully** and one labeled **Exit Immediately (No Cleanup)**.
  - If the server is down, the line indicates **DOWN** and there is one control button labeled **Start Up**.
- If the server is down and you wish to start it, go to Step 6.
- If the server is up and you wish to stop it, go to Step 4 (graceful exit) or 5 (immediate exit); otherwise continue with Step 7.

4 To stop the server gracefully, click on the **Exit Gracefully** button.

- The server does not begin any new processes and, after the server completes ongoing converter processes and exits, the **HEG Front End Processing Server** line on the display indicates **DOWN** and offers a **Start Up** button.

5 To stop the server immediately, click on the **Exit Immediately (No Cleanup)** button.

- All ongoing converter processes are killed and the server exits immediately; the **HEG Front End Processing Server** line on the display indicates **DOWN** and offers a **Start Up** button.

6 To start the server, click on the **Start Up** button.

- The server starts; the **HEG Front End Processing Server** line on the display indicates **Up** and offers an **Exit Gracefully** button and an **Exit Immediately (No Cleanup)** button.

7 If you wish to change the other parameters available on the **Processing and Queue Status** page, enter the new value in the input field, using the appropriate editing method:

- To change the **HEG Front End Processing State**, click on the pull-down arrow at the end of the field and select the desired state (**Process orders in the order queue** or **STOP processing orders in the order queue**).
- To change the value for the **Maximum number of HEG Converter Processes** or **Maximum Order Queue Size**, click at the end of the field and either use the **Backspace** key to delete the current value or use the mouse with the primary key held down to drag the cursor and highlight the current value. Then type the desired new value.
- The field(s) display the desired new value(s).

8 Click on the **Apply Changes** button.

- The screen is refreshed with the new value(s) implemented.
- The **Reset** button may be used to clear the form values.

Table 17.10-45. Use DataPool Order Status & Control GUI to Manage the HEG Converter Front End Server

Step	What to Do	Action to Take
1	Launch the DataPool Order Status & Control GUI	Use procedure in Section 17.10.40
2	Activate the **Queue Control** link	**single-click**
3	To check the status of the HEG Front End Processing Server, note the indications on the **HEG Front End Processing Server** line on the display	**read text; observe button(s)**
4	To stop the server gracefully, activate the **Exit Gracefully** button	**single-click**
5	To stop the server immediately, activate the **Exit Immediately (No Cleanup)** button	**single-click**
6	To start the server, activate the **Start Up** button	**single-click**
7	To change other parameter(s), enter new value(s) in the input field(s)	**click(s); enter text**
8	Activate the **Apply Changes** button	**single-click**

18. Data Distribution

18.1 Data Distribution Process

Data Distribution is a process of retrieving archived data and providing the data to requesters in response to the orders they submit or subscriptions they have entered into the system. The requesters may be classified in either of the following two categories:

- External to ECS.
  - For example, scientists at Science Computing Facilities (SCFs) may have standing orders for the data products that are processed using their science software.
- Internal to ECS.
  - For example, the Data Processing Subsystem depends on Data Distribution to distribute copies of archived science software and input data in support of data processing.

Data retrieved from the archives can be distributed to requesters using any of the following three general methods:

- Electronic pull.
- Electronic push.
- Hard (physical) media distribution on disks or tape cartridges.

Hard (physical) media distribution is accomplished through the Product Distribution System (PDS), which supports the distribution of data on the following types of media:

- 8mm tape cartridges.
- Digital Linear Tape (DLT).
- Compact disk (CD).
- DVD (formerly “digital video disk” or “digital versatile disk” now referred to as just "DVD").

The method of data distribution is dictated by the nature of the data distribution request. (The requester specifies the distribution method when ordering or subscribing to the data.)

Data Distribution includes three general types of activities; i.e., Data Distribution (DDIST) operations, Product Distribution System (PDS) operations, and Order Manager (OM) operations. The Distributed Active Archive Center (DAAC) Distribution Technicians use the Data Distribution Operator graphical user interface (GUI) within the Data Server Subsystem to perform DDIST operations (i.e., electronic push or pull). They use Product Distribution System (PDS) tools to perform hard (physical) media operations (i.e., to distribute data on disks or tape cartridges). They use the OM GUI in the Order Manager Subsystem (OMS) to manage orders.

Subsequent sections related to Data Distribution address the following topics:

- Section 18.2 An overview of the process for processing distribution requests through DDIST and step-by-step procedures for monitoring and controlling distribution requests.
- Section 18.3 An overview of the process for performing storage management server operations and step-by-step procedures for monitoring storage management server operations.
- Section 18.4 An overview of the process and step-by-step procedures for tuning DDIST system parameters related to DDIST operations.
- Section 18.5 An overview of the process and step-by-step procedures for monitoring/controlling Order Manager operations.
- Section 18.6 An overview of the process and step-by-step procedures for troubleshooting DDIST and Order Manager GUI problems.
- Section 18.7 An overview of the process and step-by-step procedures for starting up PDS.
- Section 18.8 An overview of the process and step-by-step procedures for shutting down PDS.
- Section 18.9 An overview of the process for product processing using PDS and step-by-step procedures for monitoring and controlling product processing using PDS.
- Section 18.10 An overview of the process for order processing using the Product Distribution System Interface Server (PDSIS) Operator Interface (OI) and step-by-step procedures for monitoring and controlling order processing using the PDSIS OI.
- Section 18.11 An overview of the process and step-by-step procedures for troubleshooting PDS problems.

18.2 Processing Distribution Requests through DDIST

The Distribution Technicians use the Data Distribution Operator GUI and the Storage Management Control GUI to monitor and control the retrieval of data from the archives and distribution to requesters using either of the following methods:

- Electronic pull.
- Electronic push.

The method of data distribution is dictated by the nature of the data distribution request. (The requester specifies the distribution method when ordering or subscribing to the data.)

If the requester specifies distribution in the electronic “pull” mode, data are retrieved from the archive and placed in the “pull area” on the data server staging disk. The requester is notified that the data are available for retrieval from that particular location for a set period of time. The requester initiates a file transfer procedure (ftp “get”) to move the data electronically (over a communications network) to the requester’s own system.

In response to a request for distribution in the electronic “push” mode, data are retrieved from the archive and placed on a data server staging disk. Then the retrieved data on the staging disk

are transferred electronically (via ftp "put") to the requester's designated storage location (specified in the distribution request) under the control of the data server. The requester is notified when the data push has been completed.

Each procedure outlined has an **Activity Checklist** table that provides an overview of the task to be completed. The outline of the **Activity Checklist** is as follows:

Column one - ***Order*** shows the order in which tasks could be accomplished.

Column two - ***Role*** lists the Role/Manager/Operator responsible for performing the task.

Column three -***Task*** provides a brief explanation of the task.

Column four - ***Section*** provides the Procedure (P) section number or Instruction (I) section number where details for performing the task can be found.

Column five - **Complete?** is used as a checklist to keep track of which task steps have been completed.

Table 18.2-1, below, provides an Activity Checklist for monitoring/controlling distribution requests.

Table 18.2-1. Monitoring/Controlling Distribution Requests - Activity Checklist

Order	Role	Task	Section	Complete?
1	Distribution Technician	Log in to ECS Hosts	(P) 18.2.1	
2	Distribution Technician	Launch the Data Distribution Operator and Storage Management Control GUIs	(P) 18.2.2	
3	Distribution Technician	Monitor/Control Data Distribution Requests	(P) 18.2.3	
4	Distribution Technician	Configure Data Distribution Polling	(P) 18.2.4	
5	Distribution Technician	Filter Data Distribution Requests	(P) 18.2.5	
6	Distribution Technician	Change the Priority of Data Distribution Requests	(P) 18.2.6	
7	Distribution Technician	Suspend/Resume Data Distribution Requests	(P) 18.2.7	
8	Distribution Technician	Cancel Data Distribution Requests	(P) 18.2.8	
9	Distribution Technician	Modify Preambles	(P) 18.2.9	

18.2.1 Log in to ECS Hosts

Logging in to ECS hosts is accomplished from a UNIX command line prompt. Table 18.2-2 presents (in a condensed format) the steps required to log in to ECS hosts. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 At the UNIX command line prompt enter:

setenv DISPLAY <client name>:0.0

- Use either the X terminal/workstation IP address or the machine-name for the client name.
- When using secure shell, the DISPLAY variable is set just once, before logging in to remote hosts. If it were to be reset after logging in to a remote host, the security features would be compromised.

2 If logging in to the PDS Server host, in the terminal window (at the command line prompt) start the log-in to the PDS Server by entering:

/tools/bin/ssh -l <PDS user ID> <PDS host name>

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- The **-l** option used with the ssh command allows logging in to the remote host (or the local host for that matter) with a different user ID (in this case the login ID is changed to a PDS user ID).
- **<PDS user ID>** refers the PDS user ID or PDSIS user ID.
  - The PDS user IDs **pds**, **pds_st**, and **pds_it** are used for PDS operations in the OPS, TS1, and TS2 modes respectively.
  - The PDSIS user IDs **pdsis**, **pdsis_ts1**, and **pdsis_ts2** are used for PDSIS operations in the OPS, TS1, and TS2 modes respectively.
- An alternative method is to enter:

  /tools/bin/ssh <PDS user ID>@<PDS host name>

  - For example:

    /tools/bin/ssh pds@x0dig06

- Depending on the set-up it may or may not be necessary to include the path (i.e., /tools/bin/) with the ssh command. Using ssh alone is often adequate. For example:

  ssh -l pds x0dig06

  - or -

  ssh pds@x0dig06

- If you receive the message, "Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?" enter **yes** ("y" alone will not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 3.
- If you have not previously set up a secure shell passphrase, go to Step 4.

3 If logging in to an ECS host other than the PDS Server host, in the terminal window (at the command line prompt) start the log-in to the appropriate host by entering:

/tools/bin/ssh <host name>

- The **-l** option can be used with the ssh command to allow logging in to the remote host (or the local host for that matter) with a different user ID. For example, to log in to x0acs06 as user cmops enter:

  /tools/bin/ssh -l cmops x0acs06

- An alternative method of logging in with a different user ID is to enter:

  /tools/bin/ssh <PDS user ID>@<PDS host name>

  – For example:

  /tools/bin/ssh cmops@x0acs06

- Depending on the set-up it may or may not be necessary to include the path (i.e., /tools/bin/) with the ssh command. Using ssh alone is often adequate. For example:

  ssh x0acs06

  - or -

  ssh -l cmops x0acs06

  - or -

  ssh cmops@x0acs06

- Examples of Sun internal server host names include **e0acs06**, **g0acs06**, **l0acs06**, and **n0acs06**.
- Examples of Sun external server host names include **e0ins01, g0ins01, l0ins01**, and **n0ins01**.
- Examples of Access/Process Coordinators (APC) Server host names include **e0acg11**, **g0acg01**, **l0acg02**, and **n0acg01**.
- Examples of FSMS Server host names include **e0drg11**, **g0drg01**, **l0drg01**, and **n0drg01**.
- Examples of Operations Workstation host names include **e0acs03**, **g0acs02**, **l0acs01**, and **n0acs03**.
- Examples of Ingest Server host names include **e0icg11, g0icg01, l0acg02**, and **n0acg01**.

- If you receive the message, "Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?" enter **yes** ("y" alone will not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter *passphrase* for RSA key '<*user@localhost*>'** appears; continue with Step 4.
- If you have not previously set up a secure shell passphrase, go to Step 5.

4 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, enter:

<passphrase>

- If a command line prompt is displayed, log-in is complete.
- If the passphrase is unknown, press **Return/Enter**, which should cause a **<user@remotehost>'s password:** prompt to appear (after the second or third try if not after the first one), then go to Step 5.
- If the passphrase is entered improperly, a **<user@remotehost>'s password:** prompt should appear (after the second or third try if not after the first one); go to Step 5.

5 If a prompt for **<*user@remotehost*>'s password:** appears, enter:

<password>

- A command line prompt is displayed.
- Log-in is complete.

Table 18.2-2. Log in to ECS Hosts - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**setenv DISPLAY <client name>:0.0**	**enter text, press Enter**
2	**/tools/bin/ssh -l <pds user id> <pds host name>** or **/tools/bin/ssh <host name>** (as applicable)	**enter text, press Enter**
3	**<passphrase>** (if applicable)	**enter text, press Enter**
4	**<password>** (if applicable)	**enter text, press Enter**

18.2.2 Launch the Data Distribution Operator and Storage Management Control GUIs

The **Data Distribution Operator GUI** is intended to run continually to allow the monitoring and management of data distribution requests. The **Storage Management Control** GUI is intended to be run as it is needed; e.g., in support of Storage Management configuration parameter modifications.

The **Data Distribution Operator** and **Storage Management Control** GUIs are invoked from a UNIX command line prompt. Table 18.2-3 presents (in a condensed format) the steps required to launch the **Data Distribution Operator** and **Storage Management Control** GUIs. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the Operations Workstation.

- Examples of Operations Workstation host names include **e0acs03**, **g0acs02**, **l0acs01**, and **n0acs03**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 In the terminal window, at the command line prompt enter:

cd /usr/ecs/<MODE>/CUSTOM/utilities

- **<MODE>** is current mode of operation.
  - TS1 - Science Software Integration and Test (SSI&T)
  - TS2 - New Version Checkout
  - OPS - Normal Operations
- "utilities" is the directory containing the **Data Distribution Operator GUI** and **Storage Management Control** GUI start-up scripts (e.g., EcDsDdistGuiStart, EcDsStmgtGuiStart).

3 Start the **Data Distribution Operator GUI** by entering:

EcDsDdistGuiStart <MODE>

- The **Data Distribution Operator GUI** is launched.
- The **Data Distribution Operator GUI Distrib'n Requests** tab is displayed.

4 Start the **Storage Management Control** GUI by entering:

EcDsStmgtGuiStart <MODE>

- The **Storage Management Control** GUI is launched.
- The **Storage Management Control** GUI Storage **Config.** tab is displayed.

Table 18.2-3. Launch the Data Distribution Operator and Storage Management Control GUIs - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	UNIX window (Operations Workstation)	**single-click** or use procedure in Section 18.2.1
2	**cd /usr/ecs/<MODE>/CUSTOM/utilities**	**enter text, press Enter**

Table 18.2-3. Launch the Data Distribution Operator and Storage Management Control GUIs - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
3	EcDsDdistGuiStart <MODE>	enter text, press Enter
4	EcDsStmgtGuiStart <MODE>	enter text, press Enter

18.2.3 Monitor/Control Data Distribution Requests

The Distribution Technician monitors and manages data distribution requests primarily via the **Data Distribution - Track Activity** window of the **Distrib'n Requests** tab on the **Data Distribution Operator GUI**. From the **Data Distribution - Track Activity** window the DAAC Distribution Technician can perform the following functions:

- View data distribution requests.
- Change the priority of a selected distribution request.
- Cancel or suspend a request.
- Resume processing of a suspended request.
- Filter on all or specific requests by...
  - Request ID.
  - Requester.
  - All Requests.
  - Media Type.
  - State (current status).

Table 18.2-4 presents (in a condensed format) the steps required to monitor/control data distribution requests. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Data Distribution Operator GUI** (refer to Section 18.2.2).
- The **Data Distribution Operator GUI** is displayed.

2 Configure Data Distribution polling (refer to Section 18.2.4).
- DDist Polling Rate is set.
- Error Retry Rate is set (if applicable).

3 Observe the distribution request information displayed on the **Distrib'n Requests** tab of the **Data Distribution Operator GUI**.

- By default, all current distribution requests are shown in the **Data Distribution Requests** list of the **Data Distribution - Track Activity** window (**Distrib'n Requests** tab).
- Note that Data Distribution controls much of the data retrieval from the archive (excluding retrieval for Data Pool insert); therefore, there may be a lot of activity on the **Data Distribution - Track Activity** screen, especially if data processing is operating at or near capacity.
  - Consequently, it may be useful to restrict the number of distribution requests displayed by filtering them as described in the next step of this procedure.
- Horizontal and vertical scroll bars allow viewing data that are not readily visible in the window.
- **Single-click** on any of the column headers of the **Data Distribution - Track Activity** screen to sort the listed requests in order by the column selected.
  - For example, **single-click** on the **Submission Time** column header to list requests in the order in which the requests were submitted (i.e., oldest first).
- The **Refresh** button provides a means of updating the data on the screen.
  - An alternative is to execute the following menu path from the pull-down menu:

    View → Refresh
- The **Find** button provides a means of performing a keyword search of the distribution requests.
  - To perform a keyword search, in the text entry box to the right of the **Find** button enter: **<text>** then **single-click** on the **Find** button. Request(s) that have the search text are highlighted.
- The **Operator Messages** field at the bottom of the GUI displays messages concerning events occurring in distribution operations.
  - Error messages are described in Table 18.6-3, Data Distribution Operator GUI User Messages and Table 18.6-4, Storage Management User Messages.
- To select (highlight) all requests being displayed in the **Data Distribution - Track Activity** window execute the following menu path from the pull-down menu:

  Selected → Select All
- To deselect all highlighted requests being displayed in the **Data Distribution - Track Activity** window execute the following menu path from the pull-down menu:

  Selected → Deselect All
- To access more detailed information concerning the status of a distribution request, **single-click** on the distribution request in the **Data Distribution - Track Activity** window then execute the following menu path from the pull-down menu:

  View→ Detailed
  - The detailed information is displayed in the **Operator Messages** field at the bottom of the GUI.

4 If the list of data distribution requests shown in the **Data Distribution - Track Activity** window needs to be filtered, filter data distribution requests (refer to Section 18.2.5).

- Only requests that meet the specified filter criteria appear in the list in the **Data Distribution - Track Activity** window.

5 Observe the distribution request information displayed on the **Distrib'n Requests** tab of the **Data Distribution Operator GUI**.

6 If necessary, change the priority of a data distribution request (refer to Section 18.2.6).

- Priority of the request, as displayed in the **Priority** column of the **Data Distribution Requests** list, changes from its original value to the newly selected priority.
- A check mark is displayed in the **Mod** column of the **Data Distribution Requests** list to indicate that the request has been changed.

7 If necessary, suspend data distribution request(s) (refer to Section 18.2.7).

- Status of request(s), as displayed in the **State** column of the **Data Distribution Requests** list, change(s) to the appropriate state(s).
- Check mark(s) is (are) displayed in the **Mod** column of the **Data Distribution Requests** list to indicate that changes have been made to the request(s).

8 If necessary, resume processing of suspended request(s) (refer to Section 18.2.7).

- Status of request(s), as displayed in the **State** column of the **Data Distribution Requests** list, change(s) to the appropriate state(s).
- Check mark(s) is (are) displayed in the **Mod** column of the **Data Distribution Requests** list to indicate that changes have been made to the request(s).

9 If necessary, cancel a data distribution request (refer to Section 18.2.8).

- Status of the request, as displayed in the **State** column of the **Data Distribution Requests** list, changes from its original value to "Canceled."
- A check mark is displayed in the **Mod** column of the **Data Distribution Requests** list to indicate that the request has been changed.

10 If the system creates an open intervention with respect to a request (e.g., due to the failure of a request), respond to the intervention.

- For detailed instructions refer to the **View Open Intervention Information on the OM GUI** procedure (Section 18.5.2).

11 If it becomes necessary to reprocess or check on a data distribution request that has failed, been cancelled, or been shipped, check/resubmit the request.

- For detailed instructions refer to the **Monitor/Control Distribution Request Information on the OM GUI** procedure (Section 18.5.3).

12 If it is necessary to update the data displayed in the **Data Distribution - Track Activity** window, **single-click** on the **Refresh** button.

- Current data concerning data distribution requests is displayed in the **Data Distribution - Track Activity** window.

13 If it is necessary to access more detailed information concerning the status of a particular distribution request, first **single-click** on (highlight) the distribution request in the **Data Distribution - Track Activity** window.

14 To complete accessing more detailed information concerning the status of a particular distribution request execute the following menu path from the pull-down menu:

View→ Detailed

- Information is displayed in the **Operator Messages** field at the bottom of the GUI.

15 If there is a data distribution failure, perform the applicable procedure(s) in the **Troubleshooting DDIST and Order Manager GUI Problems** section (Section 18.6).

16 Repeat Steps 4 through 15 as necessary to monitor data distribution requests.

17 If necessary, exit from the **Data Distribution Operator GUI** by executing the following menu path:

File → Exit

- The **Data Distribution Operator GUI** disappears.

Table 18.2-4. Monitor/Control Data Distribution Requests - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Launch the **Data Distribution Operator GUI** (if necessary)	Use procedure in Section 18.2.2
2	Configure Data Distribution polling	Use procedure in Section 18.2.4
3	Observe distribution request information	**read text**
4	Filter data distribution requests if necessary	Use procedure in Section 18.2.5
5	Observe distribution request information	**read text**
6	Change the priority of a data distribution request if necessary	Use procedure in Section 18.2.6
7	Suspend data distribution request(s) if necessary	Use procedure in Section 18.2.7
8	Resume processing of suspended request(s) if necessary	Use procedure in Section 18.2.7
9	Cancel a data distribution request if necessary	Use procedure in Section 18.2.8
10	View open intervention information on the **OM GUI** if necessary	Use procedure in Section 18.5.2

Table 18.2-4. Monitor/Control Data Distribution Requests - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
11	Check/resubmit a completed request if necessary	Use procedure in Section 18.5.3
12	**Refresh** button (as necessary)	**single-click**
13	**<distribution request>** (in the **Data Distribution - Track Activity** window) (as necessary to access detailed information concerning request status)	**single-click**
14	**View→ Detailed** (as necessary to access detailed information concerning request status)	**single-click**
15	Repeat Steps 4 through 14 as necessary	
16	**File → Exit** (to exit from the **Data Distribution Operator GUI**)	**single-click**

18.2.4 Configure Data Distribution Polling

The procedure to **Configure Data Distribution Polling** is performed as part of the **Monitor/Control Data Distribution Requests** procedure (Section 18.2.3). The **Options** menu on the **Data Distribution Operator GUI** provides the Distribution Technician with a means of switching the Data Distribution database polling function on or off. In addition, there are several parameters that the technician can modify:

- DDist Polling Rate
  - How often (in seconds) the system updates the information displayed in the Data Distribution - Track Activity window.
- Error Retry Rate
  - Amount of time (in seconds) that the system waits before trying to poll the Data Server after a failed attempt.
- Select Confirmation Min
  - Number of records that triggers a confirmation dialogue box for a selected action.
- Overdue Limit
  - Time limit (in hours) for declaring requests "overdue."

Table 18.2-5 presents (in a condensed format) the steps required to configure Data Distribution polling. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Execute the following menu path:

Options → System Settings

- The **Refresh Options** dialogue box is displayed.

2 If the DDist Polling state is to be changed (from off to on or vice versa), **single-click** on the **DDist Polling On** button.
- If the button does not have a check mark in it, clicking on it turns DDist Polling on.
- If the button already has a check mark in it, clicking on it turns DDist Polling off.

3 If the polling rate value is to be changed, in the **DDist Polling Rate** field enter:

<polling rate>

- The default value for polling rate is 30 seconds.

4 If an error retry rate value is to be specified, in the **Error Retry Rate** field enter:

<error retry rate>

- The value for error retry rate is specified as a number of seconds.

5 If it is necessary to specify a number of records that would trigger a confirmation dialogue box if selected, in the **Select Confirmation Min** field enter:

<number of records>

- When specifying a common action for a multiple requests that have been highlighted (e.g., when "resuming" a large group of suspended requests), a dialogue box is displayed to confirm that the action should be applied to all of the requests in the group.
- The **Select Confirmation Min** field specifies the minimum number of records for displaying the confirmation dialogue box.
  - The default value is 100. If 100 requests (or more) are selected for a particular action, a dialogue box is displayed to confirm the action. If 99 requests (or fewer) are selected for a particular action, no confirmation dialogue box is displayed.

6 If it is necessary to specify a time limit for declaring requests "overdue," in the **Overdue Limit** field enter:

<hours>

- Requests that exceed the number of hours specified in the **Overdue Limit** field are marked "Yes" in the **Overdue** column on the **Data Distribution - Track Activity** window.

7 When the appropriate data have been entered in the **Refresh Options** dialogue box fields, **single-click** on the appropriate button from the following selections:
- **Ok** - to apply the selections and dismiss the **Refresh Options** dialogue box.
- **Cancel** - to dismiss the **Refresh Options** dialogue box without applying the selections.

8 Return to the **Monitor/Control Data Distribution Requests** procedure (Section 18.2.3).

Table 18.2-5. Configure Data Distribution Polling - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Options → System Settings**	**single-click**
2	**DDist Polling On** button (if applicable)	**single-click**
3	**<polling rate>** (if applicable)	**enter text**
4	**<error retry rate>** (if applicable)	**enter text**
5	**<number of records>** (if applicable)	**enter text**
6	**<hours>** (if applicable)	**enter text**
7	**Ok** button	**single-click**
8	Return to the procedure to **Monitor/Control Data Distribution Requests**	Use procedure in Section 18.2.3

18.2.5 Filter Data Distribution Requests

The procedure to **Filter Data Distribution Requests** is performed as part of the **Monitor/Control Data Distribution Requests** procedure (Section 18.2.3). The **Data Distribution Operator GUI** provides the Distribution Technician with a means of filtering data distribution requests.

The distribution requests to be displayed in the **Data Distribution Requests** list (**Data Distribution - Track Activity** window) can be filtered using the **Distribution Filter Requests** dialogue box. The filtering can be done on the basis of the following criteria, either individually or in combination:

- Request ID.
- Requester.
- Media Type.
- State [of the request].

Table 18.2-6 presents (in a condensed format) the steps required to filter data distribution requests. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Execute the following menu path:

View → Filter

- The **Distribution Filter Requests** dialogue box is displayed.
- If data distribution requests are to be filtered on the basis of….
  - **Request ID**, perform Steps 2 and 3.
  - **Requester,** perform Steps 4 and 5.

- **All Requests,** perform Step 6.
- **Media Type,** perform Step 7.
- **State,** perform Step 8.

2 If a specific distribution request is desired and the request ID is known, **single-click** on the **Request ID** radio button.

3 If a specific distribution request is desired and the request ID is known, in the text box adjacent to the **Request ID** radio button enter:

<request ID>

4 If data distribution requests submitted by a particular requester are desired, **single-click** on the **Requester** radio button.

5 If data distribution requests submitted by a particular requester are desired, in the text box adjacent to the **Requester** radio button enter:

<requester>

- In the text box the requester must be identified exactly as known to the Data Server Subsystem.

6 If all data distribution requests are to be displayed in the **Data Distribution Requests** list, **single-click** on the **All Requests** radio button.

- The **All Requests** button is particularly useful for restoring the **Data Distribution Requests** list after reviewing a previously filtered set of requests.
- Go to Step 9.

7 If a list of data distribution requests filtered by media type(s) is needed, in the **Media Type** section of the **Filter Requests** dialogue box **single-click** on the type(s) of media to be displayed in the **Data Distribution - Track Activity** window.

- Options are: **8 MM, CDROM, DLT, DVD, FtpPull, FtpPush, scp, All, None.**
  - **8 MM** (tape), **CDROM** (Compact Disk – Read-Only Memory), **DLT** (Digital Linear Tape), and **DVD** are handled through PDS not DDIST.
  - **FtpPull**, **FtpPush** and **scp** (secure copy distribution) are handled through DDIST.
- One media type or several media types may be selected.
- If other filters (e.g., requester or state) are to be applied, it is possible to **single-click** on the **Apply** button to implement the media type filter and leave the **Filter Requests** dialogue box open.

8 If a list of data distribution requests filtered by state(s) is needed, **single-click** on the applicable button(s) in the **State** section of the **Filter Requests** dialogue box.

- Options are: **Pending, Active, Staging, Transferring, Cancelled, Suspended, Suspended with Errors, Waiting for Shipment, Shipped, Failed, All, None.**
- One button or several buttons may be selected.
- If other filters (e.g., requester or media type) are to be applied, it is possible to **single-click** on the **Apply** button to implement the state filter and leave the **Filter Requests** dialogue box open.

9 When all filter criteria have been selected, **single-click** on the appropriate button from the following selections:

- **OK** - to implement the selections and dismiss the **Distribution Filter Requests** dialogue box.
  - The **Data Distribution - Track Activity** window reappears; only requests that meet the specified filter criteria appear in the list.
- **Apply** - to implement the selections without dismissing the **Distribution Filter Requests** dialogue box.
  - The **Distribution Filter Requests** dialogue box remains open.
- **Cancel** - to dismiss the **Distribution Filter Requests** dialogue box without implementing the selections.
  - The previously available **Data Distribution Requests** list is shown in the **Data Distribution - Track Activity** window.

10 Return to the **Monitor/Control Data Distribution Requests** procedure (Section 18.2.3).

Table 18.2-6. Filter Data Distribution Requests - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**View → Filter**	**single-click**
2	**Request ID** radio button (if applicable)	**single-click**
3	**<request ID>** (in **Request ID** text box) (if applicable)	**enter text**
4	**Requester** radio button (if applicable)	**single-click**
5	**<requester>** (in **Requester** text box) (if applicable)	**enter text**
6	**All Requests** radio button (if applicable)	**single-click**
7	**<media types>** (in **Media Type** section) (if applicable)	**single-click**
8	**<state>** button(s) (in **State** section) (if applicable)	**single-click**
9	**OK** button	**single-click**
10	Return to the procedure to **Monitor/Control Data Distribution Requests**	Use procedure in Section 18.2.3

18.2.6 Change the Priority of Data Distribution Requests

The procedure to **Change the Priority of Data Distribution Requests** is performed as part of the **Monitor/Control Data Distribution Requests** procedure (Section 18.2.3). The **Change Priority** area of the **Data Distribution - Track Activity** window on the **Data Distribution Operator GUI** allows the Distribution Technician to change the priority of data distribution requests.

Table 18.2-7 presents (in a condensed format) the steps required to change the priority of data distribution requests. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If the list of data distribution requests shown in the **Data Distribution - Track Activity** window of the **Data Distribution Operator GUI** needs to be filtered, filter data distribution requests (refer to Section 18.2.5).
- Only requests that meet the specified filter criteria appear in the list in the **Data Distribution - Track Activity** window.

2 In the **Data Distribution Requests** list **single-click** on (highlight) the row corresponding to the distribution request to be assigned a different priority.
- The selected data distribution request is highlighted.

3 **Single-click** and **hold** the **Change Priority** option button to display a menu of priorities, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.
- Options are: **Xpress, Vhigh, High, Normal, Low.**
- Selected code is displayed on the **Change Priority** option button when the mouse button is released.

4 To implement the priority change **single-click** on the **Apply** button to the right of the priority option button.

5 **Single-click** on the **Refresh** button to update the data displayed on the screen.
- Priority of the request, as displayed in the **Priority** column of the **Data Distribution Requests** list, changes from its original value to the newly selected priority.
- A check mark is displayed in the **Mod** column of the **Data Distribution Requests** list to indicate that the request has been changed.

6 Repeat the preceding steps as necessary to change the priority of additional data distribution requests.

7 Return to the **Monitor/Control Data Distribution Requests** procedure (Section 18.2.3).

Table 18.2-7. Change the Priority of Data Distribution Requests - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Filter data distribution requests (if necessary)	Use procedure in Section 18.2.5
2	**<distribution request>** (in **Data Distribution Requests** list)	**single-click**
3	**<priority>** (**Change Priority** option button)	**single-click**
4	**Apply** button	**single-click**
5	**Refresh** button (if applicable)	**single-click**
6	Repeat the preceding steps as necessary	
7	Return to the procedure to **Monitor/Control Data Distribution Requests**	Use procedure in Section 18.2.3

18.2.7 Suspend/Resume Data Distribution Requests

Under certain circumstances it may be advisable to suspend the processing of a data distribution request and resume it at a later time. For example, if there is a very large request that is taking up resources and causing other requests to back up waiting (especially requests from data processing that must be filled to allow processing to proceed), the request should be suspended. Processing of the request might be resumed at a time when the demand on data distribution was relatively light. Another example is that of a request that has been suspended by the system due to a system error. Processing of the request should be resumed after the conditions that caused the error have been corrected.

The procedure to **Suspend/Resume Data Distribution Requests** is performed as part of the **Monitor/Control Data Distribution Requests** procedure (Section 18.2.3). The **Data Distribution Operator GUI** provides the Distribution Technician with a means of suspending or resuming data distribution requests.

Table 18.2-8 presents (in a condensed format) the steps required to suspend/resume data distribution requests. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If the list of data distribution requests shown in the **Data Distribution - Track Activity** window of the **Data Distribution Operator GUI** needs to be filtered, filter data distribution requests (refer to Section 18.2.5).

- Only requests that meet the specified filter criteria appear in the list in the **Data Distribution - Track Activity** window.

- If data distribution request are to be…
  - **Suspended,** perform Steps 2 through 6.
  - **Resumed,** perform Steps 7 through 11.

2 If all new requests displayed in the **Data Distribution Requests** list are to be suspended, click on the **Suspend New Requests** button.
- The data distribution requests are suspended.
- Go to Step 6.

3 If a single request displayed in the **Data Distribution Requests** list is to be suspended, in the **Data Distribution Requests** list **single-click** on (highlight) the row corresponding to the request.
- The selected data distribution request is highlighted.

4 If a single request displayed in the **Data Distribution Requests** list is to be suspended, **single-click** on the **Suspend** button.
- The selected data distribution request is suspended.

5 **Single-click** on the **Refresh** button to update the data displayed on the screen.
- Status of request(s), as displayed in the **State** column of the **Data Distribution Requests** list, change(s) from original value to "Suspended."
- Check mark(s) is (are) displayed in the **Mod** column of the **Data Distribution Requests** list to indicate that changes have been made to the request(s).

6 If there are no suspended requests to be resumed at this time, return to the **Monitor/Control Data Distribution Requests** procedure (Section 18.2.3).

7 If processing of all new requests displayed in the **Data Distribution Requests** list is to be resumed, **single-click** on the **Resume New Requests** button.
- The data distribution requests resume processing.
- Go to Step 10.

8 If processing of a single request displayed in the **Data Distribution Requests** list is to be resumed, in the **Data Distribution Requests** list **single-click** on the row corresponding to the request.
- The selected data distribution request is highlighted.

9 If processing of a single request displayed in the **Data Distribution Requests** list is to be resumed, **single-click** on the **Resume** button.
- The selected data distribution request resumes processing.

10 **Single-click** on the **Refresh** button to update the data displayed on the screen.

- Status of request(s), as displayed in the **State** column of the **Data Distribution Requests** list, changes from "Suspended" to whatever state(s) is (are) appropriate for the continuation of request processing (depending on each request's status when it was suspended).
- Check mark(s) is (are) displayed in the **Mod** column of the **Data Distribution Requests** list to indicate that changes have been made to the request(s).

11 Return to the **Monitor/Control Data Distribution Requests** procedure (Section 18.2.3).

Table 18.2-8. Suspend/Resume Data Distribution Requests - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Filter data distribution requests (if necessary)	Use procedure in Section 18.2.5
2	**Suspend New Requests** button (if applicable)	**single-click**
3	**<distribution request>** (in **Data Distribution Requests** list) (if applicable)	**single-click**
4	**Suspend** button (if applicable)	**single-click**
5	**Refresh** button (if applicable)	**single-click**
6	Return to the procedure to **Monitor/Control Data Distribution Requests** (if applicable)	Use procedure in Section 18.2.3
7	**Resume New Requests** button (if applicable)	**single-click**
8	**<distribution request>** (in **Data Distribution Requests** list) (if applicable)	**single-click**
9	**Resume** button (if applicable)	**single-click**
10	**Refresh** button (if applicable)	**single-click**
11	Return to the procedure to **Monitor/Control Data Distribution Requests**	Use procedure in Section 18.2.3

18.2.8 Cancel Data Distribution Requests

The procedure to **Cancel Data Distribution Requests** is performed as part of the **Monitor/Control Data Distribution Requests** procedure (Section 18.2.3). The **Data Distribution Operator GUI** provides the Distribution Technician with a means of canceling data distribution requests.

Table 18.2-9 presents (in a condensed format) the steps required to cancel data distribution requests. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If the list of data distribution requests shown in the **Data Distribution - Track Activity** window of the **Data Distribution Operator GUI** needs to be filtered, filter data distribution requests (refer to Section 18.2.5).
- Only requests that meet the specified filter criteria appear in the list in the **Data Distribution - Track Activity** window.

2 In the **Data Distribution Requests** list **single-click** on (highlight) the row corresponding to the distribution request to be canceled.
- The selected data distribution request is highlighted.

3 **Single-click** on the **Cancel** button near the bottom of the **Distrib'n Requests** tab.
- The selected data distribution request is canceled.

4 **Single-click** on the **Refresh** button to update the data displayed on the screen.
- Status of the request, as displayed in the **State** column of the **Data Distribution Requests** list, changes from its original value to "Canceled."
- A check mark is displayed in the **Mod** column of the **Data Distribution Requests** list to indicate that the request has been changed.

5 Return to the **Monitor/Control Data Distribution Requests** procedure (Section 18.2.3).

Table 18.2-9. Cancel Data Distribution Requests - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Filter data distribution requests (if necessary)	Use procedure in Section 18.2.5
2	**<distribution request>** (in **Data Distribution Requests** list)	**single-click**
3	**Cancel** button	**single-click**
4	**Refresh** button	**single-click**
5	Return to the procedure to **Monitor/Control Data Distribution Requests**	Use procedure in Section 18.2.3

18.2.9 Modify Preambles

The **Preamble Editor** tab on the **Data Distribution Operator GUI** allows the Distribution Technician to review and/or modify the text of preambles to the following types of documents:

- Packing list.
- Successful e-mail.
- Failed e-mail.

The preambles are accessible in the **/usr/ecs/<MODE>/CUSTOM/data/DSS** directory on the Distribution Server host (Sun internal server host). The directory contains preambles for the

different types of distribution. For example, the file EcDsDdFtpPushEMSuccessPreamble.txt (in the /usr/ecs/<MODE>/CUSTOM/data/DSS directory) would be an "ftp push successful e-mail" preamble file.

The following three types of distribution only are currently relevant to DDIST distribution:

- Ftp pull.
- Ftp push.
- Secure distribution (scp).

Consequently, preambles for those types of distribution are the only preambles that are currently applicable.

Table 18.2-10 presents (in a condensed format) the steps required to modify preambles. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If necessary, launch the **Data Distribution Operator GUI** (refer to Section 18.2.2).

- The **Data Distribution Operator GUI** is displayed.

2 **Single-click** on the **Data Distribution Operator GUI Preamble Editor** tab.

- The **Preamble Editor** screen is displayed.

3 **Single-click** on (highlight) the media type for which the preamble is to be modified in the **Media Type** window.

- Options are: **8MM, CDROM, DLT**, **DVD**, **FtpPull, FtpPush,** and **scp.**
- The selected media type is highlighted.

4 **Single-click** and **hold** the **Preamble Type** option button to display a menu of types of preambles, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.

- Options are: **Packing List, Successful Email,** and **Failed Email**.
- The selected preamble type is displayed on the **Preamble Type** option button.
- The selected preamble is displayed in the **Preamble Text** window.
  - If the **Preamble Text** window is blank, either there is no current preamble of the specified type or the preamble file is empty. Proceed to Step 5 and create a new preamble.

5 In the **Preamble Text** window enter:

<text>

- Enter modifications to the preamble text as necessary.

- The following editing functions are available from the **Edit** pull-down menu or by clicking on the right mouse button:
  - **Cut.**
  - **Copy.**
  - **Paste.**

6 **Single-click** on the appropriate button from the following selections:
- **Save** - to save the preamble text as modified.
- **Reset** - to discard any changes and revert to the original (unmodified) preamble text.
- **Clear** - to remove all text from the **Preamble Text** window.
  - When the **Clear** button has been selected, a **Preamble Save Confirmation Dialogue Box** is displayed.

7 If the **Preamble Save Confirmation Dialogue Box** is displayed, **single-click** on the appropriate button from the following selections:
- **Yes** - to save the preamble text as modified.
- **No** - to revert to the original (unmodified) preamble text.

Table 18.2-10. Modify Preambles - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Data Distribution Operator GUI** (if necessary)	Use procedure in Section 18.2.2
2	**Preamble Editor** tab	**single-click**
3	**<media type>** (in **Media Type** window)	**single-click**
4	**<preamble type>** (**Preamble Type** option button)	**single-click**
5	**<text>** (in **Preamble Text** window)	**enter text**
6	**Save** button	**single-click**
7	**Yes** button (if applicable)	**single-click**

18.3 Monitoring Storage Management Server Operations

Distribution Technicians use the Storage Management Control GUI primarily to monitor Storage Management server operations. Configuring Storage Management polling and deleting files from cache are activities that are included in the overall process.

Table 18.3-1, below, provides an Activity Checklist for monitoring Storage Management server operations.

Table 18.3-1. Monitoring Storage Management Server Operations - Activity Checklist

Order	Role	Task	Section	Complete?
1	Distribution Technician	Configure Storage Management Polling	(P) 18.3.1	
2	Distribution Technician	Delete Files from Cache	(P) 18.3.2	
3	Distribution Technician	View Storage Management Event Log Information	(P) 18.3.3	
4	Distribution Technician	Monitor Storage Management Server Operations	(P) 18.3.4	

18.3.1 Configure Storage Management Polling

The **Storage Management Control** GUI **Options** menu provides the Distribution Technician with a means of switching the **Operator Notification Timer Polling** on or off: In addition, the technician can modify the following parameters:

- Database Polling Rate.
  - How often (in seconds) the system updates the information displayed on the GUI.
- Error Retry Rate.
  - Amount of time (in seconds) that the system waits before trying to poll the database server after a failed attempt.

Table 18.3-2 presents (in a condensed format) the steps required to configure Storage Management polling. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If necessary, launch the **Storage Management Control** GUI (refer to Section 18.2.2).
- The **Storage Management Control** GUI is displayed.

2 Execute the following menu path:

Options → System Settings
- The **Session Settings** dialogue box is displayed.

3 To change the **Operator Notification Timer Polling** state (from off to on or vice versa), **single-click** on the **Polling** button.
- If **OFF** is displayed in the **Polling** field , **single-clicking** on the adjacent button turns Polling on.

- If **ON** is displayed in the **Polling** field , **single-clicking** on the adjacent button turns Polling off.

4 To change the database polling rate for the **Operator Notification Timer** in the **Database Polling Rate** field enter:

<value>

- **<value>** is expressed in seconds.
- The default value is 30 seconds.

5 To change the error retry rate for the **Operator Notification Timer**, in the **Error Retry Rate** field enter:

<value>

- **<value>** is expressed in seconds.

6 When the appropriate data have been entered in the **Session Settings** dialogue box fields, **single-click** on the appropriate button from the following selections:

- **Ok** - to apply the selections and dismiss the **Session Settings** dialogue box.
- **Apply** - to apply the selections without dismissing the **Session Settings** dialogue box.
- **Cancel** - to dismiss the **Session Settings** dialogue box without applying the selections.

Table 18.3-2. Configure Storage Management Polling - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Storage Management Control** GUI (if necessary)	Use procedure in Section 18.2.2
2	**Options → System Settings**	**single-click**
3	Either **<on>** or **<off>** (**Polling** button) (as applicable)	**single-click**
4	**<value>** (in **Database Polling Rate** field)	**enter text**
5	**<value>** (in **Error Retry Rate** field)	**enter text**
6	**Ok** button	**single-click**

18.3.2 Delete Files from Cache

The **Storage Management Control** GUI's **Cache Stats.** tab displays all of the files that are in the cache areas, including the Pull Monitor and other staging areas. The data displayed on the **Cache Stats.** tab reports general statistics on the selected cache and allows the operator to manually delete expired files in cache areas.

A just-enough-cache cleanup strategy is used in Storage Management. A principal effect of the strategy is that caches (including the Pull Area) generally remain full because each cache manager (including the cache manager that is configured as the Pull Monitor or Pull Area Manager) automatically identifies and removes just enough old files to accommodate new ones. Consequently, it is likely that manual cache cleanup will not be performed very often. The procedure that follows is provided as a guide for those rare occasions when it is necessary to manually delete files from cache.

Table 18.3-3 presents (in a condensed format) the steps required to delete files from cache. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If necessary, launch the **Storage Management Control** GUI (refer to Section 18.2.2).
- The **Storage Management Control** GUI is displayed.

2 **Single-click** on the **Cache Stats.** tab.
- The **Cache Stats.** tab is displayed.

3 To define the size of a "page" of data displayed in the **Cache Information** table on the **Cache Stats.** tab type the number of rows per page in the **Max Rows Returned** text box.
- **Max Rows Returned** defines the size of a "page" of data displayed in the **Cache Information** table on the **Cache Stats.** tab.
  - For example, setting **Max Rows Returned** to 50 would cause data to be displayed in the **Cache Information** table in pages (groups) of 50 rows of data.
  - If there were 500 files in the selected cache and **Max Rows Returned** were set to 50, there would be 10 pages of data available for display, with the first 50 items being displayed in the **Cache Information** table.
  - The **Prev** and **Next** buttons provide means of displaying additional pages of data.

4 To view the contents of a particular cache (e.g., **FTP Pull Cache**) **single-click** and **hold** on the option button to the right of the **Cache** field, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.
- The selected cache is displayed in the **Cache** field of the **Cache Stats.** tab.
- The following cache statistics are displayed in the **Cache Statistics** area:
  - **Current Utilization.**
  - **Used Space (Blocks).**
  - **Free Space (Blocks).**
  - **Total Space (Blocks).**
  - **Number of Resident Files.**
  - **Maximum File Size (Blocks).**
  - **Minimum File Size (Blocks).**

  - **Average File Size (Blocks).**
- The following information concerning the files in the selected cache is listed in the **Cache Information** table:
  - **Filename.**
  - **File Size.**
  - **Expiration** [date/time].
  - **Last Accessed.**
  - **Delete Flag** [displays either **N** or **Y**].
  - **State.**

NOTE: The only view currently accessible using the **Text** (view) option button is **Text**. The **Graphic** view is not currently available.

5 Observe cache statistics/information displayed on the **Cache Stats.** tab.
- As previously mentioned, cache statistics are displayed in the **Cache Statistics** area of the GUI and information concerning the files in the selected cache is listed in the **Cache Information** table.
- The **Refresh** button can be used to update the data on (refresh) the screen.
- The **Prev** and **Next** buttons provide means of displaying additional pages of data.
- The **Operator Messages** field at the bottom of the GUI displays messages concerning events (i.e., information, warnings, or errors) occurring in **Storage Management Control** GUI operations.
  - Error messages are described in Table 18.6-4, Storage Management User Messages.

6 If deleting files, **single-click** on the row(s) corresponding to the file(s) to be deleted in the **Cache Information** table on the **Cache Stats.** tab.
- Multiple rows may be selected.

7 If deleting files, **single-click** on the **Mark Delete** button near the bottom of the **Cache Stats.** tab.
- **Y** is displayed in the **Delete Flag** field for the row in the **Cache Information** table.

8 If any file that should be left in the cache has been inadvertently marked **Delete**, first **single-click** on the row corresponding to the file.

9 If any file that should be left in the cache has been inadvertently marked **Delete**, **single-click** on the **Unmark Delete** button near the bottom of the **Cache Stats.** tab.
- **N** is displayed in the **Delete Flag** field for the row in the **Cache Information** table.

10 If it becomes necessary to exit from the **Storage Management Control** GUI execute the following menu path:

File → Exit

Table 18.3-3. Delete Files from Cache - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Storage Management Control** GUI (if necessary)	Use procedure in Section 18.2.2
2	**Cache Stats.** tab	**single-click**
3	**<cache>** (in **Cache** field)	**single-click**
4	Observe cache statistics/information (**Cache Stats.** tab)	**read text**
5	**<file>** (to delete) (**Cache Information** table)	**single-click**
6	**Mark Delete** button	**single-click**
7	**<file>** (to preserve) (**Cache Information** table) (if applicable)	**single-click**
8	**Unmark Delete** button (if applicable)	**single-click**
9	**File → Exit** (when applicable)	**single-click**

18.3.3 View Storage Management Event Log Information

The **Storage Events** tab on the **Storage Management Control** GUI provides the Distribution Technician with the ability to search the Event Log and obtain reports on events that have occurred in Storage Management. It is possible to review the following information concerning any particular Storage Management event:

- Number.
- Date.
- Level.
- Type.
- Message.

The following search criteria can be used individually or in combination to view entries in the Event Log:

- Date Interval.
- Event Type.
- Event Level.
- Message.

Table 18.3-4 presents (in a condensed format) the steps required to view Storage Management Event Log information. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If necessary, launch the **Storage Management Control** GUI (refer to Section 18.2.2).

- The **Storage Management Control** GUI is displayed.

2 **Single-click** on the **Storage Events** tab.

- The **Storage Events** screen is displayed.
- If Event Log entries are to be displayed on the basis of a particular….
  - Time period, perform Step 3. (If no time period is specified, log entries for the current day will be displayed.)
  - Event type, perform Step 4.
  - Event level, perform Step 5.
  - Message, perform Step 6.
- Any of the preceding criteria (time period, event type, event level, or message) may be used individually or in combination to view entries in the Event Log.

3 To view Event Log entries for a particular time period, enter the desired data start date in the **Date Interval: Begin** field in the following format:

<MM/DD/YYYY>

- The **Tab** key may be pressed to move from field to field.
- Another method of changing date settings (other than typing the numbers) is to **single-click** in the **Date Interval: Begin** field and **single-click** on the up/down buttons adjacent to the **Date Interval: Begin** field until the correct date is indicated.

4 To view Event Log entries for a particular time period, enter the desired data ending date in the **Date Interval: End** field in the following format:

<MM/DD/YYYY>

- The **Tab** key may be pressed to move from field to field.
- Another method of changing date settings (other than typing the numbers) is to **single-click** in the **Date Interval: End** field and **single-click** on the up/down buttons adjacent to the **Date Interval: End** field until the correct date is indicated.

5 To view log entries for a particular **event type**, **single-click** and **hold** on the **Event Type** option button, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.

- Options are: **Any, Device, Cache, Software, COTS, Sybase, Pulldisk, Unknown.**
- The selected event type is displayed on the **Event Type** option button.

6 To view log entries for a particular **event level**, **single-click** and **hold** on the **Event Level** option button, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.

- Options are: **Any, Information, Warning, Error, Severe, Fatal, Unknown.**
- The selected event level is displayed on the **Event Level** option button.

7 To view log entries for a particular **message** in the **Message** field enter:

<message>

8 **Single-click** on the **Search** button to search the event log for events that meet the specified criteria.

- The search results are displayed in the **Event Log** table of the **Storage Management Control** GUI **Storage Events** tab.

9 Observe event information displayed in the **Event Log** table.

- Log entries are displayed in the **Event Log** table of the GUI.
- **Single-click** on any of the column headers of the **Event Log** table to sort the listed events in order by the column selected.
  - For example, **single-click** on the **Message** column header to list the events in alphabetical order by message text.
- The **Operator Messages** field at the bottom of the GUI displays messages concerning events (i.e., information, warnings, or errors) occurring in **Storage Management Control** GUI operations.
  - Error messages are described in Table 18.6-4, Storage Management User Messages.

10 If it becomes necessary to clear entries in the Event Log Search Parameter fields, **single-click** on the **Clear Parameters** button.

- Entries in the Event Log Search Parameter fields are cleared.

11 If it becomes necessary to purge entries from the Event Log, **single-click** on (highlight) each row corresponding to an event to be deleted in the **Event Log** table.

- Multiple entries may be selected.

12 If it becomes necessary to purge entries from the Event Log, **single-click** on the **Purge Selected** button.

- Selected entries are deleted from the Event Log.

13 If a new Event Log search is to be performed on the basis of a particular….

- time period, return to Step 3.
- event type, return to Step 5.
- event level, return to Step 6.
- message, return to Step 7.

14 If it becomes necessary to exit from the **Storage Management Control** GUI execute the following menu path:

File → Exit

Table 18.3-4. View Storage Management Event Log Information - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Storage Management Control** GUI (if necessary)	Use procedure in Section 18.2.2
2	**Storage Events** tab	**single-click**
3	**<MM/DD/YYYY>** (in **Date Interval: Begin** field) (if applicable)	**enter text**
4	**<MM/DD/YYYY>** (in **Date Interval: End** field) (if applicable)	**enter text**
5	**<event type>** (**Event Type** option button) (if applicable)	**single-click**
6	**<event level>** (**Event Level** option button) (if applicable)	**single-click**
7	**<message>** (in **Message** field)	**enter text**
8	**Search** button	**single-click**
9	Observe event information (**Event Log** table)	**read text**
10	**Clear Parameters** button (if applicable)	**single-click**
11	**<event>** (in **Event Log** table) (if applicable)	**single-click**
12	**Purge Selected** button (if applicable)	**single-click**
13	Return to applicable step to perform a new Event Log search	
14	**File** → **Exit** (when applicable)	**single-click**

18.3.4 Monitor Storage Management Server Operations

The **Request Status** tab on the **Storage Management Control** GUI provides the Distribution Technician with the ability to monitor processing activity in all of the storage management servers for a given mode. The **Request Status Information** table lists the requests that are currently being serviced by storage management servers and those that have been completed within the last 24 hours. It is possible to review the following information concerning any particular storage management request:

- Operation [type of operation represented by the request].
- Request ID.
- Progress [stage of processing on which the request is currently working (may include a numeric progress indication)].
- Status.
- Priority.
- When Submitted [time and date when the request was received by the Storage Management server that is responsible for the request].

- Last Updated [time and date when the status was last updated for the request].

Using the **Request Status** tab the Distribution Technician can detect stalled requests or servers that appear to be idle.

Table 18.3-5 presents (in a condensed format) the steps required to monitor storage management server operations. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If necessary, launch the **Storage Management Control** GUI (refer to Section 18.2.2).
- The **Storage Management Control** GUI is displayed.

2 **Single-click** on the **Storage Management Control** GUI **Request Status** tab.
- The **Request Status** tab is displayed.

3 Observe information displayed on the **Request Status** tab of the **Storage Management Control** GUI.
- The **Request Status Information** table displays the following information:
  - **Operation.**
  - **Request ID.**
  - **Progress.**
  - **Status.**
  - **Priority.**
  - **When Submitted.**
  - **Last Updated.**
- By default, all storage management server requests for the last 24 hours are shown in the **Request Status Information** table of the **Request Status** tab.
- Note that virtually all data inserted into or retrieved from the archive is controlled by storage management servers; consequently there may be a lot of activity on the **Request Status** tab.
  - Consequently, it may be useful to restrict the number of requests displayed by filtering them as described in the next step of this procedure.
- **Single-clicking** on any of the column headers of the **Request Status Information** table causes the listed requests to be sorted in order by the column selected.
  - For example, **single-clicking** on the **Last Updated** column header causes the requests to be listed in order from the least recently updated to the most recently updated.
- The **Operator Messages** field at the bottom of the GUI displays messages concerning events (i.e., information, warnings, or errors) occurring in **Storage Management Control** GUI operations.
  - Error messages are described in Table 18.6-4, Storage Management User Messages.

4 If the list of Storage Management requests shown in the **Request Status Information** table needs to be filtered, **single-click** and **hold** the **Filtering** pull-down menu to display a menu of filtering options, **move** the mouse cursor to the appropriate selection (highlighting it), then **release** the mouse button.

- The **Filtering** pull-down menu offers the following options for filtering Storage Management requests:
- Options are: **Server**, **Operation**, **Processing State**, and **Submitter**.
  - **Server** controls what activity is displayed by limiting the list to the requests being/having been serviced by a specific server. Selecting **All** displays all requests throughout the Storage Management CSCI. Other selections include the individual archive servers, cache manager servers, ftp servers, request manager server, and staging disk servers.
  - **Operation** allows the Distribution Technician to focus on a specific type of operation. The list of operations is dynamically generated to reflect those operations for which requests are currently in queue, for example (among others): **All, scp, CMLink, ArStore, FtpPull, FtpPush**.
  - **Processing State** allows the Distribution Technician to differentiate among requests that are being actively processed; have been completed, either successfully or to a retryable error state; or have been suspended and are awaiting the outcome of another event. The following selections are available: **All, Processing, Suspended, Completed**.
  - **Submitter** allows the Distribution Technician to see the status of requests submitted by a specific client process. The list of possible clients is dynamically generated to reflect the list of clients with outstanding requests for example (among others): **All, DSDD, SDSV, this,** individual ftp server, individual archive server, individual staging disk server.

5 Observe the Storage Management requests displayed in the **Request Status Information** table.

6 Repeat Steps 4 and 5 as necessary to monitor Storage Management requests.

7 If it becomes necessary to exit from the **Storage Management Control** GUI execute the following menu path:

File → Exit

Table 18.3-5. Monitor Storage Management Server Operations - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Storage Management Control** GUI (if necessary)	Use procedure in Section 18.2.2
2	**Request Status** tab	**single-click**
3	Observe request status information (**Request Status Information** table)	**read text**
4	<filtering option> (**Filtering** pull-down menu) (If applicable)	**single-click**
5	Observe request status information (**Request Status Information** table)	**read text**
6	Repeat Steps 4 and 5 (as necessary)	
7	**File** → **Exit** (when applicable)	**single-click**

18.4 Tuning Data Server Subsystem Configuration Parameters

The values assigned to system parameters affect the functioning and performance of the system. When certain parameters are modified, the system operates differently. Changes to some other parameters may not appear to affect the system although there may in fact be subtle effects. In any case before system parameters are modified it is essential to understand what will happen to system functioning and performance.

Many system parameters may be subject to control by Configuration Management (CM). When making or requesting a change to system parameters, the CM process at the particular site must be followed (if applicable).

Values are assigned to Storage Management and Data Distribution parameters in the following databases:

- Configuration Registry database.
- Storage Management and Data Distribution database.

With respect to Storage Management servers the Registry contains database connectivity information only. All other configuration information is in the Storage Management and Data Distribution database and is typically entered or modified using the **Storage Management Control GUI**.

Table 18.4-1, below, provides an Activity Checklist for tuning DDIST system parameters.

Table 18.4-1. Tuning DDIST System Parameters - Activity Checklist

Order	Role	Task	Section	Complete?
1	Distribution Technician	Modify System Parameters in the Storage Management and Data Distribution Database Using the Storage Management Control GUI	(P) 18.4.1	
2	Distribution Technician	Modify System Parameters in the Storage Management and Data Distribution Database Using ISQL	(P) 18.4.2	
3	Distribution Technician	Modify Parameters in the DsDdThreadPool Table Using ISQL	(P) 18.4.3	

Modifying System Parameters in the Configuration Registry Database

The Configuration Registry Server provides a single interface (via a Sybase server) for retrieving configuration attribute-value pairs for ECS servers from the Configuration Registry database. When ECS servers are started, they access the Configuration Registry Database to obtain needed configuration parameters.

The Database Administrator has access to a Configuration Registry GUI for viewing and editing configuration data in the database. Therefore, it is necessary to coordinate with the Database Administrator when changes to configuration parameters are needed. Also, as previously mentioned, changes to configuration-controlled parameters are subject to approval through the site CM process.

Default and adjusted values assigned to system parameters vary from site to site. For guidance concerning the assignment of values to parameters included in the Configuration Registry refer to document 910-TDA-022, *Custom Code Configuration Parameters for ECS.* The document is available at http://cmdm.east.hitc.com/baseline/ under "Technical Documents."

The following parameters are examples of parameters whose values may be modified to enhance system functioning or performance:

- AppLogSize [parameter applies to all servers].
  - Maximum size of the application log (ALOG) file for a particular application.
  - Recommended size varies considerably depending the nature of the application for which the file is being written.
- AppLogLevel [parameter applies to all servers].
  - Level of detail provided in the ALOG file for a particular application.
  - Acceptable values are 0, 1, 2, or 3.
  - A setting of "0" provides the most data.
- DebugLevel [parameter applies to all servers].
  - Level of detail provided in the debug log file for a particular application.

  - Normally acceptable values are 0, 1, 2, or 3.
  - A setting of "0" turns off logging; a setting of “3” provides a significant amount of data.
  - STMGT offers "enhanced" debugging based on bitmaps including Level 7 (the 4 bit), which provides detailed database debugging, and Level 15 (the 8 bit), which frequently dumps the in-memory request queue (in the Request Manager). [Both Level 7 and Level 15 quickly create enormous log files.]
- DBMaxConnections [EcDsDistributionServer and EcDsDdistGui parameter].
  - Maximum number of database open connections (e.g., 15) allowed a particular application.
  - Increasing the assigned value may prevent other applications from getting access to the database.
- FtpPushThreshold [EcDsDistributionServer parameter].
  - Maximum number of bytes (e.g., 15000000000) per ftp push request.
  - The FtpPushThreshold should always be greater than the size of the largest input granule used by the Planning and Data Processing Subsystems (PDPS) to ensure that PDPS distribution requests are processed without manual intervention.
  - When a distribution request exceeds a threshold (e.g., FtpPushThreshold or FtpPullThreshold), the request is suspended in DDIST.
- FtpPullThreshold [EcDsDistributionServer parameter].
  - Maximum number of bytes (e.g., 20000000000) per ftp pull request.
- MaxThreads [EcDsDistributionServer parameter].
  - Worker threads (created at start up) used to process active requests.
  - Needs to be greater than or equal to the sum of all priority thread limits.
- RETRIEVAL_CHUNK_SIZE [EcDsDistributionServer parameter].
  - Number of per-request archived files (e.g., 40) to be retrieved from the archive server.
  - Must be greater than zero (0).
  - Should not be greater than half the number of service threads used by the STMGT cache managers for archive reading.
- SocketLimit [EcDsDistributionServer parameter].
  - Number of connections (e.g., 620) to a server through the Hubble Space Telescope (HST) sockets middleware.
  - Too low a number misses connections.
  - Too high a number may adversely affect the memory of the server's host.
- CheckSumStoreFreq [EcDsStArchiveServer parameter].
  - Percentage of StoreFile requests to be checksummed.
- CheckSumRetrieveFreq [EcDsStCacheManagerServer parameter].
  - Percentage of checksummed files to be checksummed for file retrieve requests.

When the value assigned to a parameter has been changed and saved in the Configuration Registry, the modified value does not take effect until the affected server has been restarted. For example, if the debug level for the Distribution Server log has been changed from “2” to “3” in

the Configuration Registry, the modification does not affect the recording of data in the log until after a warm restart of the Distribution Server (at which time the server would read the parameters in the Configuration Registry).

Checksum Status

It is possible to have a checksum calculated for each file stored (inserted) in the archive. In addition, there is an option for having a checksum computed for each file retrieved from the archive and validating it by comparing it with the checksum previously computed.

The extent of check-summing is determined by the values assigned to the following two configuration parameters in the Configuration Registry:

- CheckSumStoreFreq.
- CheckSumRetrieveFreq.

CheckSumStoreFreq is an archive server (EcDsStArchiveServer) parameter that specifies the percentage of StoreFile requests to be checksummed. CheckSumRetrieveFreq is a cache manager server (EcDsStCacheManagerServer) parameter that specifies the percentage of file retrieve requests to be checksummed. The recommended value for both parameters is 100 (i.e., calculate a checksum for 100% of requests). If either value needs to be modified, coordinate the change with the Database Administrator.

Tuning System Parameters in the Storage Management and Data Distribution Database

Staging Area Size and Read-Only Cache Size

Cache and staging disk space requirements are defined in separate columns in different database tables in the Storage Management and Data Distribution Database.

- The TotalStagingSpace column in the DsStStagingDiskServer table contains the overall size of the space (in blocks) available for a staging disk.
  - It should reflect the available disk space in the file partition that is configured.
- The TotalCacheSpace column in the DsStCache table contains the overall size (in blocks) of a cache.
  - TotalCacheSpace is seen as "Original Cache Space" from the **Storage Management Control** GUI.
  - The value assigned to the cache manager that is configured as the Pull Monitor (Pull Area Manager) should be the size (in blocks) of the partition that houses the Pull Area.
  - If the value assigned to the Pull Monitor (Pull Area Manager) is changed while there are files in the Pull Area, the value should be higher than the cumulative size of files in the cache.

NOTE: In Storage Management configurations, capacity ("space") is consistently specified in blocks. File size is specified in bytes.

The change in the specification of staging disk/cache space is an effect of the way cache structure has been modified. Currently cache has its own path as shown in the following comparison of staging disk and cache paths:

- EcDsStCacheManagerServerACM1 cache path:
  - /usr/ecs/OPS/CUSTOM/apc/x0acg01/data/staging/cache (The cache area is no longer identified as "user1".)
- EcDsStStagingDiskServerACM1 root path:
  - /usr/ecs/OPS/CUSTOM/apc/x0acg01/data/staging//disks (Now each staging disk has a unique number (e.g., disk1132), even across servers.)

The cache and staging disk space parameters are modified using the **Storage Management Control** GUI. [Refer to the **Modify System Parameters in the Storage Management and Data Distribution Database Using the Storage Management Control GUI** procedure (Section 18.4.1).]

Setting Expiration Thresholds for Cache Managers

A just-enough-cache cleanup strategy is used in Storage Management. A principal effect of the strategy is that caches (including the Pull Area) generally remain full because each cache manager (including the cache manager that is configured as the Pull Monitor or Pull Area Manager) identifies and removes just enough old files to accommodate new ones.

In the DsStCache database table there is an ExpirationThreshold column that contains the number of hours it takes for files to expire in the cache area managed by each cache manager. The ExpirationThreshold for the cache manager that is configured as the Pull Monitor (i.e., EcDsStCacheManagerServerPULL) specifies the number of hours it takes for files to expire in the Pull Area.

When setting the ExpirationThreshold for each cache manager the following factors should be taken into consideration:

- ExpirationThreshold specifies the number of hours a lien will be held against a cached file.
- If a lien expires and space is required, the lien will be automatically removed unless the ConfirmDelete flag (for expired files) is set to "Yes."
- ExpirationThreshold entries are typically set at 72 (hours) but may be set at some other value (usually in the range of 24 - 72).
  - Too short a time limits the ability of users to get their data before it is deleted (if ConfirmDelete is set to "No").
  - Too long a time increases the chance of filling up the cache.
- The ConfirmDelete column in the DsStCache table is a flag that indicates whether to automatically delete upon reaching the ExpirationThreshold.
  - Typically set to "No" (do not require confirmation before deleting).

- Files are pulled to the Pull Area by the Pull Monitor (Pull Area Manager); they are not pushed there by the ftp server.
- The Fault Level and Warning Level parameters are ignored.

Expiration thresholds and ConfirmDelete flags for expired files are modified using the **Storage Management Control** GUI. [Refer to the **Modify System Parameters in the Storage Management and Data Distribution Database Using the Storage Management Control GUI** procedure (Section 18.4.1).]

Storage Management Service Thread Allocation

Service threads process requests submitted to the applicable server (e.g., EcDsStRequestManagerServer, EcDsStArchiveServer, EcDsStCacheManager-Server, EcDsStStagingDiskServer, EcDsStFtpServer). The number of service threads assigned to a server should be set on the basis of the resources available and the server throughput.

The DsStServiceThreadConfig database table contains the number, types, and priorities of service threads for Storage Management servers.

- The following columns in the DsStServiceThreadConfig database table indicate the number of service threads assigned to each priority:
  - XpressThreads
  - VhighThreads
  - HighThreads
  - NormalThreads
  - LowThreads
- The PoolType column identifies the type of threads within a certain pool. (i.e., Service Threads, Read Threads, Write Threads) applicable to the server.
  - In Storage Management Read Threads and Write Threads apply to the archive servers only.
- The NumThreads column contains the number of threads in a particular pool.

Table 18.4-2 lists representative default values as listed in the DsStServiceThreadConfig database table. In the table ServerId 1 refers to EcDsStArchiveServerACM4 and ServerId 2 refers to EcDsStArchiveServerDRP3.

Table 18.4-2. Representative Default Values Listed in the DsStServiceThreadConfig Database Table (1 of 2)

ServerId	PoolType	Num Threads	Xpress Threads	Vhigh Threads	High Threads	Normal Threads	Low Threads
1	ReadThreadPool	30	0	10	10	0	10
1	ThreadPool	30	0	10	10	0	10
1	WriteThreadPool	30	0	10	10	0	10
2	ReadThreadPool	10	0	0	0	0	10

Table 18.4-2. Representative Default Values Listed in the DsStServiceThreadConfig Database Table (2 of 2)

ServerId	PoolType	Num Threads	Xpress Threads	Vhigh Threads	High Threads	Normal Threads	Low Threads
2	ThreadPool	50	0	10	10	0	30
2	WriteThreadPool	100	0	20	70	0	10

Storage Management service thread-related values are modified using the **Storage Management Control** GUI. [Refer to the **Modify System Parameters in the Storage Management and Data Distribution Database Using the Storage Management Control GUI** procedure (Section 18.4.1).]

Data Distribution Priority Thread Allocation

Data Distribution (DDIST) has been enhanced to support a DAAC-configurable number of thread pools with each pool having a separate thread limit. The pools are defined in a DDIST database table called DsDdThreadPool. Each row in the table contains a unique pool identifier, a thread pool name, and the number of threads (thread limit) associated with the pool. Table 18.4-3 shows an example of DsDdThreadPool table contents.

Table 18.4-3. Example of DsDdThreadPool Table Contents

ThreadPoolId	ThreadPoolName	ThreadLimit
13	SUB_LARCINGMGR	15
14	DEFAULT	10
15	PRODUCTION	20
16	SUB_ASTERGDS	10
17	SUB_NOAASOAP	20
18	SUB_JSMITH	20
19	PDS	30
20	USER_FTPPUSH	35
21	USER_FTPPULL	10
22	S4POPS	20
23	SUB_PRIVUSER	80
24	SUB_REGUSER	60

The DsDdThreadPool table in the example (Table 18.4-3) defines the following 12 pools:

- SUB_LARCINGMGR (15 threads maximum).
- DEFAULT (10 threads maximum).
- PRODUCTION (20 threads maximum).

- SUB_ASTERGDS (10 threads maximum).
- SUB_NOAASOAP (20 threads maximum).
- SUB_JSMITH (20 threads maximum).
- PDS (30 threads maximum).
- USER_FTPPUSH (35 threads maximum).
- USER_FTPPULL (10 threads maximum).
- S4POPS (20 threads maximum).
- SUB_PRIVUSER (80 threads maximum).
- SUB_REGUSER (60 threads maximum).

There must always be a DEFAULT pool present in the DsDdThreadPool table because a distribution request that fails to match any of the other rules for assigning requests to thread pools is automatically assigned to the DEFAULT pool.

The rules for assigning requests to thread pools are specified in the DsDdAssignmentRule table. The rules are DAAC-configurable and are based on request attributes. The following attributes are used for establishing a thread pool assignment:

- ECSUserId.
- Priority.
- EsdtType.
- MediaType.
- EmailAddress.
- NumberOfGranules.

Each row in the DsDdAssignmentRule table defines an assignment rule. Table 18.4-4 shows an example of DsDdAssignmentRule table contents.

Table 18.4-4. Example of DsDdAssignmentRule Table Contents (1 of 2)

SeqNum	Thread PoolId	ECSUserId	Priority	Esdt Type	Media Type	EmailAddress	NumberOf Granules
50	14	ANY	ANY	ANY	scp	ANY	ANY
100	15	$EcDpPrEM	ANY	ANY	ANY	ANY	ANY
200	16	aster_gds	NORMAL	ANY	ANY	ANY	ANY
300	13	LarcIngMgr	NORMAL	ANY	ANY	ANY	ANY
400	17	NOAA/SOAP	ANY	ANY	ANY	ANY	ANY
500	18	jsmith	NORMAL	ANY	ANY	ANY	ANY
600	19	$PDS3	ANY	ANY	ANY	ANY	ANY
900	22	s4opsaaf	ANY	ANY	ANY	ANY	ANY
1000	22	s4opsaar	ANY	ANY	ANY	ANY	ANY
1100	22	s4opsamf	ANY	ANY	ANY	ANY	ANY
1200	22	s4opsamr	ANY	ANY	ANY	ANY	ANY
1300	22	s4opsdpf	ANY	ANY	ANY	ANY	ANY
1400	22	s4opstmf	ANY	ANY	ANY	ANY	ANY

Table 18.4-4. Example of DsDdAssignmentRule Table Contents (2 of 2)

SeqNum	Thread PoolId	ECSUserId	Priority	Esdt Type	Media Type	EmailAddress	NumberOf Granules
1500	22	s4opstmr	ANY	ANY	ANY	ANY	ANY
1600	23	PrivUser	ANY	ANY	FtpPush	userops@x0ins02.daac.ecs.nasa.gov	2
1700	24	RegUser	ANY	ANY	ANY	ANY	ANY
1800	17	NoneUser	ANY	ANY	ANY	ANY	ANY
1900	20	ANY	ANY	ANY	FtpPush	ANY	ANY
2000	21	ANY	ANY	ANY	FtpPull	ANY	ANY

For each new request, the rules (in the DsDdAssignmentRule table) are evaluated in order by SeqNum until a rule is found where all conditions evaluate to true, in which case the request is assigned to the pool specified in the ThreadPoolId column. A rule evaluates to true if the values of all of the request attributes (i.e., ECSUserId, Priority, EsdtType, MediaType, EmailAddress, and NumberOfGranules) match the values contained in the rule's row in the table. Note that a value of "ANY" automatically evaluates to true for that attribute. So, in the example, any request with the ECSUserId "s4opsaaf" is allocated to ThreadPoolId 22 (i.e., the S4POPS thread pool in Table 2) and any FtpPull request that does not meet the conditions specified for any other assignment rule are allocated to ThreadPoolId 21 (the USER_FTPPULL thread pool). Any request that fails to match the rules for any of the thread pool IDs in the assignment rule table is assigned to the DEFAULT thread pool.

In addition to enforcing rules for assigning requests to thread pools (as specified in the DsDdAssignmentRule table) Data Distribution has another mechanism for preventing certain types of requests from monopolizing distribution resources. The mechanism is called dynamic FTP server assignment and it involves using a set of rules in the DsDdAssignmentRuleHWCI table to evaluate each distribution request and allocate it to the appropriate Data Distribution FTP server.

The rules for assigning a distribution request to a specific FTP server (identified by HWCI) are DAAC-configurable and are based on request attributes. The following attributes are used for making an HWCI assignment:

- ECSUserId.
- SeniorClient.
- MediaType.
- EsdtType.
- PushDest.
- EmailAddress.

Each row in the DsDdAssignmentRuleHWCI table defines an HWCI assignment rule. Table 18.4-5 shows an example of DsDdAssignmentRuleHWCI table contents.

Table 18.4-5. Example of DsDdAssignmentRuleHWCI Table Contents

SeqNum	HWCI	ECSUserId	Senior Client	Media Type	Esdt Type	PushDest	EmailAddress
100	DRP1	$PDS	ANY	ANY	ANY	ANY	ANY
200	DRP1	ANY	PD	ANY	ANY	ANY	ANY
300	DRP1	ANY	IN	ANY	ANY	ANY	ANY
400	DRP1	$PDS3	ANY	ANY	ANY	ANY	ANY
500	DRP2	PrivUser	ANY	FtpPush	ANY	ANY	ANY
600	DRP1	RegUser	ANY	FtpPush	ANY	ANY	ANY
700	DRP1	s4opsaaf	ANY	FtpPush	ANY	ANY	ANY
800	DRP1	s4opsaar	ANY	FtpPush	ANY	ANY	ANY
900	DRP1	s4opsamf	ANY	FtpPush	ANY	ANY	ANY
1000	DRP1	s4opsamr	ANY	FtpPush	ANY	ANY	ANY
1100	DRP2	s4opsdpf	ANY	FtpPush	ANY	ANY	ANY
1200	DRP1	s4opstmf	ANY	FtpPush	ANY	ANY	ANY
1400	DRP1	s4opstmr	ANY	FtpPush	ANY	ANY	ANY
1500	DRP1_auto	ANY	ANY	scp	ANY	ANY	ANY

In the example shown in Table 18.4-5, FtpPush requests from either PrivUser or s4opsdpf that do not have a senior client of either “PD” or “IN” are assigned to DRP2 (EcDsStFtpServerDRP2). All other requests are allocated to DRP1 (EcDsStFtpServerDRP1).

When DDIST receives a request, a stored procedure executes to assign the request to the appropriate thread pool based on the rules contained in the DsDdAssignmentRule table (Table 18.4-4).

- Once all threads in a given thread pool have been allocated, new requests assigned to that pool are put in a "pending" state until a thread becomes available.
- Requests are no longer automatically assigned to threads in other pools if there are no available threads in their assigned pool.
- Pending requests for each pool are activated in first-in-first-out order by request priority.

Another stored procedure executes to map the request to an HWCI based on the rules contained in the DsDdAssignmentRuleHWCI table (Table 18.4-5).

DAACs may adjust configurations by updating the DsDdThreadPool, DsDdAssignmentRule, and DsDdAssignmentRuleHWCI tables.

- Assignment rules may be added, deleted or updated at any time without warm-starting DDIST.
  - Changes to assignment rules take effect immediately upon being entered in the database.

  - All new requests entering DDIST are subject to the updated rules.
- The ThreadLimit attribute in the DsDdThreadPool table may be dynamically changed as well.
  - The DDIST server reloads thread limits every 90 seconds so thread limit changes take effect within 90 seconds after being entered.
  - New thread pools can be added by inserting rows in the DsDdThreadPool table.
  - However, they are not used until the DDIST server is warm-started.
  - A thread pool can be deleted as long as there are no rules in the DsDdAssignmentRule table that point to the thread pool and all requests that have been assigned to the thread pool have been completed and have migrated out of the DDIST database.

When DDIST is warm-started, all requests are reassigned to thread pools based on the current set of rules.

If necessary, it is possible to reassign requests after they have been assigned to a thread pool. The following process is used:

- Update the rules in the DsDdAssignmentRule table as necessary to ensure that the request will be assigned to the desired thread pool.
- Warm-start DDIST (EcDsDistributionServer).

There is no GUI support for making changes to either the thread pool configuration or the FTP server assignment. Thread pool configuration or FTP server assignment changes are made by a DAAC DBA using the isql interface to update the DsDdThreadPool, DsDdAssignmentRule and/or DsDdAssignmentRuleHWCI tables in the database.

The following guidelines are provided for tuning DDIST priority thread allocation:

- In most cases, each FtpPush destination site should have its own thread pool.
- For each FtpPush destination, the DAAC should determine the number of concurrent file transfers it takes to fully utilize the available network bandwidth.
  - The number represents a parameter called "MaxTransfers."
- For subscription-based FtpPush distribution, the thread limit for the associated thread pool should be set to 130% of MaxTransfers (rounded up).
  - This should provide a sufficient number of threads to utilize the available network bandwidth plus allow for one or more threads to be concurrently staging data out of the AMASS cache.
- For non-subscription-based FtpPush distribution, the thread limit for the associated thread pool should be set to 200% of MaxTransfers (rounded up).
  - This should provide sufficient threads to utilize the available network bandwidth plus allow for staging of data from archive tapes.
- The total number of threads in DsDdThreadPool (i.e., sum of ThreadLimit for all rows) represents the maximum number of threads that can be active concurrently n DDIST.
  - The total must be less than the number of worker threads configured for DDIST.

  - The default number of worker threads configured for DDIST is 228.
- Although DDIST thread pools can be configured around request attributes other than priority, it is important to remember that STMGT CacheManager thread pools are organized by priority; consequently, it is important to ensure that STMGT thread pools are configured to optimally handle the likely mix of request priorities.
- During warm-start, it takes DDIST 0.83 second to recover each active or pending request; consequently, for a 2000-request backlog, it takes DDIST approximately 28 minutes to reach the end of start monitoring and begin accepting new requests.
  - However, note that DDIST immediately begins to work off its request backlog as requests are assigned to thread pools.

Methods for modifying thread pools and thread-pool-assignment rules are described in the **Modify System Parameters in the Storage Management and Data Distribution Database Using ISQL** procedure (Section 18.4.2) and the **Modify Parameters in the DsDdThreadPool Table Using ISQL** procedure (Section 18.4.3).

18.4.1 Modify System Parameters in the Storage Management and Data Distribution Database Using the Storage Management Control GUI

The effects on system functioning and performance must be considered before modifying system parameters. In addition, when making or requesting a change to system parameters, the CM process at the particular site must be followed (if applicable). Depending on circumstances (e.g., operator permissions) at a particular site, it may be necessary to request that someone else make parameter modifications using the **Storage Management Control** GUI. The procedure that follows is provided to assist Distribution Technicians who have to make parameter modifications using the **Storage Management Control** GUI.

Table 18.4-6 presents (in a condensed format) the steps required to modify system parameters in the Storage Management and Data Distribution Database using the **Storage Management Control** GUI. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If necessary, launch the **Storage Management Control** GUI (refer to Section 18.2.2).
- The **Storage Management Control** GUI is displayed.

2 If necessary, **single-click** on the **Storage Config.** tab.

3 **Single-click** on the appropriate server type in the **Configuration Parameter Reporting** window on the **Storage Config.** tab.
- The selected server type is highlighted in the **Configuration Parameter Reporting** window on the **Storage Config.** tab.

- The following server types are listed in the **Configuration Parameter Reporting** window on the **Storage Config.** tab:
  - **8MM** (8mm Stacker Server).
  - **ARCHIVE** (Archive Server).
  - **CACHE MANAGER** (Cache Management Server).
  - **CDROM** (CDROM Device Server).
  - **DLT** (DLT Stacker Server).
  - **DTF** (DTF Device Server).
  - **FTP** (FTP Server).
  - **REQUEST MANAGER** (Request Manager Server).
  - **STAGING DISK** (Staging Disk Server).
- Associated servers are listed in the server information window on the **Storage Config.** tab.

4 **Single-click** on the appropriate server in the server information window on the **Storage Config.** tab.

- The selected server is highlighted in the server information window on the **Storage Config.** tab.
- For example, if **CACHE MANAGER** were selected from the **Configuration Parameter Reporting** window on the **Storage Config.** tab, the following servers might be listed in the server information window:
  - EcDsStCacheManagerServerACM1.
  - EcDsStCacheManagerServerDRP3.
  - EcDsStCacheManagerServerPULL.
  - EcDsStCacheManagerServerWKS1.

5 **Single-click** on the **Modify Server/View Stackers** button.

- The applicable server configuration dialogue box is displayed.
- For example, if **CACHE MANAGER** had been selected, the **Cache Manager Server Configuration** dialogue box would be displayed. The **Cache Manager Server Configuration** dialogue box displays data in the following fields (as applicable):
  - **Server Name.**
  - **RPC** [remote procedure call] Tag.
  - **Original Cache Space (blocks).**
  - **Available Cache Space (blocks)** [cannot be modified from GUI].
  - **Allocation Block Size (bytes).**
  - **Description** [e.g., "Cache Manager"].
  - **Expiration Threshold (hours).**
  - **Expired Files Confirm Delete** [option button with Yes and No as the options].
  - **Disk Capacity: Fault Level** [currently ignored].
  - **Disk Capacity: Warning Level** [currently ignored].

- **File I/O Block Size (bytes)** [typically set to 4194304 (4MB)].
- **Retries** [typically set to 5].
- **Sleeptime (seconds)** [typically set to 2].
- **Service Threads** [number of worker threads that are allocated within the server instance to process requests - modified through the Allocate by Priority button].
- **Pull Area Manager** [option button with Yes and No as the options].
- **Cache Path.**
- **User Request Directory.**
- **FTP Notification File.**
- **FTP Notification Freq (Sec).**

- Refer to the installation instructions for the applicable software release to find recommended values for the configuration of Storage Management servers.
  - Installation instructions for each software release are available at http://cmdm.east.hitc.com/baseline/ under "Pre-Ship Reviews."

6 In the appropriate field(s) of the server configuration dialogue box enter:

<value>

7 If service-thread (or read-thread or write-thread) priority allocations are to be modified, **single-click** on the corresponding **Allocate by Priority** button.

- The appropriate **Allocate by Priority** window (e.g., the **Service Threads: Allocate by Priority** window) is displayed.

8 If thread priority allocations are being modified, in the appropriate field(s) of the **Allocate by Priority** window enter:

<value>

- When entering desired values in the appropriate fields of the **Allocate by Priority** window, start with the **Total** field.
- Lower-priority threads may be used to service higher priority requests, but never vice versa.
- By default, all service threads are created as low priority service threads, since they may be pre-empted by any priority request.
- The number of low threads is automatically re-calculated whenever the number of any of the other thread types is changed.
  - Consequently, the total of the numbers in each of the five different thread type fields equals the number in the **Total** field.

9 If thread priority allocations are being modified, **single-click** on the appropriate button from the following selections:

- **OK** - to approve the new value(s) and dismiss the **Allocate by Priority** window.
  - The **Cache Manager Server Configuration** dialogue box is displayed.

- **Cancel** - to return to the **Cache Manager Server Configuration** dialogue box without saving the new value(s).
  - The **Cache Manager Server Configuration Dialogue Box** is displayed.

NOTE: Sometimes when a secondary window (such as Service Threads: Allocate by Priority Window) has been accessed to modify parameters (e.g., to configure service threads), changes that were previously made in the primary window (such as the Cache Manager Server Configuration Dialogue Box) are lost. Consequently, it is recommended that either values be changed in the secondary window first or that changes already made in the primary window be verified after the secondary window has been closed.

10 When new values have been entered in all fields to be modified, **single-click** on the appropriate button from the following selections:
- **OK** - to approve the new value(s) and dismiss the configuration dialogue box.
  - The **Storage Config.** screen is displayed.
- **Cancel** - to return to the **Storage Config.** screen without saving the new value(s).
  - The **Storage Config.** screen is displayed.

11 Repeat Steps 3 through 10 as necessary.

Table 18.4-6. Modify System Parameters in the Storage Management and Data Distribution Database Using the Storage Management Control GUI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Storage Management Control** GUI (if necessary)	Use procedure in Section 18.2.2
2	**Storage Config.** tab	**single-click**
3	**<server type>** (in **Configuration Parameter Reporting** window)	**single-click**
4	**<server name>** (in the server information window)	**single-click**
5	**Modify Server/View Stackers** button	**single-click**
6	**<value>** [in appropriate field(s) of the server configuration dialogue box]	**enter text**
7	**Allocate by Priority** button (if applicable)	**single-click**
8	**<value>** [in appropriate field(s) of the **Allocate by Priority** window]	**enter text**
9	**OK** (if applicable)	**single-click**
10	**OK**	**single-click**
11	Repeat Steps 3 through 10 (as necessary)	

18.4.2 Modify System Parameters in the Storage Management and Data Distribution Database Using ISQL

The effects on system functioning and performance must be considered before modifying system parameters. In addition, when making or requesting a change to system parameters, the CM process at the particular site must be followed (if applicable). Depending on circumstances at a particular site it may be necessary to request that the Database Administrator modify parameters in the Storage Management and Data Distribution database. The procedures that follow are provided to assist Distribution Technicians who have to make the database modifications themselves.

The procedures vary somewhat depending on what database table is to be modified. For example:

- Modifications can be made to the DsDdAssignmentRule or DsDdAssignmentRuleHWCI table at any time as described in the **Modify System Parameters in the Storage Management and Data Distribution Database Using ISQL** procedure that follows.
  - If the Distribution Server is running when the table is updated, the changes will take effect immediately (i.e., any new distribution requests will be allocated to a thread pool using the updated rules).
  - Consequently, rule changes to one of the tables must be self-consistent and are typically made within the scope of a single Sybase transaction.
- Modifications to the DsDdThreadPool table must be made while the Distribution Server is idle, as described in the **Modify Parameters in the DsDdThreadPool Table Using ISQL** procedure (Section 18.4.3).

Table 18.4-7 presents (in a condensed format) the steps required to modify system parameters in the Storage Management and Data Distribution Database using isql. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: If modifications to the DsDdThreadPool table are to be made, go to the **Modify Parameters in the DsDdThreadPool Table Using ISQL** procedure (Section 18.4.3).

1 Access a terminal window logged in to the Access/Process Coordinators (APC) Server host.

- Examples of APC Server host names include **e0acg11**, **g0acg01**, **l0acg02**, and **n0acg01**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

isql –U <user ID> -S <database server>

- **<user ID>** is the database user's identification; e.g., **stmgt_role**.
- **<database server>** is the database server; e.g., **x0acg01_srvr**.
- For example:

  isql –U stmgt_role –S x0acg01_srvr

3 At the **Password:** prompt enter:

<database password>

- **<database password>** is the password for logging in to the database using the specified **<user ID>**.
- A **1>** prompt is displayed, indicating that a connection has been made with the database.

4 At the **1>** prompt enter:

use <database name>

- The **<database name>** is likely to be one of the following names:
  - **stmgtdb1** [OPS mode].
  - **stmgtdb1_TS1** [TS1 mode].
  - **stmgtdb1_TS2** [TS2 mode].
- A **2>** prompt is displayed.

5 At the **2>** prompt enter:

go

- A **1>** prompt is displayed.

6 At the **1>** prompt enter:

select * from <table name>

- For example:

  select * from DsDdAssignmentRule
- Alternatively, at the **1>** prompt enter:

  select <column name> from <table name>
  - For example:

    select ThreadPoolId from DsDdAssignmentRule

- Another alternative is to enter:

  select <column name 1>,<column name 2>[,<column name 3>,…] from <table name>

  – For example:

  select ThreadPoolId,Priority from DsDdAssignmentRule

- A **2>** prompt is displayed.

7 At the **2>** prompt enter:

go

- Table contents are displayed.
  – If * (wildcard) was specified, all entries in the table are displayed.
  – If specific columnNames were entered, the data associated with those columns only are displayed.
- For example:

```
1> select * from DsDdAssignmentRule
2> go
 SeqNum      ThreadPoolId ECSUserId
      Priority       EsdtType
      MediaType
      EmailAddress
      NumberOfGranules
 ----------- ------------ --------------------------------------------------
      --------------- -------------------------------------------------
      ------------------------------------------------
      ------------------------------------------------------------------------------------------------------
      ----------------
      100          15 $EcDpPrEM
      ANY             ANY
      ANY
      ANY
      ANY
      200          16 aster_gds
      NORMAL          ANY
      ANY
      ANY
      ANY
      300          13 LarcIngMgr
      NORMAL          ANY
      ANY
      ANY
      ANY
```

600 19 $PDS3
ANY ANY
ANY
ANY
ANY
900 22 s4opsaaf
ANY ANY
ANY
ANY
ANY
1000 22 s4opsaar
ANY ANY
ANY
ANY
ANY
1100 22 s4opsamf
ANY ANY
ANY
ANY
ANY
1200 22 s4opsamr
ANY ANY
ANY
ANY
ANY
1300 22 s4opsdpf
ANY ANY
ANY
ANY
ANY
1400 22 s4opstmf
ANY ANY
ANY
ANY
ANY
1500 22 s4opstmr
ANY ANY
ANY
ANY
ANY
1700 24 RegUser
ANY ANY

ANY
ANY
ANY
1800 17 NoneUser
ANY ANY
ANY
ANY
ANY
1900 20 ANY
ANY ANY
FtpPush
ANY
ANY
2000 21 ANY
ANY ANY
FtpPull
ANY
ANY
400 17 NOAA/SOAP
ANY ANY
ANY
ANY
ANY
601 19 $PDS
ANY ANY
ANY
ANY
ANY
500 18 sjones
NORMAL ANY
ANY
ANY
ANY
1600 23 PrivUser
ANY ANY
FtpPush
userops@x0ins02.daac.ecs.nasa.gov
2

(19 rows affected)

8 If updating a row in a database table, at the **1>** prompt enter:

update <table name> set <column name 1>=<value 1> where <column name 2>=<value 2>

- For example:

  update DsDdAssignmentRule set ECSUserId="jsmith" where ThreadPoolId=18

  – The effect of the modification shown in the example would be to change the ECSUserId in the row(s) of the database table containing ThreadPoolId 18 from “sjones” to "jsmith."
  – Subsequently all distribution requests with an ECSUserId of "jsmith" would be assigned to ThreadPoolId 18.
  – Distribution requests with an ECSUserId of "sjones" would no longer be assigned to ThreadPoolId 18.
- Go to Step 12.

9 If deleting a row in a database table, at the **1>** prompt enter:

delete <table name> where <column name 1>=<value 1>

- For example:

  1> delete DsDdAssignmentRule where ThreadPoolId=16

  – The effect of the modification shown in the example would be to delete any database row(s) with "16" in the ThreadPoolId column.
- Go to Step 12.

10 If adding a row in a database table, at the **1>** prompt enter:

insert <table name> (<column name 1>,<column name 2>,<column name 3>…)

- For example:

  1> insert DsDdAssignmentRule
  (SeqNum,ThreadPoolId,ECSUserId,Priority,EsdtType,MediaType,
  EmailAddress,NumberOfGranules)

11 If adding a row in a database table, at the **2>** prompt enter:

values (<value 1>,<value 2>,<value 3>…)

- For example:

  2> values (1550,23,"MODAPS","HIGH","ANY","FtpPush","ANY","ANY")

12 At the > prompt (e.g., **2>** or **3>**) enter:

go

- The effect of the modification shown in the examples in Steps 10 and 11 would be to insert in the DsDdAssignmentRule database table a row containing the following values:
  - 1550 (SeqNum column).
  - 23 (ThreadPoolId column).
  - MODAPS (ECSUserId column).
  - HIGH (Priority column).
  - ANY (EsdtType column).
  - FtpPush (MediaType column).
  - ANY (EmailAddress column).
  - ANY (NumberOfGranules column).
- If modifying the DsDdAssignmentRule table (as shown in the examples in this procedure) the following attributes must be specified for each row:
  - SeqNum.
  - ThreadPoolId.
  - ECSUserId.
  - Priority.
  - EsdtType.
  - MediaType.
- SeqNum.
  - Determines the order in which a rule is evaluated.
  - Integer whose value is greater than or equal to zero.
  - Each rule must have a unique sequence number.
  - Rules are evaluated in order from the lowest sequence number to the highest sequence number.
  - It is recommended that sequence numbers not be created consecutively (e.g., instead of numbering 1, 2, 3, use 100, 200, 300) so new rules can be inserted without having to renumber subsequent rules.
- ThreadPoolId.
  - Unique identifier of the thread pool to be assigned if the rule is the first one to evaluate to true.
  - Integer with a value greater than zero.
  - Must match one of the values in the ThreadPoolId column in the DsDdThreadPool table.
  - Multiple rules can assign the same ThreadPoolId.
- ECSUserId.
  - User identifier associated with a distribution request.
  - String of up to 24 characters in length.
  - If the user identifier of a distribution request matches the string, the attribute evaluates to true.

  - If the string is set to the reserved word "ANY," the attribute always evaluates to true.
  - String comparisons are case-sensitive.
- Priority.
  - Request priority associated with a distribution request.
  - String that must be set to one of the following six values: "XPRESS", "VHIGH", "HIGH", "NORMAL", "LOW", or "ANY".
  - If the priority of a distribution request matches the string then the attribute evaluates to true.
  - If the string is set to the reserved word "ANY," the attribute always evaluates to true.
  - String comparisons are case-sensitive.
- EsdtType.
  - Data type associated with a distribution request.
  - String of up to twelve (12) characters in length.
  - Must be set to a valid ESDT name and version number or the reserved words "MULTIPLE" or "ANY."
  - When an ESDT name and version number are specified, the string has the form "Name.Version" (e.g., "MOD021KM.003").
  - A distribution request has its EsdtType set to "MULTIPLE" if granules from more than one ESDT are being distributed. If the data type of a distribution request matches the string, the attribute evaluates to true.
  - If the string is set to the reserved word "ANY," the attribute always evaluates to true.
  - String comparisons are case-sensitive.
- MediaType.
  - Type of distribution medium to be used in fulfilling a distribution request.
  - String that must be set to one of the following seven values: "FtpPush", "FtpPull", "8MM", "CDROM", "DLT", "scp", "ANY."
  - If the "media type" of a distribution request matches the string then the attribute evaluates to true.
  - If the string is set to the reserved word "ANY," the attribute always evaluates to true.
  - String comparisons are case-sensitive.
  - Currently “8MM”, “CDROM”, and “DLT” never appear in distribution requests because media requests are redirected to PDS.
- EmailAddress.
  - An e-mail address that can be used to distinguish among different accounts with the same ECSUserId (e.g., to map specific ECSGuest requests to the appropriate thread pools).

- The e-mail address is especially useful when a particular ECSGuest user submits so many requests that it is necessary to control how much of the distribution capacity those requests can utilize at any given time.
- If the "e-mail address" associated with a distribution request matches the string, the attribute evaluates to true.
- If the string is set to the reserved word "ANY," the attribute always evaluates to true.
- String comparisons are case-sensitive.

- NumberOfGranules.
  - Number of granules in a distribution request.
  - The NumberOfGranules criterion can be used to map distribution requests to thread pools based on the size (in terms of granules) of the request.
  - NumberOfGranules is useful in controlling the distribution capacity available to large requests versus small requests. So it can be used to avoid having small requests back up behind large requests.
  - If the "NumberOfGranules" of a distribution request matches the value stored in the database, the attribute evaluates to true.
  - If the value of NumberOfGranules in the database is set to the reserved word "ANY," the attribute always evaluates to true.

13 To start verification of the update at the **1>** prompt enter:

select * from <table name>

- Alternatively, use one of the options described in Step 6.

14 At the **2>** prompt enter:

go

- Table contents are displayed.
- Specified value(s) should have been updated.
- For example:

```
1> select * from DsDdAssignmentRule
2> go
 SeqNum      ThreadPoolId ECSUserId
      Priority       EsdtType
      MediaType
      EmailAddress
      NumberOfGranules
 ----------- ------------ --------------------------------------------------
      --------------- ----------------------------------------------------
      ------------------------------------------------
      ------------------------------------------------------------------------------------------------
      ----------------
```

100 15 $EcDpPrEM
ANY ANY
ANY
ANY
ANY
200 16 aster_gds
NORMAL ANY
ANY
ANY
ANY
300 13 LarcIngMgr
NORMAL ANY
ANY
ANY
ANY
600 19 $PDS3
ANY ANY
ANY
ANY
ANY
900 22 s4opsaaf
ANY ANY
ANY
ANY
ANY
1000 22 s4opsaar
ANY ANY
ANY
ANY
ANY
1100 22 s4opsamf
ANY ANY
ANY
ANY
ANY
1200 22 s4opsamr
ANY ANY
ANY
ANY
ANY
1300 22 s4opsdpf
ANY ANY

ANY
ANY
ANY
1400 22 s4opstmf
ANY ANY
ANY
ANY
ANY
1500 22 s4opstmr
ANY ANY
ANY
ANY
ANY
1700 24 RegUser
ANY ANY
ANY
ANY
ANY
1800 17 NoneUser
ANY ANY
ANY
ANY
ANY
1900 20 ANY
ANY ANY
FtpPush
ANY
ANY
2000 21 ANY
ANY ANY
FtpPull
ANY
ANY
400 17 NOAA/SOAP
ANY ANY
ANY
ANY
ANY
601 19 $PDS
ANY ANY
ANY
ANY

ANY
500 18 jsmith
NORMAL ANY
ANY
ANY
ANY
1600 23 PrivUser
ANY ANY
FtpPush
userops@x0ins02.daac.ecs.nasa.gov
2

(19 rows affected)

– The preceding example indicates that the DsDdAssignmentRule table has been updated (from what was shown in the example in Step 7) to change the ECSUserId from "sjones" to "jsmith" in the row containing "18" for ThreadPoolId.

15 To exit from isql at the **1>** prompt enter:

quit

- The connection with the database is discontinued.
- A UNIX command line prompt is displayed.

Table 18.4-7. Modify System Parameters in the Storage Management and Data Distribution Database Using the ISQL - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	UNIX window (APC Server)	**single-click** or use procedure in Section 18.2.1
2	**isql –U <user ID> -S <database server>**	**enter text, press Enter**
3	**<database password>**	**enter text, press Enter**
4	**select * from <table name> * from <table name>**	**enter text, press Enter**
5	**go**	**enter text, press Enter**
6	**select * from <table name>**	**enter text, press Enter**
7	**go**	**enter text, press Enter**
8	**update <table name> set <column name 1>=<value 1> where <column name 2>=<value 2>** (if applicable)	**enter text, press Enter**
9	**delete <table name> where <column name 1>=<value 1>** (if applicable)	**enter text, press Enter**

Table 18.4-7. Modify System Parameters in the Storage Management and Data Distribution Database Using the ISQL - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
10	**insert <table name> (<column name 1>,<column name 2>,<column name 3>…)** (if applicable)	**enter text, press Enter**
11	**values (<value 1>,<value 2>,<value 3>…)** (if applicable)	**enter text, press Enter**
12	**go**	**enter text, press Enter**
13	**select * from <table name>**	**enter text, press Enter**
14	**go**	**enter text, press Enter**
15	**quit**	**enter text, press Enter**

18.4.3 Modify Parameters in the DsDdThreadPool Table Using ISQL

Modifications to the DsDdThreadPool table must be made while the Distribution Server is idle, as described in the procedure that follows.

Table 18.4-8 presents (in a condensed format) the steps required to modify parameters in the DsDdThreadPool table using isql. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If any rule in the DsDdAssignmentRule table references a thread pool that is going to be deleted from the DsDdThreadPool table, update the rules in the DsDdAssignmentRule table so that no additional requests will be assigned to the thread pool that is to be deleted.

- Refer to the **Modify System Parameters in the Storage Management and Data Distribution Database Using ISQL** procedure (Section 18.4.2).
- Thread pool assignment rules are defined by the rows in the DsDdAssignmentRule table.
- A thread pool should not be deleted while any rule in the DsDdAssignmentRule table references that thread pool.

2 If any request in the DsDdRequest table references a thread pool that is to be deleted, wait until all requests that are currently assigned to the thread pool have been completed before continuing.

- A thread pool should not be deleted while there is a request in the DsDdRequest table that references the thread pool.

3 When there are no current requests assigned to any thread pool to be deleted (if any), make a request to the Operations Controller/System Administrator to bring down (stop) the Distribution Server (EcDsDistributionServer) in the appropriate mode.

- If a new pool is added to DsDdThreadPool and new rules are added to DsDdAssignmentRule while the Distribution Server is running and the new rules result in a request being assigned to the new pool, the request will be suspended with a DsEDdMissingPool error code.
  - The suspended request cannot be resumed until the Distribution Server is warm-started.

4 Wait until the Distribution Server has stopped.

5 If a thread pool is to be deleted, use isql to set the ThreadLimit in the DsDdThreadPool table to zero.

- Refer to the **Modify System Parameters in the Storage Management and Data Distribution Database Using ISQL** procedure (Section 18.4.2).

6 If a thread pool is to be added to the DsDdThreadPool table or an existing thread pool is to modified, modify the DsDdThreadPool table using isql.

- Refer to the **Modify System Parameters in the Storage Management and Data Distribution Database Using ISQL** procedure (Section 18.4.2).
- Each thread pool is defined by a row in the DsDdThreadPool table.
- The following attributes must be specified for each row in the DsDdThreadPool table:
  - ThreadPoolId.
  - ThreadPoolName.
  - ThreadLimit.
- ThreadPoolId.
  - Unique identifier for the thread pool.
  - Integer with a value greater than zero.
  - Each row in DsDdThreadPool must have a unique TheadPoolId.
- ThreadPoolName.
  - Name of the thread pool.
  - String with a length less than or equal to 24 characters.
  - Each row in DsDdThreadPool must have a unique ThreadPoolName.
- ThreadLimit.
  - Number of threads available for processing requests assigned to the thread pool.
  - Integer with a value greater than or equal to zero.
  - If the ThreadLimit for a given thread pool is zero, any requests that are assigned to the thread pool will remain in the pending state until the ThreadLimit is set to a value greater than zero.
  - If the ThreadLimit for a given thread pool is updated from a non-zero value to zero, no new requests assigned to the thread pool will be activated; however, any currently active requests will be allowed to complete.

- The total of the thread limits for all thread pools must be less than the number of worker threads configured for DDIST.
- The default worker thread configuration for DDIST is 228 threads.

7 When the appropriate modifications to the DsDdThreadPool table have been made using isql, make a request to the Operations Controller/System Administrator to perform a warm start of the Distribution Server (EcDsDistributionServer) in the appropriate mode.

8 If a thread pool is to be deleted (i.e., the ThreadLimit in the DsDdThreadPool table has been set to zero), wait until all completed requests that were assigned to the thread pool have been subject to garbage collection from the DsDdRequest table before continuing.

- A waiting time of 24 hours should be adequate.

9 If a thread pool is to be deleted (i.e., the ThreadLimit in the DsDdThreadPool table has been set to zero) and the waiting period has expired, use isql to delete the relevant row from DsDdThreadPool table.

- Refer to the **Modify System Parameters in the Storage Management and Data Distribution Database Using ISQL** procedure (Section 18.4.2).

Table 18.4-8. Modify Parameters in the DsDdThreadPool Table Using ISQL - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Update the rules in the DsDdAssignmentRule table so that no additional requests will be assigned to the thread pool that is to be deleted (if applicable)	Use procedure in Section 18.4.2
2	Wait until all requests that are currently assigned to the thread pool have been completed before continuing (if applicable)	**wait**
3	Make a request to the Operations Controller/System Administrator to bring down the Distribution Server in the appropriate mode (if applicable)	**contact Operations Controller**
4	Wait until the Distribution Server has stopped	**wait**
5	Use isql to set the ThreadLimit in the DsDdThreadPool table to zero (if applicable)	Use procedure in Section 18.4.2
6	Modify the DsDdThreadPool table using isql	Use procedure in Section 18.4.2
7	Make a request to the Operations Controller/System Administrator to perform a warm start of the Distribution Server in the appropriate mode (if applicable)	**contact Operations Controller**

Table 18.4-8. Modify Parameters in the DsDdThreadPool Table Using ISQL - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
8	Wait until all completed requests that were assigned to the thread pool have been subject to garbage collection from the DsDdRequest table (if applicable)	**wait**
9	Use isql to delete the relevant row from DsDdThreadPool table (if applicable)	Use procedure in Section 18.4.2

18.5 Monitoring/Controlling Order Manager Operations

The **Order Manager (OM) GUI** provides ECS operators with access to the Order Manager database. The GUI is based on web standards. It performs most of its functions by accessing the database directly, in contrast to most current ECS operator GUIs, which interface with servers. The GUI allows operators to view and modify requests that the Order Manager Server has placed on hold because they require operator intervention. In addition, operators can resubmit requests or portions of a request that failed.

For Synergy IV, the **OM GUI** incorporates many of the functions of the **Data Distribution Operator GUI** with the expectation that the **OM GUI** can provide an efficient, centralized interface. Note that the **Data Distribution Operator GUI** is still functional, as is the **ECS Data Order Tracking** GUI, which also shares a number of functions with the **OM GUI**.

New operator GUI security standards require the following two levels of permissions for the **OM GUI**:

- Full Capability.
- Limited Capability.

Full-capability operators have the ability to configure parameters and perform all other actions that can be accomplished with the **OM GUI**. Limited-capability operators are able to view a lot of information; however, on the limited-capability GUI some buttons and links have been disabled so it is not possible to perform certain actions or access certain pages.

Order Manager activities in which the Distribution Technician is likely to be involved are performed using the following **OM GUI** pages:

- Request Management.
  - Open Interventions.
  - Completed Interventions.
  - Distribution Requests.
  - FTP Push Distribution Requests.
  - Staging Requests.
  - Operator Alerts.

- FtpPush Monitor.
  - FTP Push Distribution Requests.
  - Suspended Destinations.
- OM Status Pages.
  - OM Queue Status.
  - Staging Status: Media Type.
  - Staging Status: FTP Push Destination.
- OM Configuration.
  - Aging Parameters.
  - Server/Database.
  - Media.
  - FTP Push Policy.
- Help.
  - About HelpOnDemand.
  - Help.
- Logs.
  - OM GUI Log Viewer.

Table 18.5-1, below, provides an Activity Checklist for monitoring/controlling Order Manager operations.

Table 18.5-1. Monitoring/Controlling Order Manager Operations - Activity Checklist (1 of 4)

Order	Role	Task	Section	Complete?
1	Distribution Technician [full-capability or limited-capability]	Launch the Order Manager GUI	(P) 18.5.1	
2	Distribution Technician [full-capability or limited-capability]	View Open Intervention Information on the OM GUI	(P) 18.5.2	
3	Distribution Technician [full-capability or limited-capability]	Set Refresh Options on OM GUI Pages	(P) 18.5.2.1	
4	Distribution Technician [full-capability only]	Respond to an Open Intervention	(P) 18.5.2.2	
5	Distribution Technician [full-capability (limited-capability: monitor only)]	Monitor/Control Distribution Request Information on the OM GUI	(P) 18.5.3	

Table 18.5-1. Monitoring/Controlling Order Manager Operations - Activity Checklist (2 of 4)

Order	Role	Task	Section	Complete?
6	Distribution Technician [full-capability or limited-capability]	Filter Data Displayed on the Distribution Requests Pages	(P) 18.5.3.1	
7	Distribution Technician [full-capability only]	Change the Priority of a Distribution Request Using the OM GUI	(P) 18.5.3.2	
8	Distribution Technician [full-capability only]	Suspend, Resume, Cancel, or Resubmit a Distribution Request Using the OM GUI	(P) 18.5.3.3	
9	Distribution Technician [full-capability only]	Edit FtpPush Parameters	(P) 18.5.3.4	
10	Distribution Technician [full-capability or limited-capability]	View Operator Alerts on the OM GUI	(P) 18.5.4	
11	Distribution Technician [full-capability or limited-capability]	View Completed Intervention Information on the OM GUI	(P) 18.5.5	
12	Distribution Technician [full-capability or limited-capability]	Filter Data Displayed on the Completed Interventions Page	(P) 18.5.5.1	
13	Distribution Technician [full-capability (limited-capability view only)]	View and Respond to Suspended FTP Push Distribution Destinations	(P) 18.5.6	
14	Distribution Technician [full-capability (limited-capability view only)]	View and Respond to Destination Details on the OM GUI	(P) 18.5.6.1	
15	Distribution Technician [full-capability (limited-capability check only)]	Check/Modify OM Queue Status	(P) 18.5.7	
16	Distribution Technician [full-capability or limited-capability]	Check Staging Status	(P) 18.5.7.1	

Table 18.5-1. Monitoring/Controlling Order Manager Operations - Activity Checklist (3 of 4)

Order	Role	Task	Section	Complete?
17	Distribution Technician [full-capability (limited-capability check only)]	Check/Modify Aging Parameters	(P) 18.5.8	
18	Distribution Technician [full-capability (limited-capability check only)]	Check/Modify OMS Server or Database Parameters	(P) 18.5.9	
19	Distribution Technician [full-capability (limited-capability check only)]	Check/Modify Media Parameters	(P) 18.5.10	
20	Distribution Technician [full-capability (limited-capability check only)]	Check/Modify FTP Push Policy Configuration	(P) 18.5.11	
21	Distribution Technician [full-capability only]	Add Destinations to the Frequently Used Destinations List	(P) 18.5.11.1	
22	Distribution Technician [full-capability only]	Modify Values Assigned to Parameters of Frequently Used Destinations	(P) 18.5.11.2	
23	Distribution Technician [full-capability or limited-capability]	View the OM GUI Log	(P) 18.5.12	
24	Distribution Technician [full-capability only]	Prepare Input Files for Use with the OMS CI	(P) 18.5.13	
25	Distribution Technician [full-capability only]	Start the OMS CI	(P) 18.5.14	
26	Distribution Technician [full-capability only]	Process Input Files Specified for Synergy III Exceptions	(P) 18.5.15	
27	Distribution Technician [full-capability only]	Configure How Long Order-Tracking Information is Kept in the OMS Database	(P) 18.5.16	
28	Distribution Technician [full-capability only]	Switch Between Synergy IV and Synergy III Operations	(P) 18.5.17	

Table 18.5-1. Monitoring/Controlling Order Manager Operations - Activity Checklist (4 of 4)

Order	Role	Task	Section	Complete?
29	Distribution Technician [full-capability only]	Get OMS CI Help	(P) 18.5.18	

18.5.1 Launch the Order Manager GUI

Launching the **Order Manager GUI** is accomplished using the Netscape browser. Table 18.5-2 presents (in a condensed format) the steps required to launch the **Order Manager GUI**. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to a host (e.g., the Operations Workstation or Sun external server) that has access to the Netscape web browser.

- Examples of Operations Workstation host names include **e0acs03**, **g0acs02**, **l0acs01**, and **n0acs03**.
- Examples of Sun external server host names include **e0ins01**, **g0ins01**, **l0ins01**, and **n0ins01**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 In the terminal window, at the command line prompt, enter:

netscape &

- It may be necessary to type the path as well as the netscape command (e.g., **/tools/bin/netscape &**).
- It may be necessary to respond to dialogue boxes, especially if the browser is already being used by someone else who has logged in with the same user ID.
- The Netscape web browser is displayed.

3 If a bookmark has been created for the **OM GUI**, select the appropriate bookmark from those listed on the browser's **Bookmarks** button (or the **Communicator → Bookmarks** pull-down menu).

- The security login **Prompt** is displayed.

4 If no bookmark has been created for the **OM GUI**, in the browser's **Location (Go To)** field enter:

http://<host>:<port>/<path>/

- For example:

  http://x0dps01.daac.ecs.nasa.gov:54321/cgi-bin/

- The security login **Prompt** is displayed.

5 In the **User Name** box of the security login **Prompt** enter:

<user name>

6 In the **Password** box of the security login **Prompt** enter:

<password>

NOTE: If the security login prompt reappears after the first time the user name and password have been entered (and the **OK** button has been clicked), it may not be due to a data entry problem. Try again to log in using the same user name and password. Sometimes it is necessary to enter the user name and password for the GUI more than once.

7 **Single-click** on the appropriate button from the following selections:

- **OK** - to complete the log-in and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **Order Manager Page** ["**Home" Page**] is displayed.
- **Cancel** - to dismiss the dialogue box without logging in.
  - The dialogue box is dismissed.
  - The Netscape web browser is displayed.

Table 18.5-2. Launch the Order Manager GUI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window with access to Netscape browser (Operations Workstation, Interface Server 02, etc.)	**single-click** or use procedure in Section 18.2.1
2	**netscape &**	**enter text, press Enter**
3	**<OM GUI bookmark>** (if available)	**single-click**
4	**http://<host>:<port>/<path>/** (if necessary)	**enter text, press Enter**
5	**<user name>**	**enter text**
6	**<password>**	**enter text**
7	**OK**	**single-click**

18.5.2 View Open Intervention Information on the OM GUI

The **Open Interventions** page provides the full-capability operator with a means of viewing and responding to open interventions. (The limited-capability operator can view but cannot work on (respond to) open interventions.)

Table 18.5-3 presents (in a condensed format) the steps required to view open intervention information on the **OM GUI**. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).
- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **Request Management** link in the navigation frame of the **OM GUI**.
- The **Request Management** menu is expanded.

3 **Single-click** on the **Open Interventions** link in the navigation frame of the **OM GUI**.
- The **Open Interventions** page is displayed.
- The **Listing** table has the following columns:
  - **Order Id.**
  - **Request Id.**
  - **Media.**
  - **Status.**
  - **Worked by.**
  - **Created.**
  - **Acknowledged.**
  - **Explanation(s).**

4 Observe information displayed in the **Listing** table of the **Open Interventions** page.
- The **Show _____ rows at a time** window provides a means of selecting the maximum number of rows of data to be displayed at a time.
  - For example, if **Show _____ rows at a time** is being displayed, selecting **50** from the option button would result in the display of a page of data containing up to 50 rows of data.
- **Single-clicking** on a link (underlined word) in the column header row of the table causes table contents to be sorted on that column.
  - For example, clicking on the **Created** link causes the table to be organized by "Creation Time," with the most recent request requiring intervention in the top row of the table.
- **Single-clicking** on a specific Order ID brings up a screen containing more detailed data concerning that particular order.
  - The ECS Order page displays the following types of data concerning the order: Request ID(s), Order Type, Order Source, Receive Date, Last Update, Description, Start Date, User ID, Status, Ship Date, Order Home DAAC.

  - If the order is a bundling order (Order Type "Bundled Order" or "BO"), the **ECS Order** page includes a link to the **Spatial Subscription Server GUI**.
  - Clicking on the Netscape browser **Back** button causes the **Open Interventions** page to be redisplayed.
- **Single-clicking** on a specific Request ID in the **Listing** table of the **Open Interventions** page brings up a screen containing detailed data concerning the intervention for that particular request (refer to Steps 5 and 6).
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.
- If **AutoRefresh** is **ON**, the **Open Interventions** page refreshes automatically as often as specified in the **Refresh screen every *x* minutes** window.
  - If a different refresh option is preferred, perform the **Set Refresh Options on OM GUI Pages** procedure (Section 18.5.2.1).
- To manually update (refresh) the data on the screen, **single-click** on the Netscape browser **Reload** button.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.
- The **first**, **previous**, **next**, and **last** links provide means of displaying additional pages of data.

5 **Single-click** on a specific Request ID in the **Listing** table of the **Open Interventions** page to bring up a screen containing detailed data concerning the intervention for that particular request.

- For example, clicking on Request ID **0400080905** brings up an **Open Intervention Detail** page (i.e., **Intervention for Request 0400080905**).

6 Observe information displayed on the **Open Intervention Detail** page.

- The following items are displayed on the **Open Intervention Detail** page.
  - **User ID.**
  - **email.**
  - **Order ID.**
  - **Request ID.**
  - **Size (est, MB).**
  - **Media Type.**
  - **Priority.**
  - **Explanation(s).**
  - **Worked by.**
  - **Created.**
  - **Acknowledged.**
  - **Status.**
  - **User String:**
  - **Worked by:** data entry field.

- **Assign New Worker** button or **Override Current Worker** button.
- **Granule List: DBID; ESDT; Size (MB); Status; RESUBMIT** (button); **Explanation; Action; Fail** button(s) (if applicable).
- **Request Attributes: Change Media to:** option button; **Change Priority to:** option button; **Disable limit checking** box; **Update FtpPush Parameters** box (if applicable.
- **Request Level Disposition: Keep on hold; Submit; Fail Request; Partition;** (Partition) **Interval:** *d* **days** *h* **hours** boxes.
- **OPERATOR NOTES**.
- **Apply** button.
- **Reset** button.

- Clicking on the Netscape browser **Back** button causes the **Open Interventions** page to be redisplayed.

7 To work on the intervention being displayed on the **Open Intervention Detail** page, perform the **Respond to an Open Intervention** procedure (Section 18.5.2.2).

8 To view the details of another open intervention first **single-click** on the Netscape browser **Back** button then return to Step 4.

- The **Open Intervention Detail** page is dismissed.
- The **Open Interventions** page is displayed.

9 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message “Are you sure you want to log out? This will close your browser.” is displayed.

10 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Table 18.5-3. View Open Intervention Information on the OM GUI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**Request Management** link (**Order Manager Page** [**"Home" Page**])	**single-click**
3	**Open Interventions** link	**single-click**
4	Observe information displayed in the **Listing** table of the **Open Interventions** page	**read text**
5	**<Request ID>** (in the **Listing** table of the **Open Interventions** page)	**single-click**
6	Observe information displayed on the **Open Intervention Detail** page	**read text**
7	Work on the intervention (if appropriate)	Use procedure in Section 18.5.2.2
8	Netscape browser **Back** button (if applicable)	**single-click**
9	Return to Step 4 (if applicable)	
10	**Log Out** link (when applicable)	**single-click**
11	**OK** (when applicable)	**single-click**

18.5.2.1 Set Refresh Options on OM GUI Pages

Buttons at the bottom of **OM GUI** pages provide the Distribution Technician (whether full-capability or limited capability operator) with a means of setting refresh options. Table 18.5-4 presents (in a condensed format) the steps required to set refresh options on **OM GUI** pages. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Observe the **AutoRefresh Control Panel** at the bottom of the **OM GUI** page.

- One of the following **AutoRefresh** statuses is displayed:
  - **ON.**
  - **OFF.**

2 If applicable, **single-click** on the appropriate radio button in the **AutoRefresh Control Panel** at the bottom of the **OM GUI** page.

- The following **AutoRefresh** options are available:
  - **on**.
  - **off**.

- It is useful to "auto refresh" when working with current orders/requests that are expected to change status at any time and it is desirable to see the new status right away.
- It is useful to suspend refresh when a large volume of orders/requests is being processed and it is desirable to preserve the orders/requests displayed on the current screen.

3 To change the refresh rate (assuming **AutoRefresh** is **ON**), **single-click** on the **Refresh screen every *x* minutes** option button to display a menu of numbers of minutes then **single-click** on the desired selection.

- The following choices are available:
  - **1.**
  - **5.**
  - **10.**
  - **15.**
  - **30.**
  - **45.**
  - **60.**
- Selected number is displayed in the **Refresh screen every *x* minutes** window.

4 Return to the procedure that recommended setting refresh options on OM GUI pages.

Table 18.5-4. Set Refresh Options on OM GUI Pages - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Observe the **AutoRefresh Control Panel**	**read text**
2	**AutoRefresh** option (i.e., **on** button or **off** button on the **AutoRefresh Control Panel**) (if applicable)	**single-click**
3	**<minutes>** (**Refresh screen every *x* minutes** option button) (if applicable)	**single-click**
4	Return to the procedure that recommended setting refresh options on OM GUI pages	

18.5.2.2 Respond to an Open Intervention

The **Open** Intervention **Detail** page provides the full-capability operator with a means of performing the following kinds of interventions (limited-capability operators are not allowed to work on open interventions):

- Select a different granule to replace a granule that is unavailable.
- Fail selected granule(s).
- Disable limit checking.

- Change the distribution medium for a request.
- Resubmit a request.
- Fail a request.
- Partition (divide) a request.

Table 18.5-5 presents (in a condensed format) the steps required to respond to an open intervention. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: The response to an intervention may require coordination between the Distribution Technician and a User Services representative, especially when determining a more suitable type of distribution medium, selecting a replacement granule, or taking any other action that would require contacting the person who submitted the order. In fact, depending on the circumstances and DAAC policy it may be appropriate for User Services to assume responsibility for the eventual disposition of some interventions.

1 Observe the information displayed in the **Worked by** column of the **Open Intervention Detail** page.

- If the **Open Intervention Detail** page is not being displayed on the **OM GUI**, go to the **View Open Intervention Information on the OM GUI** procedure (Section 18.5.2).
- If someone is already working on the intervention, that person is identified in the **Worked by:** field of the **Open Intervention Detail** page.
  - In general working on an intervention is left to the person who has already been signed up to work on it unless the change is coordinated with that person or they are going to be unavailable (e.g., due to illness or vacation).
- If necessary (e.g., due to illness, vacation, or prior coordination), it is possible to override the assignment of a person to work on an intervention.

2 To assign oneself to work on the intervention, on the **Open Intervention Detail** page in the **Worked by:** text entry box enter:

<name>

- or -

<user ID>

- If necessary, overwrite the ID of the previously assigned person.

3 To continue the process of assigning oneself to work on the intervention, **single-click** on the **Assign New Worker** button or **Override Current Worker** button (as applicable).

4 If no granule in the request is to be "failed" or if all granules in the request are to be "failed," skip Steps 5 through 10 and go to Step 11.

5 If a granule is to be replaced (e.g., because of an "Invalid UR/Granule Not Found" entry in the **Explanation** column of the **Granule List**), in the **DBID** text box enter:

<Database ID>

- The DBID for a replacement granule can be determined by doing a search using the EDG.

6 To continue the process of specifying a replacement granule, **single-click** on the **Apply** button associated with the DBID.

- A dialogue box is displayed to confirm the change to the granule.

7 To continue the process of specifying a replacement granule, **single-click** on the appropriate button from the following selections:

- **OK** - to confirm the specification of a replacement granule and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **Open Intervention Detail** page is displayed.
- **Cancel** - to dismiss the dialogue box without specifying a replacement granule.
  - The dialogue box is dismissed.
  - The **Open Intervention Detail** page is displayed.

8 If a granule is to be "failed" (e.g., because of an "Invalid UR/Granule Not Found" entry in the **Explanation** column of the **Granule List**), **single-click** on the **Fail** button in **Action** column of the row for the granule in the **Granule List**.

- A dialogue box is displayed to confirm the change to the granule.

NOTE: **"**Failing" a granule is a permanent action and cannot be canceled after having been confirmed.

9 To continue the process of failing a granule, **single-click** on the appropriate button from the following selections:

- **OK** - to confirm the failure of the granule and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **Open Intervention Detail** page is displayed.
- **Cancel** - to dismiss the dialogue box without failing the granule.
  - The dialogue box is dismissed.
  - The **Open Intervention Detail** page is displayed.

10 Repeat Steps 5 through 9 (as necessary) to replace or fail any additional granules.

11 If limit checking should be disabled, **single-click** on the **Disable limit checking** box.

- If the **Disable limit checking** attribute is selected and subsequently applied, the request size limit checking is disabled.
- The **Disable limit checking** option makes it possible to override the standard media capacity limits for a particular media type and is most likely to be applied to a non-physical media type (i.e., ftp push or ftp pull).
- The **Disable limit checking** option should be used for unusually large requests only.

12 If the distribution medium should be changed, **single-click** on the **Change Media to:** box to display a menu of media then **single-click** on the desired selection.

- The following choices are available: **- -**, **FtpPull**, **FtpPush**, **CDROM**, **DLT**, **DVD**, **8MM, scp**.
- Selected medium is displayed in the **Change Media to:** box.

13 If the priority of the request should be changed, **single-click** on the option button associated with the **Change Priority to:** box to display a menu of priorities then **single-click** on the desired selection.

- The following choices may be available (the current priority will not be listed): **- -**, **LOW**, **NORMAL**, **HIGH**, **VHIGH**, **XPRESS**.
- Selected priority is displayed in the **Change Priority to:** box.

14 If the ftp push parameters should be changed, **single-click** on the **Update FtpPush Parameters** box.

- The **Update FtpPush Parameters** option appears when applicable (i.e., when the current distribution medium for the request is ftp push).
  - The **Update FtpPush Parameters** option provides a means of editing the existing ftp push information when the intervention is closed.

15 If a note should be entered concerning the request, in the **OPERATOR NOTES** text box enter:

<text>

- For example, the note may explain the reason for resubmitting the request.

16 To select the disposition for the request **single-click** on the appropriate button from the following selections:

- **Keep on hold** - to delay applying any intervention action (keep the intervention open) and dismiss the **Open Intervention Detail** page.
  - Placing an intervention on hold does not allow changing the request's attributes, but saves the operator notes and allows opening the intervention at a later time (essentially, the intervention is being "saved").
- **Submit** - to apply the intervention actions (if any) specified in the **Granule List** and **Request Attributes** sections of the **Open Intervention Detail** page and dismiss the **Open Intervention Detail** page.

- **Fail Request** - to fail the entire request (including all granules) and dismiss the **Open Intervention Detail** page.
- **Partition** - to start the process of partitioning a request that exceeds maximum request size.

17 If the **Partition** button was selected in the preceding step and distribution of the granules should be spread over a period of time, in the corresponding text box(es) enter:

<number of days>

<number of hours>

NOTE: There are **Apply** and **Reset** buttons at the bottom of the **Open Intervention Detail** page. The **Reset** button does not cancel any changes made to the request or changes made to the DBIDs (changed or failed). It simply resets the form buttons for the **Request Level Disposition** section to their original states.

18 **Single-click** on the **Apply** button.

- A **Close Confirmation** page is displayed.
  - The **Close Confirmation** page displays the actions to be taken; for example, the following types of actions may be listed: **Disposition** [e.g., keep on hold, submit, fail, or partition], **Limit Checking Disabled** [yes, no, or blank], **New Media** [no, yes: (type), or blank], **New Priority** [no, yes: (type), or blank].
  - If the intervention involved changing the medium from an electronic medium to a physical medium, text boxes for entering the following types of shipping information are displayed on the **Close Confirmation** page: **Address 1**, **Address 2**, **Address 3**, **City**, **State/Province**, **Country, Zip/Postal Code**,
  - If the intervention involved changing the medium to ftp push or updating the ftp push parameters, text boxes for the following ftp push parameters are displayed on the **Close Confirmation** page: **Ftp node** [Destination host name], **Ftp Address** [FTP user name], **Password**, **Confirm Password**, **User String** [message to be sent to the user], **Destination Directory** [full path]**.**
  - If it was necessary to fail a request or granule(s) within a request, the **Close Confirmation** page includes options for either appending additional text to the default e-mail message to be sent to the requester or choosing not to send an e-mail message to the requester. An **Additional e-mail text** text box for appending text (if desired) to the standard e-mail text is displayed on the **Close Confirmation** page; a **Don't send e-mail** box to suppress the sending of an e-mail message is displayed on the **Close Confirmation** page.

19 If the intervention involved changing the medium from an electronic medium to a physical medium, in the corresponding text boxes enter:

<Address 1>

<Address 2>

<Address 3>

<City>

<State/Province>

<Country>

<Zip/Postal Code>

20 If the intervention involved changing the medium to ftp push or updating the ftp push parameters, perform the **Edit FtpPush Parameters** procedure (Section 18.5.3.4).

21 If the intervention involved failing a request or granule(s) within a request, partitioning a request, or modifying the granules in a request, and additional text is to be appended to the corresponding standard e-mail text, in the **Additional e-mail text** text box on the **Close Confirmation** page enter:

<text>

22 If the intervention involved failing a request or granule(s) within a request, partitioning a request, or modifying the granules in a request, and no e-mail message is to be sent, **single-click** on the **Don't send e-mail** box on the **Close Confirmation** page to suppress the sending of an e-mail message indicating request/granule failure.

- Unless the **Don't send e-mail** box is checked, an e-mail message indicating request/granule failure will be sent to the requester.

23 **Single-click** on the appropriate button from the following selections:

- **OK** - to apply the specified intervention actions (if any) and dismiss the **Close Confirmation** page.
  - The **Close Confirmation** page is dismissed.
  - An **Intervention Closed** page is displayed
- **Cancel** - to dismiss the **Close Confirmation** page without applying the specified intervention actions.
  - The **Close Confirmation** page is dismissed.
  - A warning dialogue box is displayed with the message "WARNING: The disposition and actions you have taken for this intervention will be lost. Continue?"

24 If a warning dialogue box is displayed with the message "WARNING: The disposition and actions you have taken for this intervention will be lost. Continue?" **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the warning dialogue box and the **Close Confirmation** page and return to the **Open Intervention Detail** page.
- **Cancel** - to dismiss the warning dialogue box and return to the **Close Confirmation** page.

25 To exit from the **Intervention Closed** page, click on the **OK** button.

- The **Intervention Closed** page is dismissed.
- The **Open Interventions** page is displayed.

26 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

27 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Table 18.5-5. Respond to an Open Intervention - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Observe the information displayed in the **Worked by** column	**read text**
2	**<name>** (or **<user ID>**)	**enter text**
3	**Assign New Worker** button or **Override Current Worker** button (as applicable)	**single-click**
4	**<Database ID>** (**DBID** text box) (if applicable)	**enter text**
5	**Apply** button (if applicable)	**single-click**
6	**OK** button (if applicable)	**single-click**
7	**Fail** button (in **Action** column of the row for the granule) (if applicable)	**single-click**
8	**OK** button (if applicable)	**single-click**
9	Repeat Steps 4 through 8 (as necessary)	
10	**Disable limit checking** box (if applicable)	**single-click**

Table 18.5-5. Respond to an Open Intervention - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
11	**<medium>** (**Change Media to:** option list) (if applicable)	**single-click**
12	**<priority>** (**Change Priority to:** option list) (if applicable)	**single-click**
13	**Update FtpPush Parameters** box (if applicable)	**single-click**
14	**<text>** (**OPERATOR NOTES** text box) (if applicable)	**enter text**
15	**Keep on hold** button (if applicable)	**single-click**
16	**Submit** button (if applicable)	**single-click**
17	**Fail Request** button (if applicable)	**single-click**
18	**Partition** button (if applicable)	**single-click**
19	**<number of days>** (**day(s)** text box) (if applicable)	**enter text**
20	**<number of hours>** (**hours** text box) (if applicable)	**enter text**
21	**Apply** button	**single-click**
22	**<Address 1>** (**Address 1** text box) (if applicable)	**enter text**
23	**<Address 2>** (**Address 2** text box) (if applicable)	**enter text**
24	**<Address 3>** (**Address 3** text box) (if applicable)	**enter text**
25	**<City>**(**City** text box) (if applicable)	**enter text**
26	**<State/Province>** (**State/Province** text box) (if applicable)	**enter text**
27	**<Country>** (**Country** text box) (if applicable)	**enter text**
28	**<Zip/Postal Code>** (**Zip/Postal Code** text box) (if applicable)	**enter text**
29	Edit FtpPush parameters (if applicable)	Use procedure in Section 18.5.3.4
30	**<text>** (**Additional e-mail text** text box) (if applicable)	**enter text**
31	**Don't send e-mail** button (if applicable)	**single-click**
32	**OK** button (to dismiss the **Close Confirmation** page)	**single-click**
33	**OK** button (to dismiss the warning dialogue box) (if applicable)	**single-click**
34	**OK** button (to exit from the **Intervention Closed** page) (when applicable)	**single-click**
35	**Log Out** link (when applicable)	**single-click**
36	**OK** (to complete logging out) (when applicable)	**single-click**

18.5.3 Monitor/Control Distribution Request Information on the OM GUI

The following three **OM GUI** pages provide the full-capability operator with a means of viewing distribution request information on the **OM GUI** and a means of taking actions with respect to distribution requests:

- **Distribution Requests** page.
- **Staging Distribution Requests** page.
- **FtpPush Distribution Requests** page.

The pages allow the full-capability operator to take the following kinds of actions with respect to distribution requests:

- Change the priority of a distribution request while granules for the request still need to be staged or while granules for the request still need to be pushed.
- Resubmit a request in a terminal state (e.g., aborted, cancelled, terminated, or shipped).
- Suspend a request that still needs to be staged or while granules for the request still need to be pushed.
- Resume a request that was suspended by the OM GUI operator or while the processing of new requests by the OMS is suspended.
- Cancel a request that is not in a terminal state and while granules for the request still need to be staged or pushed.

The limited-capability operator can use the **Distribution Requests** page to view distribution request information but is not allowed to take action on distribution requests.

Table 18.5-6 presents (in a condensed format) the steps required to monitor/control distribution request information on the OM GUI. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).
- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **Request Management** link in the navigation frame of the **OM GUI**.
- The **Request Management** menu is expanded.

3 Click on the **Distribution Requests** link in the navigation frame of the **OM GUI**.
- The **Distribution Requests** page is displayed.

- The **Current Filters** area of the **Distribution Requests** page describes how the current listing of distribution requests has been filtered.
  - It is important to check the filter settings when opening any of the distribution requests pages because changes to the filter settings tend to persist, even from one session to another.
  - To filter the **Distribution Requests Listing** in a different way, perform the **Filter Data Displayed on the Distribution Requests Pages** procedure (Section 18.5.3.1).
- The **Options** area of the **Distribution Requests** page has the following buttons:
  - **Change Filter** [refer to the **Filter Data Displayed on the Distribution Requests Pages** procedure (Section 18.5.3.1)].
  - Either **Suspend New Requests** or **Resume New Requests** (as applicable) [refer to Steps 7 and 8].
- The **Listing** table has the following columns:
  - **Ord Typ/Prc Mod** [Order Type/Processing Mode] [Order types include "Regular" and "BO" (Bundling Order). Processing mode is either "S3" (Synergy III) or "S4" (Synergy IV). Processing mode appears only when the request mode is different from the current OMS mode.]
  - **OrderID.**
  - **RequestID.**
  - **Request Size (MB).**
  - **Gran Cnt** [Granule Count].
  - **Media.**
  - **Priority.**
  - **Request Status.**
  - **ESDT.**
  - **UserID.**
  - **Resub Cnt** [Resubmit Count].
  - **Created.**
  - **Last Update.**
  - **Actions** [Actions (e.g., Resubmit, Cancel, Suspend, or Resume) for which the request is eligible.].

4 Observe information displayed in the **Listing** table of the **Distribution Requests** page.

- The **Show _____ rows at a time** window provides a means of selecting the maximum number of rows of data to be displayed at a time.
  - For example, if **Show _____ rows at a time** is being displayed, selecting **50** from the option button would result in the display of a page of data containing up to 50 rows of data.
- **Single-clicking** on a link in the column header row of the table causes table contents to be sorted on that column.
  - For example, clicking on the **Created** link causes the table to be organized by date, with the most recent distribution request in the top row of the table.

- **Single-clicking** on a specific Order ID or Request ID brings up a screen containing more detailed data concerning that particular order or request.
  - For example, clicking on Order ID 0400078765 brings up an ECS Order page (i.e., ECS ORDER 0400078765) that displays the following types of data concerning the order: Request ID(s), Order Type, Order Source, Receive Date, Last Update, Description, Start Date, User ID, Status, Ship Date, Order Home DAAC.
  - If the order is a bundling order (Order Type "Bundled Order" or "BO"), the **ECS Order** page includes a link to the **Spatial Subscription Server GUI**.
  - Clicking on the Netscape browser **Back** button causes the **Request Management** page **Distribution Requests** page to be redisplayed.
  - For example, clicking on Request ID **0400083900** brings up a **Distribution Request Detail** page (i.e., **DISTRIBUTION REQUEST 0400083900**) that displays the following types of data concerning the request: UserID; E-mail; Request Size (MB); # Granules; # Granules Staged; # Granules FTP Pushed; Receive Date/Time; Start Date/Time; Last Update; End Date/Time; OrderId; Order Type; Ext. RequestId; Priority; Request Status; Destination; Edit FtpPush Parameters [button]; Resubmit Count; Media Type; Resource Class; [Action button(s) (e.g., Resubmit, Cancel, Suspend, and/or Resume)]; Mailing Address: Title; First Name; Middle Name; Last Name; Email; Organization; Address; City; State/Province; Country; Zip/Postal code; Telephone; Fax; Shipping Address: Title; First Name; Middle Name; Last Name; Email; Address; City; State/Province; Country; Zip/Postal code; Telephone; Fax; Billing Address: Title; First Name; Middle Name; Last Name; Email; Organization; Address; City; State/Province; Country; Zip/Postal code; Telephone; Fax; Granule List: DB ID; DPL ID; ESDT; Size (MB); Granule Status; Completion Time; Explanation.
- **Single-clicking** on a specific User ID brings up a screen that shows user profile information for that user, including the following types of data:
  - **Contact Information**: Name, E-Mail Address, Organization, User ID, User Verification Key, Affiliation, Project, Home DAAC, Primary area of study, Account Information, Date created, Expiration date, Privilege level, NASA user, Access privilege, V0 Gateway user type, V0 Gateway category.
  - **Contact Address**: Address, City, State/Province, Country, Zip/Postal code, Telephone, Fax.
  - **DAR [Data Acquisition Request] Information: Aster category**, DAR expedited data, Shipping Address, Title, First Name, Middle Initial, Last Name, Email, Address, City, State/Province, Country, Zip/Postal code, Telephone, Fax.
  - **Billing Address** [Same fields as Shipping Address]
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.

- If **AutoRefresh** is **ON**, the **Distribution Requests** page refreshes automatically as often as specified in the **Refresh screen every *x* minutes** window.
  - If a different refresh option is preferred, perform the **Set Refresh Options on OM GUI Pages** procedure (Section 18.5.2.1).
- To manually update (refresh) the data on the screen, click on the **Reload Page** link.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.
- The **first**, **previous**, **next**, and **last** links provide means of displaying additional pages of data.
- The **Go directly to row…** window provides a means of displaying a page of data starting with a particular row of the table.
  - For example, if **Go directly to row _____ of 415 rows** is being displayed, typing **315** in the window and clicking on the **ok** button would result in the display of a page of data containing rows 315 through 364.

5 If the list of distribution requests shown in the **Listing** table of the **Distribution Requests** page needs to be filtered (e.g., a request to be viewed is not listed in the table), filter the data.

- For detailed instructions refer to the **Filter Data Displayed on the Distribution Requests Pages** procedure (Section 18.5.3.1).

6 Observe information displayed in the **Listing** table of the **Distribution Requests** page.

7 To suspend all new distribution requests (when applicable), **single-click** on the **Suspend New Requests** button in the **Options** area of the **Distribution Requests** page.

- The **Suspend New Requests** button changes to a **Resume New Requests** button when new requests have been suspended.
- The **Suspend New Requests** button should be visible only when new requests are not already being suspended.

8 To resume processing of new requests (when applicable), **single-click** on the **Resume New Requests** button in the **Options** area of the **Distribution Requests** page.

- The **Resume New Requests** button changes to a **Suspend New Requests** button when new requests have been resumed.
- The **Resume New Requests** button should be visible only when new requests are currently being suspended.

9 To change the priority of a distribution request (when applicable), perform the **Change the Priority of a Distribution Request Using the OM GUI** procedure (Section 18.5.3.2).

10 To either suspend a distribution request or resume processing of a suspended request (when applicable), perform the **Suspend, Resume, Cancel, or Resubmit a Distribution Request Using the OM GUI** procedure (Section 18.5.3.3).

11 To cancel a distribution request (when applicable), perform the **Suspend, Resume, Cancel, or Resubmit a Distribution Request Using the OM GUI** procedure (Section 18.5.3.3).

12 To review and/or respond to an open intervention for a particular distribution request first **single-click** on the **Open Intervention** link in the **Request Status** column for the request in the **Listing** table.

13 To review and/or respond to an open intervention go to the procedure **View Open Intervention Information on the OM GUI** procedure (Section 18.5.2).

14 To reprocess a distribution request that has failed, been cancelled, or been shipped (when applicable), perform the **Suspend, Resume, Cancel, or Resubmit a Distribution Request Using the OM GUI** procedure (Section 18.5.3.3).

15 To edit ftp push parameters for a particular distribution request (when applicable), perform the **Edit FtpPush Parameters** procedure (Section 18.5.3.4).

16 To view operator alerts, perform the **View Operator Alerts on the OM GUI** procedure (Section 18.5.4).

17 To view the **Staging Distribution Requests** page, first (if it has not been expanded already) **single-click** on the **FtpPush Monitor** link in the navigation frame of the **OM GUI**.

- The **FtpPush Monitor** menu is expanded (as applicable).

18 To view the **Staging Distribution Requests** page **single-click** on the **Staging Requests** link in the navigation frame of the **OM GUI**.

- The **Staging Distribution Requests** page is displayed.
- The **Staging Distribution Requests** page displays the same types of information (for each request in the list) and has the same kinds of links as the **Distribution Requests** page; however, the **Staging Distribution Requests** page has a couple of differences:
  - The **Resource Class** column shows each request's archive resource demand in terms of one of the following values: **C** [Cheap], **M** [Moderate], **E** [Expensive].
  - Sorting the table by **Resource Class** (by clicking on the **Resource Class** column header) provides a convenient way to determine which request(s) is (are) having the most significant effects on archive resources. That may lead to suspending or canceling certain requests.

- The **Gran Cnt/Staging Complete** column shows the number of granules associated with the request and the number of granules that have completed staging.

19 To view the **FtpPush Distribution Requests** page, first (if it has not been expanded already) **single-click** on either **Request Management** or the **FtpPush Monitor** link in the navigation frame of the **OM GUI**.

- The **Request Management** or **FtpPush Monitor** menu is expanded (as applicable).

20 To view the **FtpPush Distribution Requests** page **single-click** on the **FtpPush Distribution Requests** link in the navigation frame of the **OM GUI**.

- The **FtpPush Distribution Requests** page is displayed.
- The **FtpPush Distribution Requests** page displays the same types of information (for each request in the list) and has the same kinds of links as the **Distribution Requests** page; however, there are several differences:
  - There is no **Media** column (all requests use the same type of medium – ftp push).
  - The **Destination** column shows the name of the destination.
  - The **Gran Cnt/FtpPush Complete** column shows the number of granules associated with the request and the number of granules that have completed ftp push.
  - The **Resource Class** column shows each request's archive resource demand (as on the **Staging Distribution Requests** page).
- To filter the list of distribution requests shown in the **Listing** table of the **FtpPush Distribution Requests** page perform the **Filter Data Displayed on the Distribution Requests Pages** procedure (Section 18.5.3.1).

21 If there is an **OM GUI** failure, perform the applicable procedure(s) in the **Troubleshooting DDIST and Order Manager GUI Problems** section (Section 18.6).

22 Repeat Steps 4 through 21 as necessary to monitor distribution requests.

23 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

24 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.

- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Table 18.5-6. Monitor/Control Distribution Request Information on the OM GUI - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**Request Management** link (if necessary)	**single-click**
3	**Distribution Requests** link	**single-click**
4	Observe information displayed in the **Listing** table of the **Distribution Requests** page	**read text**
5	Filter the data displayed in the table (if necessary)	Use procedure in Section 18.5.3.1
6	Observe information displayed in the **Listing** table of the **Distribution Requests** page	**read text**
7	**Suspend New Requests** button (if suspending new requests)	**single-click**
8	**Resume New Requests** button (if resuming new requests)	**single-click**
9	Change the priority of a distribution request (when applicable)	Use procedure in Section 18.5.3.2
10	Suspend a distribution request or resume processing of a suspended request (when applicable)	Use procedure in Section 18.5.3.3
11	Cancel a distribution request (when applicable)	Use procedure in Section 18.5.3.3
12	**Open Intervention** link (when applicable)	**single-click**
13	Review and/or respond to an open intervention (when applicable)	Use procedure in Section 18.5.2
14	Reprocess a distribution request that has failed, been cancelled, or been shipped (when applicable)	Use procedure in Section 18.5.3.3
15	Edit ftp push parameters for a particular distribution request (when applicable)	Use procedure in Section 18.5.3.4
16	View operator alerts (when applicable)	Use procedure in Section 18.5.4
17	**FtpPush Monitor** link (to view the **Staging Distribution Requests** page) (when applicable)	**single-click**
18	**Staging Requests** link (to view the **Staging Distribution Requests** page) (when applicable)	**single-click**
19	Either **Request Management** or the **FtpPush Monitor** link (to view the **FtpPush Distribution Requests** page) (when applicable)	**single-click**

Table 18.5-6. Monitor/Control Distribution Request Information on the OM GUI - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
20	**FtpPush Distribution Requests** link (to view the **FtpPush Distribution Requests** page) (when applicable)	**single-click**
21	Troubleshoot **OM GUI** failure (when applicable)	Use applicable procedure(s) in Section 18.6
22	Repeat Steps 4 through 21 (as necessary)	
23	**Log Out** link (when applicable)	**single-click**
24	**OK** button (to complete logging out) (when applicable)	**single-click**

18.5.3.1 Filter Data Displayed on the Distribution Requests Pages

The **Change Filter** buttons in the **Options** area of the **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page provide the Distribution Technician (whether full-capability or limited capability operator) with a means of filtering data displayed on the screen.

Table 18.5-7 presents (in a condensed format) the steps required to filter data displayed on the **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: By default, distribution requests are filtered by "creation time" within the last 24 hours, all statuses, and all media types. However, changes made to the filter settings tend to persist, even from one session to another. To restore the default filtering criteria **single-click** on the **Apply Defaults** button in the filter pop-up window.

NOTE: The session ID provides a means of tracking which GUI pages are accessed and what filter options are used during a particular session. Such data is especially important when several operators are using the OM GUI in the same mode at the same time. For example, an individual operator's previously selected filter options can be retrieved from the session data so the filter options do not have to be reentered every time the same type of search is performed.

1 **Single-click** on the **Change Filter** button in the **Options** area of the **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page.

- A **Distribution Requests Filters** pop-up window is displayed.

- The Distribution Requests Filters pop-up window contains fields for changing various filters.
  - The **Distribution Requests Filters**, **Staging Distribution Requests Filters**, and **FtpPush Distribution Requests Filters** pop-up windows are similar except the **FtpPush Distribution Requests Filters** pop-up window has no **Media Type Select List** window (because all requests on the page are ftp push requests).

NOTE: The pop-up window may not open enough to display all of the features of the filters. If the three buttons (i.e., **Set Defaults**, **Apply Defaults**, and **Close Window**) at the bottom of the window are not visible, **single-click** and hold on one of the bottom corners of the window and pull down with the mouse to expand the window and reveal the buttons.

2 If the distribution request(s) associated with a particular Individual Filter only should be displayed on the **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page, in the corresponding text box enter:

<Order ID>

<Request ID>

<E-Mail>

<First Name>

<Last Name>

- The following text boxes are available for Individual Filters: **Order ID, Request ID, E-Mail, First Name, Last Name.**
- If a value is entered in one of the text boxes in the preceding list, the other four text boxes are disabled.
  - To clear a field in which a value has been entered and enable all fields, either delete the entered value or **single-click** on the **Clear** button.

3 If a value was entered in one of the text boxes in Step 2, **single-click** on the **Apply Individual Filters** button.

- The **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page refreshes.
- Only requests that meet the specified filter criteria appear in the **Listing** table.

NOTE: Whenever Combined Filters are applied, Status and Media Type options must be specified (except for the **FtpPush Distribution Requests** page filter, which has no Media Type filter because ftp push is assumed).

4 If the relevant distribution request(s) has (have) creation time outside the range indicated in the **Start Month**, **Start Day**, **Start Year**, **Start Hour**, **Start Minute**, **End Month**, **End Day**, **End Year**, **End Hour**, and **End Minute** boxes, as necessary **single-click** on each date/time option button to display a drop-down list of month, day, year, hour, or minute options then **single-click** on the desired selection.

- Selected number is displayed in each date/time box.
- Filtering by "Creation Time" may be combined with other filtering options (refer to Steps 5 through 8).

5 If distribution requests with particular status(es) only should be displayed on the **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page, **single-click** on the desired status(es) in the **Status Select List** window to highlight or unhighlight them (while holding down either the **Shift** key or the **Ctrl** key if highlighting multiple selections).

- To quickly deselect all highlighted statuses, **single-click** on the **Status Select – None** button (clears all selections so individual statuses can be selected).
- To quickly select all statuses, **single-click** on the **Status Select – All** button (all items are highlighted).
- The following choices are available: **Abort, Aborted, Active, Bundling, Canceled, Cancelled, Expired, Not Found, Operator Intervention, Partitioned, Pending, Prep for Distribution, Queued, SDSRV Staging, Shipped, Subset Staging, Staging, Subsetting, Terminated, Transferring, Waiting for Shipment**.
- Selected status(es) is (are) highlighted in the **Status Select List** window; undesired status(es) is (are) not highlighted in the **Status Select List** window.
- To quickly deselect all highlighted statuses, **single-click** on the **Status Select – None** button.
- To quickly select all statuses, **single-click** on the **Status Select – All** button.
- A vertical scroll bar allows viewing data that are not readily visible in the **Status Select List** window.
- Filtering by "Status" may be combined with other filtering options (refer to Steps 4 through 8).
  - Whenever Combined Filters are applied, Status and Media Type options must be specified (except for the **FtpPush Distribution Requests** page filter, which requires no Media Type because ftp push is assumed).
- If all filtering criteria have been selected, go to Step 8.

6 If distribution requests for particular type(s) of medium only should be displayed on the **Distribution Requests** page or the **Staging Distribution Requests** page, **single-click** on the desired medium/media in the **Media Type Select List** window to highlight or unhighlight them (while holding down either the **Shift** key or the **Ctrl** key if highlighting multiple selections).

- To quickly deselect all highlighted media, **single-click** on the **Media Type Select – None** button (clears all selections so individual media can be selected).

- To quickly select all media, **single-click** on the **Media Type Select – All** button (all items are highlighted).
- The following Media Type choices are available: **FtpPull, FtpPush, CDROM, DLT, DVD, 8MM, scp** [secure copy distribution].
- Selected medium/media is (are) highlighted in the **Media Type Select List** window; undesired medium/media is (are) not highlighted in the **Media Type Select List** window.
- A vertical scroll bar allows viewing data that are not readily visible in the **Media Type Select List** window.
- Filtering by "Media Type" may be combined with other filtering options (refer to Steps 4 through 8).
  - Whenever Combined Filters are applied, Status and Media Type options must be specified (except for the **FtpPush Distribution Requests** page filter, which requires no Media Type because ftp push is assumed).
- If all filtering criteria have been selected, go to Step 8.

7 If the distribution requests associated with a particular User ID only should be displayed on the **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page, in the **User ID** text box enter:

<User ID>

8 If value(s) was (were) specified for any of the filters in Steps 4 through 7, **single-click** on the **Apply Combined Filters** button.
- The **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page refreshes.
- Only requests that meet the specified filter criteria appear in the **Listing** table.

9 When all relevant filtering criteria have been applied (as described in Steps 2 through 8), **single-click** on the **Close Window** button.
- The **Distribution Requests Filters** window is dismissed.

10 Return to the procedure that recommended filtering data displayed on the **Distribution Requests** pages.

Table 18.5-7. Filter Data Displayed on the Distribution Requests Pages - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	**Change Filter** button	**single-click**
2	**<Order ID>** (**Order ID** text box) (if applicable)	**enter text**
3	**<Request ID>** (**Request ID** text box) (if applicable)	**enter text**

Table 18.5-7. Filter Data Displayed on the Distribution Requests Pages - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
4	**<E-Mail>** (**E-Mail** text box) (if applicable)	**enter text**
5	**<First Name>** (**First Name** text box) (if applicable)	**enter text**
6	**<Last Name>** (**Last Name** text box) (if applicable)	**enter text**
7	**Apply Individual Filters** button (if applicable)	**single-click**
8	**<date/time values>** (**Start Month**, **Start Day**, **Start Year**, **Start Hour**, **Start Minute**, **End Month**, **End Day**, **End Year**, **End Hour**, and **End Minute** option buttons) (as applicable)	**single-click**
9	**<status>** (**Status Select List** option list) (if applicable)	**single-click**
10	**<medium>** (**Media Type Select List** option list) (if applicable)	**single-click**
11	**<User ID>** (**User ID** text box) (if applicable)	**enter text**
12	**Apply Combined Filters** button (if applicable)	**single-click**
13	**Close Window** button (when applicable)	**single-click**
14	Return to the **Monitor/Control Distribution Request Information on the OM GUI** procedure	Use procedure in Section 18.5.3

18.5.3.2 Change the Priority of a Distribution Request Using the OM GUI

The **Change the Priority of a Distribution Request Using the OM GUI** procedure is performed as part of the **Monitor/Control Distribution Request Information on the OM GUI** procedure (Section 18.5.3). The priority of an S4 (Synergy IV) request can be changed while granules for the request still need to be staged or pushed.

The **Priority** column in the **Distribution Requests** table of the **Distribution Requests** page, **Staging Distribution Requests** page, the **FtpPush Distribution Requests** page or the **Destination Details** page on the **OM GUI** allows the full-capability operator to change the priority of distribution requests that are in a state that allows the priority to be changed. The **Priority** line of the **Distribution Request Details** page provides the full-capability operator with an alternative means of changing the priority of the particular distribution request.

The limited-capability operator is not allowed to change the priority of distribution requests.

Table 18.5-8 presents (in a condensed format) the steps required to change the priority of a distribution request using the OM GUI. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If the list of distribution requests shown in the **Distribution Requests** table needs to be filtered to include the distribution request for which the priority is to be changed, filter the data.

- For detailed instructions refer to the **Filter Data Displayed on the Distribution Requests Pages** procedure (Section 18.5.3.1).

2 **Single-click** on the option button in the **Priority** column of the row associated with the request to display a menu of priorities then **single-click** on the desired selection.

- Selected priority is displayed in the **Priority** column.
- An alternative is to bring up the relevant **Distribution Request Detail** page (by clicking on the Request ID in the **Distribution Requests** table), **single-click** on the option button on the **Priority** line to display a menu of priorities, then **single-click** on the desired selection.

3 To implement the priority change **single-click** on the **Apply** button adjacent to the text box displaying the desired priority.

- "Priority changed" is displayed in the **Priority** column for the row associated with the request.

4 Repeat the preceding steps as necessary to change the priority of additional distribution requests.

5 Return to the **Monitor/Control Distribution Request Information on the OM GUI** procedure (Section 18.5.3).

Table 18.5-8. Change the Priority of a Distribution Request Using the OM GUI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Filter the data displayed in the **Distribution Requests** table (if necessary)	Use procedure in Section 18.5.3.1
2	**<priority>** (option button in the **Priority** column of the row associated with the request)	**single-click**
3	**Apply** button (adjacent to the text box displaying the desired priority)	**single-click**
4	Repeat the preceding steps (to change the priority of additional distribution requests) (as necessary)	**enter text**
5	Return to the **Monitor/Control Distribution Request Information on the OM GUI** procedure	Use procedure in Section 18.5.3

18.5.3.3 Suspend, Resume, Cancel, or Resubmit a Distribution Request Using the OM GUI

The **Action** column in the **Distribution Requests** table of the **Distribution Requests** page, **Staging Distribution Requests** page, the **FtpPush Distribution Requests** page, or the **Destination Details** page on the **OM GUI** provides the full-capability operator with a means of taking the following kinds of actions with respect to distribution requests:

- Suspend a request that still needs to be staged or while granules for the request still need to be pushed.
- Resume a request that was suspended by the OM GUI operator or while the processing of new requests by the OMS is suspended.
- Cancel a request that is not in a terminal state and while granules for the request still need to be staged or while granules for the request still need to be pushed.
- Resubmit a request in a terminal state (e.g., aborted, cancelled, terminated, or shipped).

The **Distribution Request Details** page provides the full-capability operator with an alternative means of taking the preceding kinds of actions with respect to a particular distribution request.

The limited-capability operator is not allowed to suspend, resume, cancel, or resubmit distribution requests.

Table 18.5-9 presents (in a condensed format) the steps required to suspend, resume, cancel, or resubmit a distribution request using the OM GUI. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: If a distribution request is to be canceled or if a completed distribution request is to be resubmitted, proper justification and authorization are necessary. Canceling or resubmitting requests may require coordination between the Distribution Technician and a User Services representative, especially when changing the type of distribution medium, specifying a replacement granule, or taking any other action that would require the approval of the person who submitted the order. In fact, depending on the circumstances and DAAC policy it may be appropriate for User Services to assume responsibility for canceling or resubmitting some requests.

1 If the list of distribution requests shown in the **Distribution Requests** table needs to be filtered to include the distribution request on which action is to be taken, filter the data.

- For detailed instructions refer to the **Filter Data Displayed on the Distribution Requests Pages** procedure (Section 18.5.3.1).

2 To suspend, resume, cancel, or resubmit a distribution request, **single-click** on the appropriate button in the **Action** column for the row associated with the request.

- The following choices are among those that may be available (buttons are available only for actions that are appropriate for the request):
  - **Suspend** [request that still needs to be staged or granules for the request still need to be pushed]; a **Suspend Request** dialogue box is displayed.
  - **Resume** [request that was suspended by the OM GUI operator or while the processing of new requests by the OMS is suspended]; a **Resume Request Confirmation** dialogue box is displayed.
  - **Cancel** [request that is not in a terminal state and while granules for the request still need to be staged or while granules for the request still need to be pushed]; a **Cancel Request Confirmation** dialogue box is displayed.
  - **Resubmit** [request in a terminal state (e.g., aborted, cancelled, terminated, or shipped)]; a **Resubmit Request Confirmation** dialogue box is displayed.
- An alternative is to bring up the relevant **Distribution Request Detail** page (by clicking on the Request ID in the **Distribution Requests** table), then clicking on the appropriate button.

3 If a **Suspend Request** dialogue box is displayed, **single-click** on the **OK** button:

- The dialogue box is dismissed.
- The initial page [i.e., the **Distribution Requests** page, **Staging Distribution Requests** page, the **FtpPush Distribution Requests** page, or the **Destination Details** page] is displayed.
- "Suspended" is displayed in the **Action** column for the row associated with the request.

NOTE: The **Resume Request Confirmation** dialogue box or **Cancel Request Confirmation** dialogue box may not open enough to display the buttons at the bottom of the window. If the **Apply…Action** and **Cancel…Action** buttons at the bottom of the window are not visible, **single-click** and hold on one of the bottom corners of the window and pull down with the mouse to expand the window and reveal the buttons.

4 If a **Resume Request Confirmation** dialogue box or **Cancel Request Confirmation** dialogue box is displayed, in the **Worker** text box enter:

<name>

- or -

<user ID>

- **<name>** or **<user ID>** refers to either the name or user ID of the person making the request to resume or cancel the request.

5 If a **Resume Request Confirmation** dialogue box or **Cancel Request Confirmation** dialogue box is displayed, in the **Reason for Action** text box enter:

<reason>

- **<reason>** is the justification for resuming or canceling the request.

6 If a **Resume Request Confirmation** dialogue box or **Cancel Request Confirmation** dialogue box is displayed, **single-click** on the appropriate button from the following selections:

- **Apply** [**"Resume"** or **"Cancel"**] **Action** - to apply the specified action and dismiss the dialogue box.
  - The action (i.e., "resume" or "cancel" as applicable) is applied.
  - The dialogue box is dismissed.
  - The initial page [i.e., the **Distribution Requests** page, **Staging Distribution Requests** page, the **FtpPush Distribution Requests** page, or the **Destination Details** page] is displayed.
  - The action (i.e., "Resumed" or "Canceled") is displayed in the **Action** column for the row associated with the request.
- **Cancel** [**"Resume"** or **"Cancel"**] **Action** - to dismiss the dialogue box without applying the specified action.
  - The dialogue box is dismissed.
  - The initial page [i.e., the **Distribution Requests** page, **Staging Distribution Requests** page, the **FtpPush Distribution Requests** page, or the **Destination Details** page] is displayed.

7 If a **Resubmit Request Confirmation** dialogue box is displayed, first **single-click** on the appropriate button from the following selections:

- **OK** - to create an open intervention and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **Open Intervention Detail** (**Intervention for Request *x***) page is displayed.
- **Cancel** - to dismiss the dialogue box without resubmitting the request.
  - The dialogue box is dismissed.
  - The initial page [i.e., the **Distribution Requests** page, **Staging Distribution Requests** page, the **FtpPush Distribution Requests** page, or the **Destination Details** page] is displayed.

8 If a **Resubmit Request Confirmation** dialogue box was displayed and **OK** was clicked in response to the **Resubmit Request Confirmation** dialogue box, respond to the open intervention.

- For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).

9 Repeat the preceding steps as necessary to act on additional distribution requests.

10 Return to the **Monitor/Control Distribution Request Information on the OM GUI** procedure (Section 18.5.3).

Table 18.5-9. Suspend, Resume, Cancel, or Resubmit a Distribution Request Using the OM GUI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Filter the data displayed in the **Distribution Requests** table (if necessary)	Use procedure in Section 18.5.3.1
2	**Suspend** button (in the **Action** column for the row associated with the request) (if applicable)	**single-click**
3	**Resume** button (in the **Action** column for the row associated with the request) (if applicable)	**single-click**
4	**Cancel** button (in the **Action** column for the row associated with the request) (if applicable)	**single-click**
5	**Resubmit** button (in the **Action** column for the row associated with the request) (if applicable)	**single-click**
6	**OK** button (in **Suspend Request** dialogue box) (if applicable)	**enter text**
7	**<name>** (or **<user ID>**) (in the **Worker** text box) (if applicable)	**enter text**
8	**<reason>** (in the **Reason for Action** text box) (if applicable)	**enter text**
9	**Apply Action** (in **Resume Request Confirmation** dialogue box or **Cancel Request Confirmation** dialogue box) (if applicable)	**enter text**
10	**OK** (in **Resubmit Request Confirmation** dialogue box) (if applicable)	**enter text**
11	Respond to the open intervention (if applicable)	Use procedure in Section 18.5.2.2
12	Repeat the preceding steps (to act on additional distribution requests) (as necessary)	**enter text**
13	Return to the **Monitor/Control Distribution Request Information on the OM GUI** procedure	Use procedure in Section 18.5.3

18.5.3.4 Edit FtpPush Parameters

The **Edit FtpPush Parameters** procedure is performed as part of other procedures [e.g., **Respond to an Open Intervention** (Section 18.5.2.2) or **Monitor/Control Distribution Request Information on the OM GUI** (Section 18.5.3)].

The **Edit FtpPush Parameters** button on the **Distribution Request Details** page provides the full-capability operator with a means of editing the FtpPush parameters for a particular

distribution request. The limited-capability operator is not allowed to edit FtpPush parameters for distribution requests using the **OM GUI**.

Table 18.5-10 presents (in a condensed format) the steps required to edit FtpPush parameters. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If the list of distribution requests shown in the **Distribution Requests** table needs to be filtered to include the distribution request for which the FtpPush parameters are to be changed, filter the data.

- For detailed instructions refer to the **Filter Data Displayed on the Distribution Requests Pages** procedure (Section 18.5.3.1).

2 If the **Edit FtpPush Parameters** page is not already open, **single-click** on the applicable Request ID in the **Distribution Requests** table.

- The corresponding **Distribution Request Detail** page is displayed.

3 If the **Edit FtpPush Parameters** page is not already open, **single-click** on the **Edit FtpPush Parameters** button on the **Distribution Request Detail** page.

- The **Edit FtpPush Parameters** page is displayed.

4 In the corresponding text boxes (as necessary) enter:

<Ftp node>

<Ftp Address>

<Password>

<Confirm Password>

<User String>

<Destination Directory>

- **<Ftp node>** is the destination host name.
- **<Ftp Address>** is the FTP user name.
- **<User String>** is a message to be sent to the user.
- **<Destination Directory>** is the full path to the target directory on the host.

5 **Single-click** on the appropriate button from the following selections:

- **Change This Request** - to apply the specified FtpPush parameters to the current request only and dismiss the **Edit FtpPush Parameters** page.
  - The **Edit FtpPush Parameters** page is dismissed.

- **Change All Requests** - to apply the specified FtpPush parameters to all requests for the listed destination and dismiss the **Edit FtpPush Parameters** page.
  – The **Edit FtpPush Parameters** page is dismissed.
- **Cancel** - to cancel all changes to FtpPush parameters and dismiss the **Edit FtpPush Parameters** page.
  – The **Edit FtpPush Parameters** page is dismissed.

6 Return to the procedure that recommended editing the FtpPush parameters.

Table 18.5-10. Edit FtpPush Parameters - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Filter the data displayed in the **Distribution Requests** table (if necessary)	Use procedure in Section 18.5.3.1
2	**<Request ID>** (in the **Distribution Requests** table) (if necessary)	**single-click**
3	**Edit FtpPush Parameters** button (on the **Distribution Request Detail** page) (if necessary)	**single-click**
4	**<Ftp node>** (in the **Ftp node** text box) (if applicable)	**enter text**
5	**<Ftp Address>** (in the **Ftp Address** text box) (if applicable)	**enter text**
6	**<Password>** (in the **Password** text box) (if applicable)	**enter text**
7	**<Password>** (in the **Confirm Password** text box) (if applicable)	**enter text**
8	**<User String>** (in the **User String** text box) (if applicable)	**enter text**
9	**<Destination Directory>** (in the **Destination Directory** text box) (if applicable)	**enter text**
10	**Change This Request** button or **Change All Requests** button (as applicable)	**single-click**
11	Return to the procedure that recommended editing the FtpPush parameters.	

18.5.4 View Operator Alerts on the OM GUI

"Alerts" are non-fatal warnings or errors that do not cause an Operator Intervention, but do provide valuable information concerning distribution resources. An example might be a suspended FTP Push destination.

The **Operator Alerts** page provides the Distribution Technician (whether full-capability or limited capability operator) with a means of viewing operator alerts. The following types of operator alerts can be displayed:

- FTP Push Destination Alerts (problems with the destination not sufficient to cause an Operator Intervention).
- Data Pool File System Alerts.
- Archive Server Alerts.
- ECS Server Alerts (warnings about SDSRV or PDS errors).

Table 18.5-11 presents (in a condensed format) the steps required to view operator alerts on the OM GUI. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).
- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **Request Management** link in the navigation frame of the **OM GUI**.
- The **Request Management** menu is expanded.

3 **Single-click** on the **Operator Alerts** link in the navigation frame of the **OM GUI**.
- The **Operator Alerts** page is displayed.
- The **Listing** table has the following columns:
  - **Alert Info**.
  - **Explanation.**
  - **Creation Time.**

4 Observe information displayed in the **Listing** table of the **Operator Alerts** page.
- The following types of operator alerts are displayed on the **Operator Alerts** page:
  - **FTP Push Destination Alerts** (problems with the destination not sufficient to cause an Operator Intervention).
  - **Data Pool File System Alerts.**
  - **Archive Server Alerts.**
  - **ECS Server Alerts** (warnings about SDSRV or PDS errors).
- By default all types of alerts are displayed in the **Listing** table on the **Operator Alerts** page.
- To filter the **Listing** table in a different way, **single-click** on the option button associated with the **Display _____ alerts** box then **single-click** on the desired selection.
  - The following choices are available: **ALL, Archive, Data Pool, FTP Push, PDS, SDSRV.**
  - The selected filter is displayed in the **Display _____ alerts** box.

  - The **Operator Alerts** page is refreshed and the filter is applied, so the specified type(s) of alert(s) is (are) displayed in the **Listing** table on the **Operator Alerts** page.
- The list of alerts is sorted in ascending order by date (i.e., the oldest Alerts appear first).
- The **Show _____ rows at a time** window provides a means of selecting the maximum number of rows of data to be displayed at a time.
  - For example, if **Show _____ rows at a time** is being displayed, selecting **50** from the option button would result in the display of a page of data containing up to 50 rows of data.
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.
- If **AutoRefresh** is **ON**, the **Operator Alerts** page refreshes automatically as often as specified in the **Refresh screen every *x* minutes** window.
  - If a different refresh option is preferred, perform the **Set Refresh Options on OM GUI Pages** procedure (Section 18.5.2.1).
- To manually update (refresh) the data on the screen, **single-click** on the Netscape browser **Reload** button.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.
- The **first**, **previous**, **next**, and **last** links provide means of displaying additional pages of data (if applicable).
- The following message is displayed at the bottom of the **Operator Alerts** page: **Note: All operator alerts are also sent as email to: *address***.
  - To change the e-mail address for receiving operator alerts, **single-click** on the **Change** link adjacent to the message and change the value of the **Global Configured Email** parameter (for details refer to the procedure for **Checking/Modifying OMS Server or Database Parameters**).

5 To view detailed information concerning the cause and/or requests affected by the alert, **single-click** on the corresponding **details** link in the **Alert Info** column.
- A page describing the alert is displayed.

NOTE: Unlike an operator intervention, no specific action can be taken to close an alert. The Order Manager Server automatically clears each alert when the condition(s) that caused it go to a satisfactory state.

6 Repeat Steps 4 and 5 as necessary to view operator alerts.

7 Return to the procedure for **Monitoring/Controlling Distribution Request Information on the OM GUI** (if applicable).

8 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

9 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Table 18.5-11. View Operator Alerts on the OM GUI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**Request Management** link	**single-click**
3	**Operator Alerts** link	**single-click**
4	Observe information displayed in the **Listing** table of the **Operator Alerts** page	**read text**
5	**details** link in the **Alert Info** column (if applicable)	**single-click**
6	Repeat Steps 4 and 5 (as necessary)	
7	Return to the **Monitor/Control Distribution Request Information on the OM GUI** procedure (if applicable)	Use procedure in Section 18.5.3
8	**Log Out** link (when applicable)	**single-click**
9	**OK** button (to complete logging out) (when applicable)	**single-click**

18.5.5 View Completed Intervention Information on the OM GUI

The **Completed Interventions** page provides the Distribution Technician (whether full-capability or limited capability operator) with a means of viewing completed intervention information on the OM GUI.

Table 18.5-12 presents (in a condensed format) the steps required to view completed intervention information on the OM GUI. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).

- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **Request Management** link in the navigation frame of the **OM GUI**.

- The **Request Management** menu is expanded.

3 **Single-click** on the **Completed Interventions** link in the navigation frame of the **OM GUI**.

- The **Completed Interventions** page is displayed.
- The **Listing** table has the following columns:
  - **Order Id.**
  - **Request Id.**
  - **User ID.**
  - **Size (MB).**
  - **Media.**
  - **Worked by.**
  - **Created.**
  - **Completed.**
  - **Disposition.**

4 Observe information displayed in the **Listing** table of the **Completed Interventions** page.

- By default, data concerning up to 50 requests with completed interventions (and "completion time" within the last 24 hours) are displayed at a time.
  - It is important to check the filter settings when opening the **Completed Interventions** page because changes to the filter settings tend to persist, even from one session to another.
  - To filter the **Completed Interventions Listing** in a different way, perform the **Filter Data Displayed on the Completed Interventions Page** procedure (Section 18.5.5.1).
- **Single-clicking** on a link in the column header row of the table causes table contents to be sorted on that column.
  - For example, clicking on the **Worked By** link causes the table to be organized alphabetically by the IDs of the people who worked on the interventions in the list.
- **Single-clicking** on a specific Order ID or Request ID brings up a screen containing more detailed data concerning that particular order or request.
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.

- To manually update (refresh) the data on the screen, **single-click** on the Netscape browser **Reload** button.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.
- The **first**, **previous**, **next**, and **last** links provide means of displaying additional pages of data.

5 If the desired request with completed intervention is not listed in the **Listing** table of the **Completed Interventions** page, filter the data.

- For detailed instructions refer to the **Filter Data Displayed on the Completed Interventions Page** procedure (Section 18.5.5.1).

6 If request filtering was necessary, return to Step 4.

7 **Single-click** on a specific Request ID in the **Requests with Completed Interventions** table of the **Request Management** page **Requests with Completed Interventions** screen to bring up a screen containing more detailed data concerning that particular request.

- For example, clicking on Request ID **0400011698** brings up a **Completed Intervention Detail** (i.e., **Completed Intervention for Request 0400011698**) page.

8 Observe information displayed on the **Completed Intervention Detail** (**Completed Intervention for Request *x***) page.

- The following items are displayed on the **Completed Intervention Detail** page.
  - **User Id.**
  - **email.**
  - **Priority.**
  - **Order ID.**
  - **Size (est, MB).**
  - **Media.**
  - **Worked by.**
  - **Created.**
  - **Acknowledged.**
  - **Disposition.**
  - **Explanation.**
  - **Granule List: DBID, ESDT, Granule Type, Size (MB), Status, Explanation.**
  - **OPERATOR NOTES.**
- Use the Netscape browser **Back** button to redisplay the **Completed Interventions** page.

9 Return to Step 4 to view information concerning another completed intervention (if applicable).

10 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

11 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Table 18.5-12. View Completed Intervention Information on the OM GUI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**Request Management** link	**single-click**
3	**Completed Interventions** link	**single-click**
4	Observe information displayed in the **Listing** table of the **Completed Interventions** page	**read text**
5	Filter requests displayed in the **Listing** table of the **Completed Interventions** page (if necessary)	Use procedure in Section 18.5.5.1
6	Return to Step 4 (if applicable)	
7	**<Request ID>** (**Requests with Completed Interventions** table)	**single-click**
8	Observe information displayed on the **Completed Intervention Detail** (**Completed Intervention for Request *x***) page	**read text**
9	Return to Step 4 to view information concerning another intervention (if applicable)	
10	**Log Out** link (when applicable)	**single-click**
11	**OK** button (to complete logging out) (when applicable)	**single-click**

18.5.5.1 Filter Data Displayed on the Requests with Completed Interventions Screen

Features at the top of the **Completed Interventions** page provide the Distribution Technician (whether full-capability or limited capability operator) with a means of filtering data displayed on the **Completed Interventions** page. By default, data concerning up to 50 requests with completed interventions (and "completion time" within the last 24 hours) are displayed at a time.

Table 18.5-13 presents (in a condensed format) the steps required to filter data displayed on the **Requests with Completed Interventions** screen. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: The session ID provides a means of tracking which GUI pages are accessed and what filter options are used during a particular session. Such data is especially important when several operators are using the OM GUI in the same mode at the same time. For example, an individual operator's previously selected filter options can be retrieved from the session data so the filter options do not have to be reentered every time the same type of search is performed.

NOTE: By default, completed interventions are filtered by "completion time," providing access to all interventions completed within the last 24 hours. However, changes made to the filter settings tend to persist, even from one session to another. To restore the default filtering criteria **single-click** on the **Reset** button in the **Filter** area near the top of the **Completed Interventions** page.

NOTE: Completed interventions are not permanently available on the **Completed Interventions** page. If filtering does not cause data concerning the desired intervention(s) to be displayed, check the **Delete Complete Interventions After** parameter to see if the window of opportunity has already closed. (For detailed instructions refer to the procedure for **Checking/Modifying OM Configuration Parameters**.)

1 If the filters on the **Completed Interventions** page are not visible, **single-click** on the **Filter** link.

- The filters are displayed on the **Completed Interventions** page.

2 If interventions "worked by" a particular individual only should be displayed on the **Completed Interventions** page, **single-click** on the **Worked by:** option button to display a menu of individuals then **single-click** on the desired selection.

- In addition to a list of individuals, the **Worked by:** option button has an **ALL** option.
- Selected individual (or "**ALL"**) is displayed on the **Worked by:** option button.
- Filtering by the individual who worked on interventions may be combined with filtering by "Completion Time" (refer to Step 3).
- If "Completion Time" filtering criteria are not going to be selected, go to Step 4.

3 If the intervention(s) to be viewed has (have) "Completion Time" outside the range indicated in the **Start Month**, **Start Day**, **Start Year**, **Start Hour**, **Start Minute**, **End Month**, **End Day**, **End Year**, **End Hour**, and **End Minute** boxes, as necessary **single-click** on each date/time option button to display a drop-down list of month, day, year, hour, or minute options then **single-click** on the desired selection.

- Selected number is displayed in each date/time box.

4 When all relevant filtering criteria have been selected (as described in Steps 2 and 3), **single-click** on the **Apply** button.

- The **Completed Interventions** page refreshes.
- Only requests that meet the specified filter criteria appear in the **Listing** table on the **Completed Interventions** page.

5 Return to the **View Completed Intervention Information on the OM GUI** procedure (Section 18.5.5).

Table 18.5-13. Filter Data Displayed on the Requests with Completed Interventions Screen - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Filter** link	**single-click**
2	**<individual>** (**Worked by:** option button) (if applicable)	**single-click**
3	**<date/time values>** (**Start Month**, **Start Day**, **Start Year**, **Start Hour**, and **Start Minute** option buttons) (as applicable)	**single-click**
4	**<date/time values>** (**End Month**, **End Day**, **End Year**, **End Hour**, and **End Minute** option buttons) (as applicable)	**single-click**
5	**Apply** button	**single-click**
6	Return to the **View Completed Intervention Information on the OM GUI** procedure	Use procedure in Section 18.5.5

18.5.6 View and Respond to Suspended FTP Push Distribution Destinations

The **Suspended** Destinations page provides the full-capability operator with a means of viewing suspended FTP push destinations and a means of taking the following kinds of actions with respect to suspended FTP push destinations:

- Resume suspended destinations.
- Suspend active destinations.
- View details of active or suspended destinations.

The limited-capability operator can use the **Suspended Destinations** page to view suspended FTP push destinations but is not allowed to take action on (e.g., resume) suspended FTP push destinations.

Table 18.5-14 presents (in a condensed format) the steps required to view and respond to suspended ftp push distribution destinations. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).
- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **FtpPush Monitor** link in the navigation frame of the **OM GUI**.
- The **FtpPush Monitor** menu is expanded.

3 If the **Suspended Destinations** page is not already being displayed, **single-click** on the **Suspended Destinations** link in the navigation frame of the **OM GUI**.
- The **Suspended Destinations** page is displayed.

4 Observe information displayed on the **Suspended Destinations** page.
- The **Suspended Destinations** page has the following columns:
  - **Destination Name**.
  - **Host Name.**
  - **Time of Suspension** (if applicable, date and time when the destination was suspended).
  - **Granules Queued Count** (number of granules that are queued).
  - **Granules Queued Size MB** (total size in MB of all granules that are queued).
  - **Suspend Reason** (why the destination was suspended).
  - **Resume** (buttons for resuming the destination).
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.
- To manually update (refresh) the data on the screen, **single-click** on the Netscape browser **Reload** button.
- The Netscape browser **Edit** → **Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

5 To resume a suspended destination, **single-click** on the **Resume** button in the destination's **Resume** column.
- The destination is resumed.
- The **Suspended Destinations** page refreshes and the resumed destination is no longer on the list of suspended destinations.

6 To start the process of either suspending an active destination or viewing destination details (for an active or suspended destination), in one of the corresponding text fields enter:

<Destination Name>

- or -

<FTP Node>

7 To suspend an active destination (after making the appropriate entry in either the **Destination Name** text field or the **FTP Node** text field), **single-click** on the **Suspend** button in the **Active Destination** area.

- The destination is suspended.
- The **Suspended Destinations** page refreshes and the suspended destination is included in the list of suspended destinations.
- An alternative is to suspend the active destination from the **Destination Details** page – go to Step 8.

8 To view ftp push requests associated with either an active destination or a suspended destination (after making the appropriate entry in either the **Destination Name** text field or the **FTP Node** text field), **single-click** on the **View Requests** button in the **Active Destination** area.

- The **Destination Details** page is displayed.
  - The following types of data are displayed in the **FTP Push Operations that Caused the Suspension** area (if applicable): Request Id, ECS Granule Id, DPL Granule Id, Last Update, Size (MB), Explanation.
  - The following types of data are displayed in the FTP Push Requests That Are Not In A Terminal State area: Ord Typ/Prc Mod, OrderID, RequestID, Request Size (MB), Gran Cnt/FtpPush Complete, Priority, Request Status, Resource Class, ESDT, UserID, Resub Cnt, Created, Last Update, Actions.
- To respond to conditions indicated on the **Destination Details** page refer to the **View and Respond to Destination Details on the OM GUI** procedure (Section 18.5.6.1).

9 Repeat Steps 4 through 8 as necessary to view and respond to information concerning suspended FtpPush distribution destinations on the **OM GUI**.

10 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message “Are you sure you want to log out? This will close your browser.” is displayed.

11 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Table 18.5-14. View and Respond to Suspended FTP Push Distribution Destinations - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**FtpPush Monitor** link (if necessary)	**single-click**
3	**Suspended Destinations** link (if necessary)	**single-click**
4	Observe information displayed on the **Suspended Destinations** page	**read text**
5	**Resume** button (if resuming a suspended destination)	**single-click**
6	**<Destination Name>** or **<FTP Node>** (if suspending an active destination or viewing destination details for an active or suspended destination)	**enter text**
7	**Suspend** button (in the **Active Destination** area) (if suspending an active destination)	**single-click**
8	**View Requests** button (in the **Active Destination** area) (if applicable)	**single-click**
9	Repeat Steps 4 through 8 (as necessary)	
10	**Log Out** link (when applicable)	**single-click**
11	**OK** button (to complete logging out) (when applicable)	**single-click**

18.5.6.1 View and Respond to Destination Details on the OM GUI

The **Destination Details** page (e.g., **Ftp Push Monitor – Active Destination Name OTHER**) provides the full-capability operator with a means of viewing detailed data concerning a particular destination and a means of taking the following kinds of actions:

- Suspend an active destination.
- Resume a suspended destination.
- Change the priority of a distribution request associated with the FtpPush destination while granules for the request still need to be staged or while granules for the request still need to be pushed.

- Suspend a request that still needs to be staged or while granules for the request still need to be pushed.
- Resume a request that was suspended by the **OM GUI** operator or while the processing of new requests by the OMS is suspended.
- Cancel a request that is not in a terminal state and while granules for the request still need to be staged or while granules for the request still need to be pushed.

The limited-capability operator can use the **Destinations Detail** page to view detailed data concerning a particular destination but is not allowed to take action on ftp push requests for any destination.

Table 18.5-15 presents (in a condensed format) the steps required to view and respond to destination details on the **OM GUI**. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).
- The **Order Manager GUI** is displayed.

2 If the **Destination Details** page is not already being displayed, perform the **View and Respond to Suspended FTP Push Distribution Destinations** procedure (Section 18.5.6) to display the page.
- The **Destination Details** page is displayed.

3 Observe information displayed on the **Active Destinations Detail** page.
- The following types of data are displayed in the **FTP Push Operations that Caused the Suspension** area (if applicable):
  - **Request Id.**
  - **ECS Granule Id.**
  - **DPL Granule Id.**
  - **Last Update.**
  - **Size (MB).**
  - **Explanation.**
- The following types of data are displayed in the **FTP Push Requests That Are Not In A Terminal State** area:
  - **Ord Typ/Prc Mod.**
  - **OrderID.**
  - **RequestID.**
  - **Request Size (MB).**
  - **Gran Cnt/FtpPush Complete.**
  - **Priority.**
  - **Request Status.**

  - **Resource Class.**
  - **ESDT.**
  - **UserID.**
  - **Resub Cnt.**
  - **Created.**
  - **Last Update.**
  - **Actions.**
- **Single-clicking** on a link in the column header row of the table causes table contents to be sorted on that column.
  - For example, clicking on the **RequestID** link causes the table to be organized in numerical order by Request ID.
- **Single-clicking** on a specific Order ID or Request ID brings up a screen containing more detailed data concerning that particular order or request.
- **Single-clicking** on a specific User ID brings up a screen that shows user profile information for that user.
- The **Show _____ rows at a time** window provides a means of selecting the maximum number of rows of data to be displayed at a time.
  - For example, if **Show _____ rows at a time** is being displayed, selecting **50** from the option button would result in the display of a page of data containing up to 50 rows of data.
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.
- If **AutoRefresh** is **ON**, the **Distribution Requests** page refreshes automatically as often as specified in the **Refresh screen every *x* minutes** window.
  - If a different refresh option is preferred, perform the **Set Refresh Options on OM GUI Pages** procedure (Section 18.5.2.1).
- To manually update (refresh) the data on the screen, **single-click** on the **Reload Page** link.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.
- The **first**, **previous**, **next**, and **last** links provide means of displaying additional pages of data.
- The **Go directly to row…** window provides a means of displaying a page of data starting with a particular row of the table.
  - For example, if **Go directly to row _____ of 415 rows** is being displayed, typing **315** in the window and clicking on the **ok** button would result in the display of a page of data containing rows 315 through 364.

4 To suspend an active destination (if applicable) **single-click** on the **Suspend Destination** button.

- The destination is suspended.
- The **Suspend Destination** button becomes a **Resume Destination** button.

5 To resume a suspended destination, **single-click** on the **Resume Destination** button.
- The destination is resumed.
- The **Resume Destination** button becomes a **Suspend Destination** button.

6 To change the priority of a particular distribution request (when applicable), perform the **Change the Priority of a Distribution Request Using the OM GUI** procedure (Section 18.5.3.2).

7 To either suspend a particular distribution request or resume processing of a suspended request (when applicable), perform the **Suspend, Resume, Cancel, or Resubmit a Distribution Request Using the OM GUI** procedure (Section 18.5.3.3).

8 To cancel a particular distribution request (when applicable), perform the **Suspend, Resume, Cancel, or Resubmit a Distribution Request Using the OM GUI** procedure (Section 18.5.3.3).

9 To review and/or respond to an open intervention for a particular distribution request first **single-click** on the **Open Intervention** link in the **Request Status** column for the request in the **Listing** table.

10 To review and/or respond to an open intervention go to the procedure **View Open Intervention Information on the OM GUI** procedure (Section 18.5.2).

11 Repeat Steps 3 through 10 as necessary to view and respond to destination details.

12 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.
- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

13 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:
- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Table 18.5-15. View and Respond to Destination Details on the OM GUI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	Perform the **View and Respond to Suspended FTP Push Distribution Destinations** procedure (if necessary)	Use procedure in Section 18.5.6
3	Observe information displayed on the **Active Destinations Detail** page	**read text**
4	**Suspend Destination** button (if suspending an active destination)	**single-click**
5	**Resume Destination** button (if resuming a suspended destination)	**single-click**
6	Change the priority of a distribution request (when applicable)	Use procedure in Section 18.5.3.2
7	Suspend a distribution request or resume processing of a suspended request (when applicable)	Use procedure in Section 18.5.3.3
8	Cancel a distribution request (when applicable)	Use procedure in Section 18.5.3.3
9	**Open Intervention** link (when applicable)	**single-click**
10	Review and/or respond to an open intervention (when applicable)	Use procedure in Section 18.5.2
11	Repeat Steps 3 through 10 (as necessary)	**enter text**
12	**Log Out** link (when applicable)	**single-click**
13	**OK** button (to complete logging out) (when applicable)	**single-click**

18.5.7 Check/Modify OM Queue Status

The **OM Queue Status** page provides the full-capability operator with a means of checking and modifying OM queue status. The **OM Queue Status** page allows the full-capability operator to monitor and change the current status of request queues for all media as well as the request queues for PDS, SDSRV, e-mail, and staging. (The limited-capability operator can monitor but cannot change the status of queues.) In addition, the **OM Queue Status** page allows both full-capability and limited-capability operators to determine the status ("up" or "down") of the Order Manager Server.

Table 18.5-16 presents (in a condensed format) the steps required to check and modify OM Queue status. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).

- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **OM Status Pages** link in the navigation frame of the **OM GUI**.

- The **OM Status Pages** menu is expanded.

3 If the **OM Queue Status** page is not already being displayed, **single-click** on the **OM Queue Status** link in the navigation frame of the **OM GUI**.

- The **OM Queue Status** page is displayed.
- If the **OM Queue Status** page is not displayed within a minute, it is likely that the OM Server is not operating properly.
  - For example, it may have stalled while trying to process requests that it could not process.
- The **OM Queue Status** page has the following columns:
  - **ALL QUEUES.**
  - **PDS.**
  - **SDSRV.**
  - **EMAIL.**
  - **STAGING.**

4 Observe information displayed in the **Current Request Processing States** table.

- Directly under the **Current Request Processing States** header, one of the following statements is displayed:
  - **The OM Server is: UP** [indicates that the OM Server is currently operating].
  - **The OM Server is: DOWN** [indicates that the OM Server is not currently operating].

NOTE: The status of the OM Server is determined by a program called "Sweeper," which makes an attempt to connect with the OM Server. If a connection cannot be made, it is assumed that the OM Server is down. If Sweeper was not installed correctly, either the error screen is displayed with a Sweeper error message or the Sweeper error message is displayed right on the **OM Queue Status** page itself. This does not necessarily mean that the OM Server is down.

- The column header line of the **Current Request Processing States** table includes codes that indicate the status of the request queues for the following four groupings:
  - **PDS.**
  - **SDSRV.**
  - **EMAIL.**
  - **STAGING.**

- The code in parentheses next to each entity indicates the corresponding request queue status, specifically:
  - **A** – Active.
  - **S** – Suspended by server.
  - **O** – Suspended by operator.
  - Although rare, if a state is simply not available from the Order Manager Database, it is listed as **ERROR: State not available**.
- The left-hand column of the **Current Request Processing States** table includes codes that indicate the status of the request queues for the following types of queues:
  - **FtpPull.**
  - **FtpPush.**
  - **CDROM.**
  - **DLT.**
  - **DVD.**
  - **8MM.**
  - **scp** [secure copy distribution].
  - **Archive servers.**
- Option buttons are available for full-capability operators to change the request queue states.
- If **AutoRefresh** is **ON**, the **OM Queue Status** page refreshes automatically as often as specified in the **Refresh screen every *x* minutes** window.
  - If a different refresh option is preferred, perform the **Set Refresh Options on OM GUI Pages** procedure (Section 18.5.2.1).
- To manually update (refresh) the data on the screen, **single-click** on the Netscape browser **Reload** button.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

5 If it is necessary to either activate or suspend all request queues (and there is authorization to do so), **single-click** on the **ALL QUEUES Change State** option button to display a menu of states then **single-click** on the desired selection.

- The following states are available:
  - **Activate All.**
  - **Suspend All.**

6 If it is necessary to change the state of a group of request queues or an individual request queue (and there is authorization to do so), **single-click** on the corresponding **Change State** option button to display a menu of states then **single-click** on the desired selection.

- The following states are available:
  - **Activate** [or **Activate All**].
  - **Suspend** [or **Suspend All**].

7 Repeat Step 6 as necessary to indicate a change of state for additional request queues.

8 If applicable, when the appropriate settings have been made on the **Change State** option buttons, **single-click** on the appropriate button from the following selections:

- **Apply** - to apply the modification of states to the queues.
  - An **OM Queue Status Change Confirmation** dialogue box is displayed.
- **Reset** - to change the states displayed on all request queue **Change State** option buttons back to **Change State**.
  - The states displayed on all request queue **Change State** option buttons change back to **Change State**.

9 If an **OM Queue Status Change Confirmation** dialogue box is displayed, **single-click** on the appropriate button from the following selections:

- **OK** - to apply the modification of states to the queues and dismiss the dialogue box.
  - The specified modification(s) of state(s) is (are) applied to the queue(s).
  - The dialogue box is dismissed.
  - The **OM Queue Status** page refreshes and displays the modified state(s).
- **Cancel** - to cancel the specified modification(s) of state(s) to the queue(s) and dismiss the dialogue box.
  - No changes are made to the states of the queues.
  - The dialogue box is dismissed.

10 To check staging status perform the **Check Staging Status** procedure (Section 18.5.8).

11 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message “Are you sure you want to log out? This will close your browser.” is displayed.

12 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Table 18.5-16. Check OM Queue Status - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**OM Status Pages** link	**single-click**
3	**OM Queue Status** link	**single-click**
4	Observe information displayed in the **Current Request Processing States** table	**read text**
5	**<state>** (**ALL QUEUES Change State** option button) (if applicable)	**single-click**
6	**<state>** (**Change State** option button) (if applicable)	**single-click**
7	Repeat Step 6 (if applicable)	
8	**Apply** button (if applicable)	**single-click**
9	**OK** button (if applicable)	
10	Check staging status (if applicable)	Use procedure in Section 18.5.8
11	**Log Out** link (when applicable)	**single-click**
12	**OK** button (to complete logging out) (when applicable)	**single-click**

18.5.7.1 Check Staging Status

The two **Staging Status** pages provide the Distribution Technician (whether full-capability or limited capability operator) with means of checking staging status in either of two ways; i.e., by….

- **Media Type.**
- **FTP Push Destination.**

The **Staging Status** pages allow the Distribution Technician to monitor the number of granules and data volume currently in staging. The staging information is arranged in the following four categories:

- Granules waiting for staging.
- Granules in staging.
- Granules that have been staged but not yet shipped.
- Granules that have been staged and shipped.

In addition to the preceding granule information, the data low and high water marks are shown on the **Staging Status** pages:

- **DHWM** – The Data High Water Mark is the maximum volume of data in staging or already staged but not yet shipped. If the data volume and number of requests is above the DHWM, it is assumed the media devices have plenty of work to keep them busy.

- **DLWM** – The Data Low Water Mark is the minimum volume of data that should be in staging or already staged but not yet shipped. If the data volume is below the DLWM, the media devices may soon become idle.

In general it is a good idea to keep the amount of work that is in staging or staged just below the high water mark of each output queue. This achieves a good balance among ftp output connections (or in the case of physical media, their various output devices).

The data high water marks can be exceeded in the interest of optimizing the use of the archive drives or to get high priority work through distribution quickly. For example, an idle archive would be dispatched even if it means exceeding the DHWM.

The DLWM is used mainly for dispatching high-priority work. Since it is a good idea to keep the queues at their high water marks, generally the output queues should be fairly full. As a result, a high-priority request might have to wait until some of the data gets worked off and the queue falls below that high water mark. But high-priority requests should go through at a fast pace.

Table 18.5-17 presents (in a condensed format) the steps required to check staging status. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).
- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **OM Status Pages** link in the navigation frame of the **OM GUI**.
- The **OM Status Pages** menu is expanded.

3 If the **OM Queue Status** page is not already being displayed, **single-click** on the **OM Queue Status** link in the navigation frame of the **OM GUI**.
- The **OM Queue Status** page is displayed.

4 To display staging status by media type, **single-click** on the **Media Type** link in the navigation frame of the **OM GUI**.
- The **Staging Status by Media Type** page is displayed.

5 To display staging status by FtpPush destination, **single-click** on the **FTP Push Destination** link in the navigation frame of the **OM GUI**.
- The **Staging Status by FTP Push Destination** page is displayed.

6 Observe information displayed in the table on the **Staging Status** page.

- Each **Staging Status** page (i.e., **by Media Type** or **by FTP Push Destination**) has the following columns:
  - [Media or FtpPush destinations (as applicable)]**.**
  - **DHWM.**
  - **DLWM.**
  - **Waiting for Staging** [granule count and volume in MB].
  - **In Staging** [granule count and volume in MB].
  - **Staged and NOT Shipped** [granule count and volume in MB].
  - **Staged, Shipped & In DPL** [granule count and volume in MB].
- Whenever there is little question mark next to a button or text field (e.g., **System Totals**), clicking on the question mark opens a dialogue box that describes the item.
  - The "HelpOnDemand" feature provides context-sensitive help for each page, particularly for controls or parameters that may not be entirely self-descriptive.
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.
- If **AutoRefresh** is **ON**, the **Staging Status by Media Type** or **Staging Status by FTP Push Destination** page refreshes automatically as often as specified in the **Refresh screen every *x* minutes** window.
  - If a different refresh option is preferred, perform the **Set Refresh Options on OM GUI Pages** procedure (Section 18.5.2.1).
- To manually update (refresh) the data on the screen, **single-click** on the **Reload** link.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

7 Repeat Steps 4 through 6 as necessary to view staging status.

8 To check or modify OM queue status return to the **Check/Modify OM Queue Status** procedure (Section 18.5.7).

9 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

10 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.

– The **OM GUI** is displayed.

Table 18.5-17. Check Staging Status - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**OM Status Pages** link	**single-click**
3	**OM Queue Status** link	**single-click**
4	**Media Type** link (if applicable)	**single-click**
5	**FTP Push Destination** link (if applicable)	**single-click**
6	Observe information displayed in the table on the **Staging Status** page	**read text**
7	Repeat Steps 4 through 6 as necessary	
8	Check/modify OM queue status (if necessary)	Use procedure in Section 18.5.7
9	**Log Out** link (when applicable)	**single-click**
10	**OK** button (to complete logging out) (when applicable)	**single-click**

18.5.8 Check/Modify Aging Parameters

The **OM Configuration** pages provide the full-capability operator with a means of checking and modifying (if necessary) the values assigned to the following types of OM configuration parameters:

- **Aging Parameters.**
- **OM Server Parameters.**
- **OM Database Parameters.**
- **Media Parameters.**
- **FTP Push Policy.**

The limited-capability operator can use the **OM Configuration** page to view the values assigned to OM configuration parameters but is not allowed to change any parameters.

The **Aging Parameters** page provides the full-capability operator with a means of checking and modifying aging parameters. The limited-capability operator can check but is not allowed to change any aging parameters.

Aging parameters affect how Distribution Requests are aged over time. The following two aging parameters are configurable for each ECS Priority Level (i.e., XPRESS, VHIGH, HIGH, NORMAL, or LOW):

- **Age Step.**
- **Maximum Priority.**

Age Step is the aging rate by which the effective priority of a request increases for every hour it has been waiting. The range is 0-100, including decimal fractions. If the parameter is set to zero

(0), waiting requests never increase in priority. For example, if the Age Step is set to 5.5 and a request with an initial priority of 100 waits 10 hours to be pushed, the request increases in priority by a factor of 5.5 every hour until it has been delivered:

Hour 0: priority = 100
Hour 1: priority = 105.5
Hour 2: priority = 111
.
.
.
Hour 10: priority = 155

Maximum Priority is the maximum priority a request can attain through the aging process. For example, if Maximum Priority were set to 130, once the request had reached a priority of 130, it would not go any higher [e.g., if a Maximum Priority of 130 were applied to the previous example, at Hour 6 the priority would become 130 and at every hour thereafter (if not delivered) it would still be 130].

Table 18.5-18 presents (in a condensed format) the steps required to check/modify aging parameters. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).
- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **OM Configuration** link in the navigation frame of the **OM GUI**.
- The **OM Configuration** menu is expanded.

3 If the **Aging Parameters** page is not already being displayed, **single-click** on the **Aging Parameters** link in the navigation frame of the **OM GUI**.
- The **Aging Parameters** page is displayed.

4 Observe information displayed in the table on the **Aging Parameters** page.
- The table is divided into sections for the various distribution request priorities (e.g., XPRESS) and within each section there are rows that indicate the identity and value of each of the following parameters associated with the priority:
  - **Age Step.**
  - **Maximum Priority.**
  - **Starting Priority (cannot be changed).**

- Whenever there is little question mark next to a button or text field (e.g., **Age Step**), **single-clicking** on the question mark opens a dialogue box that describes the item.
  - The "HelpOnDemand" feature provides context-sensitive help for each page, particularly for controls or parameters that may not be entirely self-descriptive.
- The Netscape browser **Reload** button can be used to update the data on (refresh) the screen.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

5 If aging parameter value(s) is (are) to be modified (and there is authorization to do so), in the text entry box(es) for the relevant parameter(s) enter.

<value>

6 If aging parameter value(s) is (are) to be modified, **single-click** on the appropriate button from the following selections:

- **Apply** - to apply the new value(s) to the parameter(s).
  - The new value(s) is (are) applied to the parameter(s).
- **Reset** - to clear the new value(s) from the text entry box(es) without changing the current value(s).
  - The original value(s) is (are) retained.

7 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

8 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Table 18.5-18. Check/Modify Aging Parameters - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**OM Configuration** link	**single-click**
3	**Aging Parameters** link	**single-click**
4	Observe information displayed in the table on the **Aging Parameters** page	**read text**
5	**<value>** [in the text entry box(es) for the relevant parameter(s)] (if applicable)	**enter text**
6	**Apply** button (to implement changes) (if applicable)	**read text**
7	**Log Out** link (when applicable)	**single-click**
8	**OK** button (to complete logging out) (when applicable)	**single-click**

18.5.9 Check/Modify OMS Server or Database Parameters

The **OMS Server and Database Configuration** page provides the full-capability operator with a means of checking and modifying OMS server or database parameters. The limited-capability operator can check but is not allowed to change any OMS server or database parameters.

OMS server and database parameters affect how the OM server and database run. The parameters are dynamically loaded from the OMS database into the configuration pages on the **OM GUI**. If a configuration parameter is added to the database, it is subsequently displayed on the **OM GUI** when the applicable configuration page is requested. If a configuration parameter is deleted from the database, it is no longer displayed on the **OM GUI**. Consequently, the configuration parameters displayed on the **OM GUI** are variable.

Table 18.5-19 presents (in a condensed format) the steps required to check/modify OMS server or database parameters. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).

- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **OM Configuration** link in the navigation frame of the **OM GUI**.

- The **OM Configuration** menu is expanded.

3 If the **OMS Server and Database Configuration** page is not already being displayed, **single-click** on the **Server/Database** link in the navigation frame of the **OM GUI**.

- The **OMS Server and Database Configuration** page is displayed.

NOTE: OMS configuration parameters are dynamically loaded from the OMS database into the configuration pages on the **OM GUI**. If a configuration parameter is added to the database, it is subsequently displayed on the **OM GUI** when the applicable configuration page is requested. If a configuration parameter is deleted from the database, it is no longer displayed on the **OM GUI**. Consequently, the configuration parameters displayed on the **OM GUI** are variable.

4 Observe information displayed in the table on the **OMS Server and Database Configuration** page.

- The table on the **OMS Server and Database Configuration** page has the following columns:
  - **Parameter.**
  - **Description.**
  - **Value.**
- The rows in the table indicate the current values and descriptions of the following types of parameters:
  - **Num of Allowed PDS Submissions.**
  - **Num of Allowed SDSRV Submissions.**
  - **Num of Allowed Email Submissions.**
  - **Child Process Time Limit.**
  - **Delete Complete Interventions After.**
  - **Delete Complete Actions After.**
  - **Max Request Granules.**
  - **Max Subset Granules.**
  - **Max Action Retries.**
  - **Idle Sleep Time.**
  - **Action Retry Wait (Seconds).**
  - **Num of Allowed Validations.**
  - **Action Check Interval.**
  - **Cleanup Check Interval.**
  - **Suspend Check Interval.**
  - **Max Concurrent Requests Processed.**
  - **Ddist Retention Value.**
  - **Max Concurrent Ftppush Ops.**
  - **Max Ftppush Duration.**
  - **Max Ftppush Retries.**
  - **Retry Interval.**

- **Min Moderate Request.**
- **Min Expensive Request.**
- **Cheap Rhwm.**
- **Moderate Rhwm.**
- **Expensive Rhwm.**
- **Max Failed Push Ops.**
- **Pull Gran Dpl Time.**
- **Pull Gran Dpl Ret Pri.**
- **Min Pri to Preempt.**
- **Ret Time Failed Order.**
- **Max Failure Archive.**
- **Failed Order Ret Time.**
- **Max Orphan Req Age.**
- **Cleanup Orphan Req Age.**
- **Cleanup Orphan Req Period.**
- **Billing Agency Email Address.**
- **Billing Agency Name.**
- **Notify User for Partition Request.**
- **Global Staging Status.**
- **Global Configured Email.**
- **Delay Partition.**

- The Netscape browser **Reload** button can be used to update the data on (refresh) the screen.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

5 If server or database parameter value(s) is (are) to be modified (and there is authorization to do so), in the text entry box(es) for the relevant parameter(s) enter.

<value>

NOTE: Server parameters cannot be set to 0 (zero).

6 If server or database parameter value(s) is (are) to be modified, **single-click** on the appropriate button from the following selections:

- **Apply** - to apply the new value(s) to the parameter(s).
  - The new value(s) is (are) applied to the parameter(s).
  - The **OMS Server and Database Configuration** page refreshes and displays the modified value(s).
- **Reset** - to clear the new value(s) from the text entry box(es) without changing the current value(s).
  - The original value(s) is (are) retained.

7 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.
- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

8 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:
- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Table 18.5-19. Check/Modify OMS Server or Database Parameters - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**OM Configuration** link	**single-click**
3	**Server/Database** link	**single-click**
4	Observe information displayed in the table on the **OMS Server and Database Configuration** page.	**read text**
5	**<value>** [in the text entry box(es) for the relevant parameter(s)] (if applicable)	**enter text**
6	**Apply** button (to implement changes) (if applicable)	**read text**
7	**Log Out** link (when applicable)	**single-click**
8	**OK** button (to complete logging out) (when applicable)	**single-click**

18.5.10 Check/Modify Media Parameters

The **Media Configuration** page provides the full-capability operator with a means of checking and modifying media parameters. The limited-capability operator can check but is not allowed to change any media parameters.

Media parameters are specific to each kind of distribution medium and affect such things as limit checking against standard media capacity limits (e.g., minimum request size and maximum request size) and the partitioning of requests (e.g., partition size). The parameters are dynamically loaded from the OMS database into the configuration pages on the OM GUI. If a configuration parameter is added to the database, it is subsequently displayed on the OM GUI

when the applicable configuration page is requested. If a configuration parameter is deleted from the database, it is no longer displayed on the OM GUI. Consequently, the configuration parameters displayed on the OM GUI are variable.

Table 18.5-20 presents (in a condensed format) the steps required to check/modify media parameters. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).
- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **OM Configuration** link in the navigation frame of the **OM GUI**.
- The **OM Configuration** menu is expanded.

3 If the **Media Configuration** page is not already being displayed, **single-click** on the **Media** link in the navigation frame of the **OM GUI**.
- The **Media Configuration** page is displayed.

NOTE: OMS configuration parameters are dynamically loaded from the OMS database into the configuration pages on the **OM GUI**. If a configuration parameter is added to the database, it is subsequently displayed on the **OM GUI** when the applicable configuration page is requested. If a configuration parameter is deleted from the database, it is no longer displayed on the **OM GUI**. Consequently, the configuration parameters displayed on the **OM GUI** are variable.

4 Observe information displayed in the table on the **Media Configuration** page.
- The **Media Configuration** table has the following columns:
  - **Parameter.**
  - **Current Value.**
  - **Change to…**
- The rows in the table indicate the current values assigned to the following types of parameters for each type of distribution medium:
  - **MediaCapacity (GB).**
  - **MinRequestSize (GB).**
  - **MaxRequestSize (GB).**
  - **PartitionSizeLimit (GB).**
  - **MinBundleSize (GB).**
  - **PartitionGranuleLimit.**

- Each of the preceding parameters applies to each of the following distribution media:
  - **FtpPull.**
  - **FtpPush.**
  - **CDROM.**
  - **DLT.**
  - **DVD.**
  - **8MM.**
  - **scp.**
- The Netscape browser **Reload** button can be used to update the data on (refresh) the screen.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

5 If media parameter value(s) is (are) to be modified (and there is authorization to do so), in the text entry box(es) for the relevant parameter(s) enter.

<value>

- **MediaCapacity (GB)** should initially be set to the maximum capacity (in gigabytes) for the type of medium, but later should be adjusted to a lower or higher value depending on whether or not data compression is used.
- **MinRequestSize (GB)** is the minimum number of gigabytes that can be requested for the type of medium.
- **MaxRequestSize (GB)** should be the maximum total number of gigabytes that can be requested for that type of medium, regardless of whether or not it can be partitioned.
- **PartitionSizeLimit (GB)** should be the size (in GB) at which point partitioning of a request can occur.
- **MinBundleSize (GB)** is the minimum number of gigabytes in a bundle for the type of medium.
- **PartitionGranuleLimit** is the maximum number of granules that may be partitioned for the type of medium.
- **RHWM -** The Request High Water Mark is the desired maximum number of requests that may be in the Staging state, or that have completed Staging but are not yet in a terminal state (e.g., Shipped).
- **DHWM** – The Data High Water Mark is the maximum volume (in MB) of data in staging or already staged but not yet shipped. If the data volume and number of requests is above the DHWM, it is assumed the media devices have plenty of work to keep them busy.
- **RLWM -** The Request Low Water Mark.
- **DLWM** – The Data Low Water Mark is the minimum volume (in MB) of data that should be in staging or already staged but not yet shipped. If the data volume is below the DLWM, the media devices may soon become idle.

6 If media parameter value(s) is (are) to be modified, **single-click** on the appropriate button from the following selections:

- **Apply** - to apply the new value(s) to the parameter(s).
  - A **"Remember Values" Confirmation** dialogue box is displayed.
- **Reset** - to clear the new value(s) from the text entry box(es) and reinsert the current value(s).
  - The values displayed in the text entry boxes return to the current values.

7 If a **"Remember Values" Confirmation** dialogue box is displayed, **single-click** on the appropriate button from the following selections:

- **Yes**.
- **Never for this site**.
- **No**.

8 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

9 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Table 18.5-20. Check/Modify Media Parameters - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**OM Configuration** link	**single-click**
3	**Media** link	**single-click**
4	Observe information displayed in the table on the **Media Configuration** page	**read text**
5	**<value>** [in the text entry box(es) for the relevant parameter(s)] (if applicable)	**enter text**
6	**Apply** button (to implement changes) (if applicable)	**read text**

Table 18.5-20. Check/Modify Media Parameters - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
7	**Yes** button, **Never for this site** button, or **No** button (as applicable)	**single-click**
8	**Log Out** link (when applicable)	**single-click**
9	**OK** button (to complete logging out) (when applicable)	**single-click**

18.5.11 Check/Modify FTP Push Policy Configuration

The **FTP Push Policy Configuration** page provides the full-capability operator with a means of defining and configuring the fine-tuning parameters of FtpPush destinations. The limited-capability operator can check but is not allowed to change the fine-tuning parameters of FtpPush destinations.

Configuration parameters on the **FTP Push Policy Configuration** page are grouped in the following three areas:

- **Global Settings for All Destinations.**
- **Settings for Non-Configured Destinations.**
- **Frequently Used Destinations.**

All FtpPush destinations belong to either the Frequently Used group, or the Non-Configured (general) group. All FtpPush destinations not specifically defined as **Frequently Used Destinations** are considered non-configured and use the parameters in the **Settings for Non-Configured Destinations** area. All new destinations use the **Settings for Non-Configured Destinations** as their default values until other values are specifically assigned.

Global Settings for All Destinations are parameters that apply to all destinations regardless of their individual settings. Global settings apply to both frequently used and non-configured destinations.

Table 18.5-21 presents (in a condensed format) the steps required to check/modify ftp push policy configuration. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).

- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **OM Configuration** link in the navigation frame of the **OM GUI**.

- The **OM Configuration** menu is expanded.

3 If the **FTP Push Policy Configuration** page is not already being displayed, **single-click** on the **FTP Push Policy** link in the navigation frame of the **OM GUI**.

- The **FTP Push Policy Configuration** page is displayed.

4 Observe information displayed in the table on the **FTP Push Policy Configuration** page.

- Configuration parameters on the **FTP Push Policy Configuration** page are grouped in the following three areas:
  - **Global Settings for All Destinations.**
  - **Settings for Non-Configured Destinations.**
  - **Frequently Used Destinations.**
- The **Global Settings for All Destinations** area has the following types of parameters:
  - **Max Operations.**
  - **Max. FTP Failures.**
- The **Settings for Non-Configured Destinations** area has the following types of parameters:
  - **RHWM** [Request High Water Mark].
  - **DHWM** [Data High Water Mark].
  - **DLWM** [Data Low Water Mark].
  - **Time Out.**
  - **Min. Throughput.**
  - **Max. Operations.**
  - **Retry Interval.**
- The **Frequently Used Destinations** area has information in the following columns:
  - **Destination Name (Alias).**
  - **Del** ["delete" boxes – select box to mark corresponding destination for deletion].
  - **Host Address.**
  - **Destination Directory.**
  - **Retry Mode.**
- **Single-clicking** on a specific Destination Name in the **Frequently Used Destinations** area brings up a screen containing more detailed data concerning that particular destination.
  - The **FTP Push Destination Details** page displays the following types of data concerning the destination in the **Destination Details** area: Name (Alias), Target Directory, Host/IP Address.
  - The **FTP Push Destination Details** page displays the following types of data concerning the destination in the **Settings for this Destination** area: Max. Operations, RHWM, DHWM, DLWM, Time Out. Min Throughput, Retry Interval, Retry Mode, Notes.

- **Single-clicking** on the Netscape browser **Back** button causes the **FTP Push Policy Configuration** page to be redisplayed.

- Whenever there is little question mark next to a button or text field (e.g., **Max Operations**), **single-clicking** on the question mark opens a dialogue box that describes the item.
  - The "HelpOnDemand" feature provides context-sensitive help for each page, particularly for controls or parameters that may not be entirely self-descriptive.
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.
- The Netscape browser **Reload** button can be used to update the data on (refresh) the screen.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

5 If parameter value(s) in either the **Global Settings for All Destinations** area or **Settings for Non-Configured Destinations** area is (are) to be modified (and there is authorization to do so), in the text entry box(es) for the relevant parameter(s) enter.

<value>

6 If parameter value(s) in either the **Global Settings for All Destinations** area or **Settings for Non-Configured Destinations** area is (are) to be modified, **single-click** on the appropriate button from the following selections:

- **Apply** - to apply the new value(s) to the parameter(s).
  - The new value(s) is (are) applied to the parameter(s).
- **Reset** - to clear the new value(s) from the text entry box(es) without changing the current value(s).
  - The new value(s) is (are) not applied to the parameter(s).

7 If the retry mode for a destination in the **Frequently Used Destinations** area should be changed (and there is authorization to do so), **single-click** on the option button (in the **Retry Mode** column) associated with the destination to display a menu of retry modes then **single-click** on the desired selection.

- The following choices are available:
  - **Automatic.**
  - **Manual.**
- Selected mode is displayed in the **Retry Mode** column.
- The retry mode for the destination is changed to the selected value.

8 To remove (delete) destination(s) from the **Frequently Used Destinations** area, first either **single-click** in the corresponding box(es) in the **Del** column or (if all destinations are to be removed) **single-click** in the **Select all** box near the bottom of the **Frequently Used Destinations** area.

- Selected destination(s) is (are) marked for deletion.
- Removing a destination from the **Frequently Used Destinations** area does not actually delete the destination; it moves the destination to the non-configured group and erases its individual configuration parameters.

9 To continue the process of removing (deleting) destination(s) from the **Frequently Used Destinations** area, **single-click** on the **Remove Selected Destinations** link near the bottom of the **FTP Push Policy Configuration** page.

- A destination deletion confirmation dialogue box is displayed with the message "Are you sure you want to delete the selected destinations?"

10 To complete the process of removing (deleting) destination(s) from the **Frequently Used Destinations** area, **single-click** on the appropriate button from the following selections:

- **OK** - to delete the selected destination(s) and dismiss the confirmation dialogue box.
  - The confirmation dialogue box is dismissed.
  - The **FTP Push Policy Configuration** page is refreshed to display the **Frequently Used Destinations** list without the deleted destination(s).
- **Cancel** – to dismiss the confirmation dialogue box without deleting the selected destination(s).
  - The confirmation dialogue box is dismissed.

11 To add a new destination to the **Frequently Used Destinations** area perform the **Add Destinations to the Frequently Used Destinations Area** procedure (Section 18.5.11.1).

- In order for a destination to be added to the list of Frequently-Used Destinations, the destination must already exist (i.e., must be referenced in at least one current order).

12 If parameter value(s) for destination(s) in the **Frequently Used Destinations** area is (are) to be modified (and there is authorization to do so), perform the **Modify Values Assigned to Parameters of Frequently Used Destinations** procedure (Section 18.5.11.2).

13 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

14 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Table 18.5-21. Check/Modify FTP Push Policy Configuration - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**OM Configuration** link	**single-click**
3	**FTP Push Policy** link	**single-click**
4	Observe information displayed in the table on the **FTP Push Policy Configuration** page	**read text**
5	**<value>** [in the text entry box(es) for the relevant parameter(s)] (if applicable)	**enter text**
6	**Apply** button (to implement changes) (if applicable)	**read text**
7	**<mode>** (**Retry Mode** option list) (if applicable)	**single-click**
8	**<destination(s)>** (in the **Del** column) or **Select all** box (if selecting destinations for deletion)	**single-click**
9	**Remove Selected Destinations** link (if selecting destinations for deletion)	**single-click**
10	**OK** [to delete the selected destination(s)] (if applicable)	**single-click**
11	Add destinations to the **Frequently Used Destinations** area (if applicable)	Use procedure in Section 18.5.11.1
12	Modify values assigned to parameters of frequently used destinations (if applicable)	Use procedure in Section 18.5.11.2
13	**Log Out** link (when applicable)	**single-click**
14	**OK** button (to complete logging out) (when applicable)	**single-click**

18.5.11.1 Add Destinations to the Frequently Used Destinations List

The **Add New Destination** page provides the full-capability operator with a means of adding destinations to the **Frequently Used Destinations** list on the **FTP Push Policy Configuration** page. The limited-capability operator is not allowed to add destinations to the **Frequently Used Destinations** list on the **FTP Push Policy Configuration** page.

A destination on the **Frequently Used Destinations** list is defined by the following three attributes:

- **Alias** – a descriptive name or handle by which the destination can be easily identified. Each alias must be unique.
- **Target Directory** - the directory on the remote host to which files will be pushed.
- **Host Address** - the remote host machine name or IP address.

Each destination on the **Frequently Used Destinations** list must have exclusive attributes and an exclusive alias. Each new destination is initially assigned the same parameter values as are used by the non-configured destinations.

Table 18.5-22 presents (in a condensed format) the steps required to add destinations to the **Frequently Used Destinations** list. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).

- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **OM Configuration** link in the navigation frame of the **OM GUI**.

- The **OM Configuration** menu is expanded.

3 If the **FTP Push Policy Configuration** page is not already being displayed, **single-click** on the **FTP Push Policy** link in the navigation frame of the **OM GUI**.

- The **FTP Push Policy Configuration** page is displayed.

4 **Single-click** on the **Add a Destination** button in the **Frequently Used Destinations** area of the **FTP Push Policy Configuration** page.

- The **Add New Destination** page is displayed.
  - In the **Destination Details** area of the **Add New Destination** page text boxes for entering the following types of destination attributes are displayed: **Name (Alias), Target Directory, Host/IP Address.**
  - In the Settings for this Destination area of the Add New Destination page current values for the following types of parameters are displayed: **Max. Operations, RHWM, DHWM, DLWM, Time Out, Min Throughput, Retry Interval, Retry Mode, Notes.**
- Each destination on the **Frequently Used Destinations** list must have exclusive attributes and an exclusive alias.
  - The attributes are entered in the **Destination Details** area of the **Add New Destination** page.

- Each new destination is initially assigned the same parameter values as are used by the non-configured destinations.
  - The parameter values are displayed in the **Settings for this Destination** area of the **Add New Destination** page.
- Whenever there is little question mark next to a button or text field (e.g., **Target Directory**), **single-clicking** on the question mark opens a dialogue box that describes the item.
  - The "HelpOnDemand" feature provides context-sensitive help for each page, particularly for controls or parameters that may not be entirely self-descriptive.

5 In the **Name (Alias)** text box enter:

<alias>

- **<alias>** is a unique descriptive name or handle by which the destination can be easily identified and by which the destination will be commonly known. For example:

  Norford University

6 In the **Target Directory** text box enter:

<path>

- **<path>** is the path to the directory on the remote host to which data are to be pushed by ftp. For example:

  /sci/data/push

7 In the **Host/IP Address** text box enter:

<address>

- **<address>** is the remote host machine name or IP address where data are to be pushed by ftp. For example:

  dsc@nu.edu

8 In the **Max. Operations** text box enter:

<#operations>

- **<#operations>** is the maximum number of concurrent FtpPush operations for a particular destination (exclusive of but subject to the global Max Operations). For example:

  2

9 In the **RHWM** text box enter:

<rhwm>

- **<rhwm>** is the Request High Water Mark, the desired maximum number of requests that may be in the Staging state, or that completed Staging but are not in a terminal state (e.g., Shipped). For example:

  10

10 In the **DHWM** text box enter:

<dhwm>

- **<dhwm>** is the Data High Water Mark, the maximum volume of data (in GB) in Staging or already staged but not yet pushed. For example:

  10

11 In the **DLWM** text box.

<dlwm>

- **<dlwm>** is the Data Low Water Mark, the minimum volume of data (in GB) in Staging or already staged but not yet pushed. For example:

  2

12 In the **Time Out** text box enter:

<minutes>

- **<minutes>** is an extra time allotment (in minutes) that is applied to the expected throughput, such that expected throughput equals minimum throughput plus timeout. For example:

  60

13 In the **Min. Throughput** text box enter:

<throughput>

- **<throughput>** is minimum data throughput (in MB/sec) for a particular destination. For example:

  100

14 In the **Retry Interval** text box enter:

<minutes>

- **<minutes>** is the waiting period (in minutes) before FtpPush operations for a suspended destination are automatically retried. For example:

  60

15 **Single-click** on the **Retry Mode** option button to display a menu of retry modes then **single-click** on the desired selection.

- The following choices are available:
  - **Automatic.**
  - **Manual.**
- Selected mode is displayed in the **Retry Mode** column.

16 If a note should be entered concerning the destination (e.g., the reason for adding the destination to the **Frequently Used Destinations** list), in the **Notes** text box enter:

<text>

17 **Single-click** on the appropriate button from the following selections:

- **Save** - to save the new frequently used destination and the values specified for its parameters.
  - A **"Remember Values" Confirmation** dialogue box is displayed.
- **Done** - to dismiss the **Add New Destination** page and display the **FTP Push Policy Configuration** page.
  - A **"Done" Confirmation** dialogue box is displayed.
- **Reset** - to clear the new value(s) from the text entry box(es) without changing the current value(s).
  - The new value(s) is (are) cleared from the text entry box(es) without changing the current value(s).

18 If a **"Remember Values" Confirmation** dialogue box is displayed, **single-click** on the appropriate button from the following selections:

- **Yes**.
  - The **"Remember Values" Confirmation** dialogue box is dismissed.
  - The **Add New Destination** page is displayed.
- **Never for this site**.
  - The **"Remember Values" Confirmation** dialogue box is dismissed.
  - The **Add New Destination** page is displayed.
- **No**.
  - The **"Remember Values" Confirmation** dialogue box is dismissed.
  - The **Add New Destination** page is displayed.

19 If a **"Done" Confirmation** dialogue box is displayed, **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the **"Done" Confirmation** dialogue box and the **Add New Destination** page and display the **FTP Push Policy Configuration** page.
  - The **"Done" Confirmation** dialogue box is dismissed.
  - The **Add New Destination** page is dismissed.
  - The **FTP Push Policy Configuration** page is displayed.
- **Cancel** - to dismiss the **"Done" Confirmation** dialogue box and return to the **Add New Destination** page.
  - The **"Done" Confirmation** dialogue box is dismissed.

20 If the **Add New Destination** page is still being displayed and no changes to the new destination are needed, **single-click** on the **Done** button.

- A **"Done" Confirmation** dialogue box is displayed.

21 If a **"Done" Confirmation** dialogue box is displayed, **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the **"Done" Confirmation** dialogue box and the **Add New Destination** page and display the **FTP Push Policy Configuration** page.
  - The **"Done" Confirmation** dialogue box is dismissed.
  - The **Add New Destination** page is dismissed.
  - The **FTP Push Policy Configuration** page is displayed.
- **Cancel** - to dismiss the **"Done" Confirmation** dialogue box and return to the **Add New Destination** page.
  - The **"Done" Confirmation** dialogue box is dismissed.

22 If changes to the new frequently used destination are needed, repeat Steps 5 through 21 as necessary.

23 Return to the **Check/Modify FTP Push Policy Configuration** procedure (Section 18.5.11).

Table 18.5-22. Add Destinations to the Frequently Used Destinations List - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**OM Configuration** link	**single-click**
3	**FTP Push Policy** link	**single-click**
4	**Add a Destination** button	**single-click**
5	**<alias>** (in the **Name (Alias)** text box) (if applicable)	**enter text**

Table 18.5-22. Add Destinations to the Frequently Used Destinations List - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
6	**<path>** (in the **Target Directory** text box) (if applicable)	**enter text**
7	**<address>** (in the **Host/IP Address** text box) (if applicable)	**enter text**
8	**<#operations>** (in the **Max. Operations** text box) (if applicable)	**enter text**
9	**<rhwm>** (in the **RHWM** text box) (if applicable)	**enter text**
10	**<dhwm>** (in the **DHWM** text box) (if applicable)	**enter text**
11	**<dlwm>** (in the **DLWM** text box) (if applicable)	**enter text**
12	**<minutes>** (in the **Time Out** text box) (if applicable)	**enter text**
13	**<throughput>** (in the **Min. Throughput** text box) (if applicable)	**enter text**
14	**<minutes>** (in the **Retry Interval** text box) (if applicable)	**enter text**
15	**<mode>** (**Retry Mode** option list) (if applicable)	**single-click**
16	**<text>** (in the **Notes** text box) (if applicable)	**enter text**
17	**Save** button	**single-click**
18	**Yes** button, **Never for this site** button, or **No** button (as applicable)	**single-click**
19	**OK** button (if applicable)	**single-click**
20	**Done** button (if applicable)	**single-click**
21	**OK** button (if applicable)	**single-click**
22	Repeat Steps 5 through 21 (as necessary)	
23	Return to the **Check/Modify FTP Push Policy Configuration** procedure	Use procedure in Section 18.5.11

18.5.11.2 Modify Values Assigned to Parameters of Frequently Used Destinations

The **FTP Push Destination Details** page provides the full-capability operator with a means of modifying the values assigned to parameters of frequently used FtpPush destinations (as listed in the **Frequently Used Destinations** area of the **FTP Push Policy Configuration** page). The limited-capability operator can check but is not allowed to change the values assigned to parameters of frequently used FtpPush destinations.

Table 18.5-23 presents (in a condensed format) the steps required to modify values assigned to parameters of **Frequently Used Destinations**. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).
- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **OM Configuration** link in the navigation frame of the **OM GUI**.
- The **OM Configuration** menu is expanded.

3 If the **FTP Push Policy Configuration** page is not already being displayed, **single-click** on the **FTP Push Policy** link in the navigation frame of the **OM GUI**.
- The **FTP Push Policy Configuration** page is displayed.

4 If the **FTP Push Destination Details** page for the relevant destination is not already being displayed, **single-click** on the specific Destination Name in the **Frequently Used Destinations** area.
- The **FTP Push Destination Details** page is displayed.

5 Observe information displayed on the **FTP Push Destination Details** page.
- In the **Destination Details** area of the **FTP Push Destination Details** page the following types of destination attributes are displayed:
  - **Name (Alias).**
  - **Target Directory.**
  - **Host/IP Address.**
- In the **Settings for this Destination** area of the **FTP Push Destination Details** page current values for the following types of parameters are displayed:
  - **Max. Operations.**
  - **RHWM.**
  - **DHWM.**
  - **DLWM.**

- **Time Out.**
- **Min Throughput.**
- **Retry Interval.**
- **Retry Mode.**
- **Notes.**

6 Perform Steps 7 through 20 as necessary to modify values that need to be changed.

7 In the **Name (Alias)** text box enter:

<alias>

- **<alias>** is a unique descriptive name or handle by which the destination can be easily identified and by which the destination will be commonly known. For example:

  Norford University

8 In the **Target Directory** text box enter:

<path>

- **<path>** is the path to the directory on the remote host to which data are to be pushed by ftp. For example:

  /sci/data/push

9 In the **Host/IP Address** text box enter:

<address>

- **<address>** is the remote host machine name or IP address where data are to be pushed by ftp. For example:

  dsc@nu.edu

10 In the **Max. Operations** text box enter:

<#operations>

- **<#operations>** is the maximum number of concurrent FtpPush operations for a particular destination (exclusive of but subject to the global Max Operations). For example:

  2

11 In the **RHWM** text box enter:

<rhwm>

- **<rhwm>** is the Request High Water Mark, the desired maximum number of requests that may be in the Staging state, or that completed Staging but are not in a terminal state (e.g., Shipped). For example:

  10

12 In the **DHWM** text box enter:

<dhwm>

- **<dhwm>** is the Data High Water Mark, the maximum volume of data (in GB) in Staging or already staged but not yet pushed. For example:

  10

13 In the **DLWM** text box.

<dlwm>

- **<dlwm>** is the Data Low Water Mark, the minimum volume of data (in GB) in Staging or already staged but not yet pushed. For example:

  2

14 In the **Time Out** text box enter:

<minutes>

- **<minutes>** is an extra time allotment (in minutes) that is applied to the expected throughput, such that expected throughput equals minimum throughput plus timeout. For example:

  60

15 In the **Min. Throughput** text box enter:

<throughput>

- **<throughput>** is minimum data throughput (in MB/sec) for a particular destination. For example:

  100

16 In the **Retry Interval** text box enter:

<minutes>

- **<minutes>** is the waiting period (in minutes) before FtpPush operations for a suspended destination are automatically retried. For example:

  60

17 **Single-click** on the **Retry Mode** option button to display a menu of retry modes then **single-click** on the desired selection.

- The following choices are available:
  - **Automatic.**
  - **Manual.**
- Selected mode is displayed in the **Retry Mode** column.

18 If a note should be entered concerning the destination (e.g., the reason for adding the destination to the **Frequently Used Destinations** list), in the **Notes** text box enter:

<text>

19 **Single-click** on the appropriate button from the following selections:

- **Save** - to save the new frequently used destination and the values specified for its parameters.
  - A **"Remember Values" Confirmation** dialogue box is displayed.
- **Done** - to dismiss the **Add New Destination** page and display the **FTP Push Policy Configuration** page.
  - A **"Done" Confirmation** dialogue box is displayed.
- **Reset** - to clear the new value(s) from the text entry box(es) without changing the current value(s).
  - The new value(s) is (are) cleared from the text entry box(es) without changing the current value(s).

20 If a **"Remember Values" Confirmation** dialogue box is displayed, **single-click** on the appropriate button from the following selections:

- **Yes**.
  - The **"Remember Values" Confirmation** dialogue box is dismissed.
  - The **Add New Destination** page is displayed.
- **Never for this site**.
  - The **"Remember Values" Confirmation** dialogue box is dismissed.
  - The **Add New Destination** page is displayed.
- **No**.
  - The **"Remember Values" Confirmation** dialogue box is dismissed.
  - The **Add New Destination** page is displayed.

21 If a **"Done" Confirmation** dialogue box is displayed, **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the **"Done" Confirmation** dialogue box and the **Add New Destination** page and display the **FTP Push Policy Configuration** page.
  - The **"Done" Confirmation** dialogue box is dismissed.
  - The **Add New Destination** page is dismissed.
  - The **FTP Push Policy Configuration** page is displayed.
- **Cancel** - to dismiss the **"Done" Confirmation** dialogue box and return to the **Add New Destination** page.
  - The **"Done" Confirmation** dialogue box is dismissed.

22 If the **FTP Push Destination Details** page is still being displayed and no changes to the new destination are needed, **single-click** on the **Done** button.

- A **"Done" Confirmation** dialogue box is displayed.

23 If a **"Done" Confirmation** dialogue box is displayed, **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the **"Done" Confirmation** dialogue box and the **Add New Destination** page and display the **FTP Push Policy Configuration** page.
  - The **"Done" Confirmation** dialogue box is dismissed.
  - The **Add New Destination** page is dismissed.
  - The **FTP Push Policy Configuration** page is displayed.
- **Cancel** - to dismiss the **"Done" Confirmation** dialogue box and return to the **Add New Destination** page.
  - The **"Done" Confirmation** dialogue box is dismissed.

24 If changes to the frequently used destination are needed, repeat Steps 7 through 23 as necessary.

25 Return to the **Check/Modify FTP Push Policy Configuration** procedure (Section 18.5.11).

Table 18.5-23. Modify Values Assigned to Parameters of Frequently Used Destinations - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**OM Configuration** link	**single-click**
3	**FTP Push Policy** link	**single-click**
4	**<Destination Name>** (in the **Frequently Used Destinations** area)	**single-click**
5	Observe information displayed on the **FTP Push Destination Details** page	**read text**

Table 18.5-23. Modify Values Assigned to Parameters of Frequently Used Destinations - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
6	**<alias>** (in the **Name (Alias)** text box) (if applicable)	**enter text**
7	**<path>** (in the **Target Directory** text box) (if applicable)	**enter text**
8	**<address>** (in the **Host/IP Address** text box) (if applicable)	**enter text**
9	**<#operations>** (in the **Max. Operations** text box) (if applicable)	**enter text**
10	**<rhwm>** (in the **RHWM** text box) (if applicable)	**enter text**
11	**<dhwm>** (in the **DHWM** text box) (if applicable)	**enter text**
12	**<dlwm>** (in the **DLWM** text box) (if applicable)	**enter text**
13	**<minutes>** (in the **Time Out** text box) (if applicable)	**enter text**
14	**<throughput>** (in the **Min. Throughput** text box) (if applicable)	**enter text**
15	**<minutes>** (in the **Retry Interval** text box) (if applicable)	**enter text**
16	**<mode>** (**Retry Mode** option list) (if applicable)	**single-click**
17	**<text>** (in the **Notes** text box) (if applicable)	**enter text**
18	**Save** button	**single-click**
19	**Yes** button, **Never for this site** button, or **No** button (as applicable)	**single-click**
20	**OK** button (if applicable)	**single-click**
21	**Done** button (if applicable)	**single-click**
22	**OK** button (if applicable)	**single-click**
23	Repeat Steps 6 through 22 (as necessary)	
24	Return to the **Check/Modify FTP Push Policy Configuration** procedure	Use procedure in Section 18.5.11

18.5.12 View the OM GUI Log

The **OM GUI Log Viewer** page provides the Distribution Technician with a means of checking entries in the OM GUI log. The log file that the log viewer displays is located under the cgi-bin/logs directory where the **OM GUI** is installed. It is not the web server log or the SYSLOG. It is a log that is specifically generated by and for the **OM GUI**.

Table 18.5-24 presents (in a condensed format) the steps required to view the **OM GUI** log. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you

are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it is not already being displayed, launch the **Order Manager GUI** (refer to Section 18.5.1).
- The **Order Manager GUI** is displayed.

2 If it has not been expanded already, **single-click** on the **Logs** link in the navigation frame of the **OM GUI**.
- The **Logs** menu is expanded.

3 If the **OM GUI Log Viewer** page is not already being displayed, **single-click** on the **OM GUI Log Viewer** link in the navigation frame of the **OM GUI**.
- The **OM GUI Log Viewer** page is displayed.

4 Observe information displayed in the **Log Summary**.
- The **Log Summary** provides the following kinds of information:
  - **Size** (size of the log file).
  - **Lines** (number of lines in the log file).
  - **Last Modified** (when the log file was last modified).

5 In the **View the last ___ line(s) of the log file** text box enter:

<number>

- **<number>** represents the number of lines to be displayed.
- The log viewer's functioning is similar to that of the UNIX "tail" command: to see a particular number of lines at the end of the log, specify the number of lines in the **View the last ___ line(s) of the log file** text box.
- Entering 0 (zero) or leaving the text box blank indicates that the entire log file should be displayed.
- It is possible to specify a number that is equal to or greater than the total number of lines in the log file.
  - The total number of lines in the log file is shown in the **Log Summary** on the **OM GUI Log Viewer** page.
- After long periods of usage, the log file may grow to considerable size and it may take some time to load the entire log into the **OM GUI Log Viewer** page.
  - In most cases viewing the last 100 - 500 lines would be adequate to assess recent activity and it would greatly decrease the amount of time it would take to load the log file onto the page.

6 **Single-click** on the **OK** button.
- The specified lines from the log file are displayed.

7 Observe information displayed in the log file.

- The GUI log is a record of every page that runs and every stored procedure that is called within those pages.
- The actual log file (EcOmGui.log) is typically located in the /usr/ecs/<MODE>/CUSTOM/WWW/OMS/cgi-bin/logs directory on the Data Pool Server host (x0dps01).
  - If preferred, the log file can be viewed with any UNIX editor or visualizing command (e.g., **pg, vi**, **view, more**).

8 To start the process of logging out (if applicable) **single-click** on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

9 To complete the process of logging out (when applicable) **single-click** on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Table 18.5-24. View the OM GUI Log - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch the **Order Manager GUI** (if necessary)	Use procedure in Section 18.5.1
2	**Logs** link	**single-click**
3	**OM GUI Log Viewer** link	**single-click**
4	Observe information displayed in the **Log Summary**	**read text**
5	**<number>** (in **View the last ___ line(s) of the log file** text box)	**enter text**
6	**OK** button	**single-click**
7	Observe information displayed in the log file	
8	**Log Out** link (when applicable)	**single-click**
9	**OK** button (to complete logging out) (when applicable)	**single-click**

18.5.13 Prepare Input Files for Use with the OMS CI

There are two general types of input files used with the **OMS CI**:

- Synergy III mode exception files.
- Order-tracking retention time data.

If any Synergy III mode exceptions are to be applied using the **OMS CI**, the appropriate input file(s) must be prepared first so the file(s) can be included in arguments that are specified when the **OMS CI** is started. Each potential input is a "flat" file that contains one of the following types of data:

- ESDT collection(s).
- Media type(s).
- Ftp push destination(s).

The files can be used to specify either of the following dispositions for the data:

- Add the data in the file to the current types of data being processed in Synergy III mode.
- Delete the data in the file from the current types of data being processed in Synergy III mode.

Consequently, files may be created for the following six conditions:

- Add ESDT collection(s) to processing in Synergy III mode.
- Delete ESDT collection(s) from processing in Synergy III mode.
- Add media type(s) to processing in Synergy III mode.
- Delete media type(s) from processing in Synergy III mode.
- Add ftp push destination(s) to processing in Synergy III mode.
- Delete ftp push destination(s) from processing in Synergy III mode.

Each Synergy III mode exception file specified when starting the **OMS CI** must contain only one of the preceding types of data. For example, if a new ftp push destination is to be added and a current ftp push destination is to be deleted, two separate files must be created, one containing the destination to be added and the other containing the destination to be deleted. The same principle applies whether the additions or deletions relate to ftp push destinations, media types, or ESDTs.

If order-tracking retention time (how long order-tracking information is kept in the OMS database) is to be modified using the **OMS CI**, a file of data "imported" from the OMS database (using the **OMS CI**) must be edited so the file can be included in an argument that is specified when the **OMS CI** is started the next time. The "imported" file contains the following three types of data:

- Order source [i.e., "D" (Data Pool), "S" (Spatial Subscription Server), "V" (V0 Gateway), or "M" (Machine-to-Machine Gateway)].
- Distribution medium.
- Retention time period in days.

The "imported" order-tracking retention time file is edited to incorporate the new configuration information (i.e., retention time for each set of order source/medium). The edited file is subsequently "exported" to the OMS database (using the **OMS CI**), where the new values are entered.

Table 18.5-25 presents (in a condensed format) the steps required to prepare input files for use with the **OMS CI**. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the Data Pool Server host.

- Examples of Data Pool Server host names include **e0dps01**, **g0dps01**, **l0dps01,** and **n0dps01**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 In the terminal window, at the command line prompt, enter:

cd /usr/ecs/<MODE>/CUSTOM/WWW/OMS/cgi-bin

- Change directory to the directory containing the Order Manager scripts (e.g., EcOmConfig.pl).
- The **<MODE>** will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 (for SSI&T).
  - TS2 (new version checkout).
- Note that the separate subdirectories under /usr/ecs apply to different operating modes.

3 In the terminal window, at the command line prompt, enter:

vi <file name>

- **<file name>** is the name of a file to be opened.
  - It may be either the name of an existing file (e.g., a file of order-tracking retention time data "imported" from the OMS database) or the name of a new file (e.g., additional media types to be processed in Synergy III mode).
- For example:

  x0pls01{cmops}[10]->vi ESDT20040109.dat

  ~

  ~

  ~

  […]

  "ESDT20040109.dat" [New file]

  - Many blank lines have been deleted from the example.
- The new file will specify the values to be sent to the OMS.

- Although this procedure has been written for the **vi** editor, any UNIX editor can be used to create the file.

4 Using **vi** editor commands create a file that specifies the relevant values to be sent to the OMS.

- Each Synergy III mode exception file contains one item per line.
  - White space is ignored, so multiple lines can separate groups of collection.
  - For example the following entries are included in an ESDT collection file:

    MOD11_L2.001
    MOD11_L2.002
    GDAS_0ZF.001
    GDAS_0ZF.002

  - Another example shows entries included in a media file:

    8MM
    scp

  - Another example shows entries included in an ftp push destination file:

    “Fordham University”
    “Yale University”
    ftp.hbc.md.edu
    223.516.34.14

  - A destination may be a configured “Name” as created by the **OMS GUI** or a host/IP address.
  - If the configured name is used, it must be enclosed in double quotes (e.g., “Fordham University”).
- Each line in an order-tracking retention time file contains an order source code, a distribution medium, and the retention time period in days.
  - For example, the following entries are included in an order-tracking retention time file:

    D FtpPull 0
    S FtpPull 0
    V FtpPull 0
    M FtpPull 0
    D FtpPush 0
    S FtpPush 0
    V FtpPush 0
    M FtpPush 0
    D CDROM 0
    S CDROM 0
    V CDROM 0
    M CDROM 0
    D DLT 0

S DLT 0
V DLT 0
M DLT 0
D DVD 0
S DVD 0
V DVD 0
M DVD 0
D 8MM 0
S 8MM 0
V 8MM 0
M 8MM 3
D scp 0
S scp 0
V scp 1.5
M scp 0

  - Order source codes include “D” (Data Pool), “S” (Spatial Subscription Server), “V” (V0 Gateway), and “M” (Machine-to-Machine Gateway).
- The following vi editor commands are useful:
  - **h** (move cursor left).
  - **j** (move cursor down).
  - **k** (move cursor up).
  - **l** (move cursor right).
  - **a** (append text).
  - **i** (insert text).
  - **r** (replace single character).
  - **x** (delete a character).
  - **dw** (delete a word).
  - **dd** (delete a line).
  - ***n*dd** (delete *n* lines).
  - **u** (undo previous change).
  - **Esc** (switch to command mode).

5 Press the **Esc** key.

6 Type **ZZ**.
- **vi** exits and the new or edited file is saved.
  - To exit **vi** without saving the new entries in the file type **:q!** then press **Return/Enter**.
- UNIX command line prompt is displayed.

Table 18.5-25. Prepare Input Files for Use with the OMS CI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (Data Pool Server host)	**single-click** or use procedure in Section 18.2.1
2	**cd /usr/ecs/<MODE>/CUSTOM/WWW/OMS/cgi-bin**	**enter text, press Enter**
3	**vi <file name>**	**enter text, press Enter**
4	Use **vi** editor commands create a file that specifies the relevant values to be sent to the OMS	**enter text**
5	**Esc** key	**press**
6	**ZZ** (or **:wq!**)	**enter text, press Enter**

18.5.14 Start the OMS CI

If any Synergy III mode exceptions are to be applied using the **OMS CI**, the appropriate input file(s) must have been prepared first so the file(s) can be included in arguments that are specified when the **OMS CI** is started. The **OMS CI** script can take several options to process input files for Synergy III mode exceptions. Each potential input is a "flat" file that contains one of the following types of data:

- ESDT collection(s).
- Media type(s).
- FtpPush destination(s).

Based on the file names included in arguments when it is started, the **OMS CI** determines which file was specified for which purpose (media, ESDTs, or destinations) and requests confirmation. Then the **OMS CI** requests whether the file entries are to be added or deleted from the relevant list.

Table 18.5-26 presents (in a condensed format) the steps required to start the **OMS CI**. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the Data Pool Server host.

- Examples of Data Pool Server host names include **e0dps01**, **g0dps01**, **l0dps01,** and **n0dps01**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 In the terminal window, at the command line prompt, enter:

cd /usr/ecs/<MODE>/CUSTOM/WWW/OMS/cgi-bin

- Change directory to the directory containing the Order Manager scripts (e.g., EcOmConfig.pl).
- The **<MODE>** will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 (for SSI&T).
  - TS2 (new version checkout).
- Note that the separate subdirectories under /usr/ecs apply to different operating modes.

3 In the terminal window, at the command line prompt, enter:

EcOmConfig.pl <MODE> ***[*** **-s3col <file name>** ***]*** ***[*** **-s3media <file name>** ***]*** ***[*** **-s3dest <file name>** ***]*** ***[*** **-ot <file name>** ***]*** ***[*** **-help** ***]***

- The **OMS CI Main Menu** is displayed.
- **-s3col <file name>** is an optional argument that specifies a flat file containing a list of ESDT collections to be added or deleted for processing in Synergy III mode, depending on the selection made by the operator.
- **-s3media <file name>** is an optional argument that specifies a flat file containing a list of media types to be added or deleted for processing in Synergy III mode, depending on the selection made by the operator.
- **-s3dest <file name>** is an optional argument that specifies a flat file containing a list of FtpPush destinations to be added or deleted for processing in Synergy III mode, depending on the selection made by the operator.
- **-ot <file name>** is an optional argument that specifies a flat file containing edited order-tracking retention times for update in the OMS database.
- **-help** is an optional argument that provides a brief overview of the input options that can be used with the **OMS CI** utility.

4 To perform another task using the **OMS CI** go to the applicable procedure from the following list:

- **Process Input Files Specified for Synergy III Exceptions** (Section 18.5.15) (to add or delete ESDT collections, media types, and/or FtpPush destinations to/from those processed in S3 (Synergy III) processing mode).
- **Configure How Long Order-Tracking Information is Kept in the OMS Database** (Section 18.5.16) (to configure how long order-tracking information is kept in the OMS database).
- **Switch Between Synergy IV and Synergy III Operations** (Section 18.5.17) (to switch OMS Server processing between S4 (Synergy IV) operations and S3 (Synergy III) operations).
- **Get OMS CI Help** (Section 18.5.18) (to display help information for the **OMS CI**).

5 To exit from the **OMS CI** (when applicable) at the **OMS CI Main Menu** prompt enter:

x

- The **OMS CI** is closed.

Table 18.5-26. Start the OMS CI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (Data Pool Server host)	**single-click** or use procedure in Section 18.2.1
2	**cd /usr/ecs/<MODE>/CUSTOM/WWW/OMS/cgi-bin**	**enter text, press Enter**
3	**EcOmConfig.pl <MODE> *[* -s3col <file name> *]* *[* -s3media <file name> *]* *[* -s3dest <file name> *]* *[* -ot <file name> *]* *[* -help *]***	**enter text, press Enter**
4	Perform the appropriate operational procedure (as needed)	Use applicable procedure(s) in Sections 18.5.15 through 18.5.18
5	**x** (to exit from the **OMS CI**) (when applicable)	**enter text, press Enter**

18.5.15 Process Input Files Specified for Synergy III Exceptions

If any Synergy III mode exceptions are to be applied using the **OMS CI**, the appropriate input file(s) must have been prepared first and the file name(s) must have been included in arguments that were specified when the **OMS CI** was started. There may be as many as six Synergy III exception files to account for the following six conditions:

- Add ESDT collection(s) to processing in Synergy III mode.
- Delete ESDT collection(s) from processing in Synergy III mode.
- Add media type(s) to processing in Synergy III mode.
- Delete media type(s) from processing in Synergy III mode.
- Add ftp push destination(s) to processing in Synergy III mode.
- Delete ftp push destination(s) from processing in Synergy III mode.

The files can specify either types of data to be added to or types of data to be deleted from the current types of data being processed in Synergy III mode. For example, a file of media types can add to the media types processed in Synergy III mode or a file can specify media types to be deleted from the media types processed in Synergy III mode. The file specified when starting the **OMS CI** must contain either the one type of data or the other, not both. If both additions and deletions are to be made, two separate files must be created. The same principle applies whether additions or deletions of media types, ESDTs, or ftp push destinations are specified.

Based on the file names included in arguments when it is started, the **OMS CI** determines which file was specified for which purpose (media, ESDTs, or destinations) and requests confirmation. When the full-capability operator confirms the file and its content, the **OMS CI** requests whether the entries in the file are to be added or deleted from the relevant list.

Table 18.5-27 presents (in a condensed format) the steps required to process input files specified for Synergy III exceptions. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it has not been started already, start the **OMS CI** (refer to Section 18.5.14).

2 At the **OMS CI Main Menu** prompt enter:

1

- The **Synergy III Mode Exceptions Menu** is displayed.

3 At the **Synergy III Mode Exceptions Menu** prompt enter:

<number>

- **<number>** is either **1** or **2**.
- Enter **1** to process any of the input files specified for Synergy III Exceptions.
  - The following type of message is displayed:

    "media20040109.dat" has been specified as the file containing media types. Use this file? [y/n]

  - If the file specified in the confirmation message is the proper file, skip Steps 4 through 7 and go to Step 8.
  - If the file specified in the confirmation message is not the proper file, continue with Step 4.
- Enter **2** to return to the **OMS CI Main Menu**.
  - The **OMS CI Main Menu** is displayed.
  - Return to Step 2.

4 If the file specified in the confirmation message is not the proper file, at the **Use this file? [y/n]** prompt enter:

n

- The **OMS CI Main Menu** is displayed.
- A likely cause of the problem is having mistyped the file name when starting the **OMS CI**.

5 If the file specified in the confirmation message is not the proper file, at the **OMS CI Main Menu** prompt enter:

x

6 If the file specified in the confirmation message is not the proper file, start the **OMS CI** using the appropriate option (i.e., **-s3col**, **-s3media**, or **-s3dest**) and the proper file name as an argument.

- For detailed instructions refer to the **Start the OMS CI** procedure (Section 18.5.14).

7 If the file specified in the confirmation message is not the proper file, return to Step 2 of this procedure to start the process of processing the input file specified for Synergy III exception.

8 To process the file specified in the confirmation message, at the **Use this file? [y/n]** prompt enter:

y

- The **Synergy III Mode Actions Menu** is displayed.

9 To continue processing the file specified in the confirmation message, at the **Synergy III Mode Actions Menu** prompt enter:

<number>

- **<number>** is **1**, **2**, or **3**.
- Enter **1** to add the data in the file to the types of data to be processed in Synergy III mode.
  - The following type of message is displayed:

    Submission successful. Press <ENTER> to continue...
- Enter **2** to remove the data in the file from the types of data to be processed in Synergy III mode.
  - The following type of message is displayed:

    Submission successful. Press <ENTER> to continue...
- Enter **3** to abort the process of processing the file specified in the confirmation menu and return to the **OMS CI Main Menu**.
  - The **OMS CI Main Menu** is displayed.
  - Return to Step 2.

10 If a "**Submission successful. Press <ENTER> to continue...**" message was displayed, press **Return/Enter**.

- The specified Synergy III exceptions have been successfully processed.
  - The **OMS CI Main Menu** is displayed.

11 Repeat Steps 2 through 10 (as applicable) to apply additional Synergy III exceptions.

12 To perform another task using the **OMS CI** (if the **OMS CI Main Menu** is being displayed), go to the applicable procedure from the following list:

- **Configure How Long Order-Tracking Information is Kept in the OMS Database** (Section 18.5.16) (to configure how long order-tracking information is kept in the OMS database).
- **Switch Between Synergy IV and Synergy III Operations** (Section 18.5.17) (to switch OMS Server processing between S4 (Synergy IV) operations and S3 (Synergy III) operations).
- **Get OMS CI Help** (Section 18.5.18) (to display help information for the **OMS CI**).

13 To exit from the **OMS CI** (when applicable) at the **OMS CI Main Menu** prompt enter:

x

- The **OMS CI** is closed.
- A UNIX command line prompt is displayed.

Table 18.5-27. Process Input Files Specified for Synergy III Exceptions - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Start the **OMS CI** (if necessary)	Use procedure in Section 18.5.14
2	**1** (to display the **Synergy III Mode Exceptions Menu**)	**enter text, press Enter**
3	**1** (to process any of the input files specified for Synergy III Exceptions)	**enter text, press Enter**
4	**y** (to process the file specified in the confirmation message)	**enter text, press Enter**
5	**<number>** (**1** to add the data in the file to the types of data to be processed in Synergy III mode; **2** to remove the data in the file from the types of data to be processed in Synergy III mode)	**enter text, press Enter**
6	**Return/Enter** key (to continue)	**press**
7	Repeat Steps 2 through 6 (as applicable)	
8	Perform the appropriate operational procedure (as needed)	Use applicable procedure(s) in Sections 18.5.16 through 18.5.18
9	**x** (to exit from the **OMS CI**) (when applicable)	**enter text, press Enter**

18.5.16 Configure How Long Order-Tracking Information is Kept in the OMS Database

The full-capability operator can configure how long order-tracking information is kept in the OMS database. The length of time can be different for each combination of media type and order source.

The process of configuring how long order-tracking information is kept in the OMS database involves "importing" the current configuration to a local file, editing the file, and exporting it back into the OMS database.

- When the full-capability operator requests the **OMS CI** to "import" the current configuration, the utility creates and saves a unique file in the current directory.
- The saved file contains the configuration for all media types and all order sources.
- The full-capability operator exits the **OMS CI** and edits the import file to incorporate changes.
- The full-capability operator starts the **OMS CI** using the **–ot** option and specifying the edited file.
- The full-capability operator uses the **OMS CI** to export the data in the file to the database.
- The **OMS CI** parses the file and submits the changes to the OMS database.

Table 18.5-28 presents (in a condensed format) the steps required to configure how long order-tracking information is kept in the OMS database. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it has not been started already, start the **OMS CI** (refer to Section 18.5.14).

2 At the **OMS CI Main Menu** prompt enter:

2

- The **Configure Order Tracking Data Menu** is displayed.

3 At the **Configure Order Tracking Data Menu** prompt enter:

<number>

- **<number>** is **1**, **2**, **3**, or **4**.
- Enter **1** to import the current order-tracking retention time configuration (from the OMS database) into a file.
  - The following type of message is displayed:

    Importing to local file "MssOmsOrderTracking.1067729076"...
    Import OK. Please edit this file and use this utility to export the new configuration.

  - The utility creates and saves a unique file (containing the current order-tracking retention time configuration from the OMS database) in the current directory.
  - The "imported" order-tracking retention time file would be edited to incorporate the new configuration information. The edited file would subsequently be "exported" to the OMS database, where the new order-tracking retention time values would be applied.
  - Press **Return/Enter**: the **OMS CI Main Menu** is displayed; go to Step 4.

- Enter **2** to export an edited order-tracking retention time file to the OMS database.
  - The following type of message is displayed:

    You are about to export an edited configuration file. Please make sure the fields are properly edited. These changes will be submitted to the OMS database.

    "MssOmsOrderTracking.1067729243" was specified as the export file. Do you want to use this one? [y/n]
  - The "exported" file would used to update the OMS database, where the new order-tracking retention time values would be applied.
  - If the file specified in the confirmation message is not the proper file, go to Step 8.
  - If the file specified in the confirmation message is the proper file, go to Step 12.
- Enter **3** to view the current configuration.
  - The current order-tracking retention time configuration (from the OMS database) is displayed.
  - Each line of the order-tracking retention time configuration contains the following three items: **Order source code** [e.g., "D" (Data Pool), "S" (Spatial Subscription Server), "V" (V0 Gateway), and "M" (Machine-to-Machine Gateway)]; **Distribution medium**, **Retention time period in days**.
  - For example:

    Order Media Ret. Time
    Source Type Period (Hours)

    D FtpPull 0
    S FtpPull 0
    V FtpPull 0
    M FtpPull 0
    D FtpPush 0
    S FtpPush 0
    V FtpPush 0
    M FtpPush 0
    D CDROM 0
    S CDROM 0
    V CDROM 0
    M CDROM 0
    D DLT 0
    S DLT 0
    V DLT 0
    M DLT 0
    D DVD 0
    S DVD 0

V DVD 0
M DVD 0
D 8MM 0
S 8MM 0
V 8MM 0
M 8MM 0
D scp 0
S scp 0
V scp 0
M scp 0

Press <enter> to return to main menu...

– Press **Return/Enter**: the OMS CI Main Menu is displayed; return to Step 2.

- Enter **4** to return to the **OMS CI Main Menu**.
  – The **OMS CI Main Menu** is displayed.
  – Return to Step 2.

4 After importing the current order-tracking retention time configuration into a file, at the **OMS CI Main Menu** prompt enter:

x

- The **OMS CI** is closed.

5 After importing the current order-tracking retention time configuration into a file and closing the **OMS CI**, edit the import file (to incorporate changes).

- For detailed instructions refer to the **Prepare Input Files for Use with the OMS CI** procedure (Section 18.5.13).

6 After editing the order-tracking retention time file (to incorporate changes), start the **OMS CI** using the **–ot** option and the file name of the edited file as an argument.

- For detailed instructions refer to the **Start the OMS CI** procedure (Section 18.5.14).

7 After starting the **OMS CI** with reference to the edited file, return to Step 2 of this procedure to start the process of exporting the edited order-tracking retention time file to the OMS database.

8 If the file specified in the confirmation message is not the proper file, at the **Do you want to use this one? [y/n]** prompt enter:

n

- The **OMS CI Main Menu** is displayed.
- A likely cause of the problem is having mistyped the file name when starting the **OMS CI**.

9 If the file specified in the confirmation message is not the proper file, at the **OMS CI Main Menu** prompt enter:

x

10 If the file specified in the confirmation message is not the proper file, start the **OMS CI** using the **–ot** option and the proper file name as an argument.

- For detailed instructions refer to the **Start the OMS CI** procedure (Section 18.5.14).

11 If the file specified in the confirmation message is not the proper file, return to Step 2 of this procedure to start the process of exporting the edited order-tracking retention time file to the OMS database.

12 To export an edited order-tracking retention time file to the OMS database, at the **Do you want to use this one? [y/n]** prompt enter:

y

- The following prompt is displayed:

You are about to export file "<file name>". Continue? [y/n]

13 To continue the process of exporting an edited order-tracking retention time file to the OMS database, at the **Continue? [y/n]** prompt enter:

y

- If there is no problem exporting the file to the OMS database, the following messages are displayed:

  Submitting file to database...
  Syntax checking the input file...
  Export OK. Press <ENTER> to continue...

  – The edited order-tracking retention time file was successfully exported to the OMS database

14 Press **Return/Enter**.

- The **OMS CI Main Menu** is displayed.

15 If there was a problem exporting the file to the OMS database, return to Step 2.

16 To perform another task using the **OMS CI** go to the applicable procedure from the following list:

- **Process Input Files Specified for Synergy III Exceptions** (Section 18.5.15) (to add or delete ESDT collections, media types, and/or FtpPush destinations to/from those processed in S3 (Synergy III) processing mode).

- **Switch Between Synergy IV and Synergy III Operations** (Section 18.5.17) (to switch OMS Server processing between S4 (Synergy IV) operations and S3 (Synergy III) operations).
- **Get OMS CI Help** (Section 18.5.18) (to display help information for the **OMS CI**).

17 To exit from the **OMS CI** (when applicable) at the **OMS CI Main Menu** prompt type **x** then press **Return/Enter**.
- The **OMS CI** is closed.
- A UNIX command line prompt is displayed.

Table 18.5-28. Configure How Long Order-Tracking Information is Kept in the OMS Database - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Start the **OMS CI** (if necessary)	Use procedure in Section 18.5.14
2	**2** (to display the **Configure Order Tracking Data Menu**)	**enter text, press Enter**
3	**1** (import the current order-tracking retention time configuration into a file)	**enter text, press Enter**
4	**x** (after importing the current order-tracking retention time configuration into a file)	**enter text, press Enter**
5	Edit the import file (to incorporate changes)	Use procedure in Section 18.5.13
6	Start the **OMS CI** using the **–ot** option and the file name of the edited file as an argument	Use procedure in Section 18.5.14
7	**2** (to display the **Configure Order Tracking Data Menu**)	**enter text, press Enter**
8	**2** (to export the edited order-tracking retention time file to the OMS database)	**enter text, press Enter**
9	**y** (to export the file specified in the confirmation message)	**enter text, press Enter**
10	**y** (to continue exporting the file)	**enter text, press Enter**
11	**Return/Enter** key (to continue)	**press**
12	Perform the appropriate operational procedure (as needed)	Use applicable procedure(s) in Sections 18.5.15 through 18.5.18
13	**x** (to exit from the **OMS CI**) (when applicable)	**enter text, press Enter**

18.5.17 Switch Between Synergy IV and Synergy III Operations

The option to switch server (processing) mode allows the full-capability operator to switch the OMS Server processing between S4 (Synergy IV) operations and S3 (Synergy III) operations. The feature works like a toggle; i.e., if the current mode is S3, the only option is to switch to S4 and vice versa.

Invoking the option to switch server (processing) mode allows also causes the current status of the OMS Server (i.e., "up" or "down") to be displayed. Because the processing mode is kept as a parameter in the OMS database, it can be changed regardless of OMS server status.

Table 18.5-29 presents (in a condensed format) the steps required to switch between Synergy IV and Synergy III operations. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it has not been started already, start the **OMS CI** (refer to Section 18.5.14).

2 At the **OMS CI Main Menu** prompt enter:

3

- If the OMS Server is "up," the OMS Server status and current processing mode are displayed along with the following message:

  Please shut down the OMS Server before switching the server mode. You may then select this option again from the main menu. (No need to exit this program)

- If the OMS Server is "down," the **Switch Processing Mode Menu** is displayed.
  - The OMS Server status and current processing mode are displayed.
- If the OMS Server is "up," continue with Step 3.
- If the OMS Server is "down," skip Steps 3 through 5 and go to Step 6.

3 If a "**Please shut down the OMS Server**" message is being displayed, press the **Return/Enter** key.

- The **OMS CI Main Menu** is displayed.

4 If a "**Please shut down the OMS Server**" message was displayed, shut down the OMS Server (EcOmOrderManager) or make a request to the Operations Controller/System Administrator to shut down the OMS Server for the appropriate mode.

- There is no need to exit from the **OMS CI** while the OMS Server is being shut down.
  - The shutdown can be accomplished in a separate terminal window.

NOTE The OMS Server (EcOmOrderManager) is typically installed on the Sun Consolidation Internal Server. Examples of Sun Consolidation Internal Server host names include **e0acs11**, **g0acs11**, **l0acs03**, and **n0acs04**.

5 If a "**Please shut down the OMS Server**" message was displayed, return to Step 2 after the OMS Server has been shut down.

6 At the **Switch Processing Mode Menu** prompt enter:

<number>

- **<number>** is **1**, **2**, or **3**.
- Enter **1** to switch to the other processing mode.
  - The processing mode is switched (either from S3 to S4 or from S4 to S3, as applicable).
- Enter **2** to return to the **OMS CI Main Menu**.
  - The **OMS CI Main Menu** is displayed.
- Enter **3** - to exit from the **OMS CI**.
  - The **OMS CI** is closed.

8 If appropriate, start the OMS Server (EcOmOrderManager) or make a request to the Operations Controller/System Administrator to bring up (start) the OMS Server in the appropriate mode.

9 To perform another task using the **OMS CI** (if the **OMS CI Main Menu** is being displayed), go to the applicable procedure from the following list:

- **Process Input Files Specified for Synergy III Exceptions** (Section 18.5.15) (to add or delete ESDT collections, media types, and/or FtpPush destinations to/from those processed in S3 (Synergy III) processing mode).
- **Configure How Long Order-Tracking Information is Kept in the OMS Database** (Section 18.5.16) (to configure how long order-tracking information is kept in the OMS database).
- **Get OMS CI Help** (Section 18.5.18) (to display help information for the **OMS CI**).

10 To exit from the **OMS CI** (when applicable) at the **OMS CI Main Menu** prompt enter:

x

- The **OMS CI** is closed.
- A UNIX command line prompt is displayed.

Table 18.5-29. Switch Between Synergy IV and Synergy III Operations - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Start the **OMS CI** (if necessary)	Use procedure in Section 18.5.14
2	**3** (to display the **Switch Processing Mode Menu**)	**enter text, press Enter**
3	**1** (to switch to the other processing mode)	**enter text, press Enter**

Table 18.5-29. Switch Between Synergy IV and Synergy III Operations - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
4	Either start the OMS Server (EcOmOrderManager) or make a request to the Operations Controller/System Administrator to bring up (start) the OMS Server in the appropriate mode (as appropriate)	**contact Operations Controller**
5	Perform the appropriate operational procedure (as needed)	Use applicable procedure(s) in Sections 18.5.15 through 18.5.18
6	**x** (to exit from the **OMS CI**) (when applicable)	**enter text, press Enter**

18.5.18 Get OMS CI Help

The "help" function of the **OMS CI** allows the full-capability operator to display a complete synopsis of the options and all available functions of the CI.

Table 18.5-30 presents (in a condensed format) the steps required to get **OMS CI** help. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If it has not been started already, start the **OMS CI** (refer to Section 18.5.14).

2 At the **OMS CI Main Menu** prompt enter:

4

- The first page of the **OMS CI Help** is displayed.

3 To view additional help information press either the **Return/Enter** key or the space bar.

- Another line of the **OMS CI Help** is displayed if **Return/Enter** is pressed.
- Another page of the **OMS CI Help** is displayed if the space bar is pressed.

4 To exit from **Help** enter:

q

- A "**Press <ENTER> to return to main menu...**" message is displayed.

5 If a "**Press <ENTER> to return to main menu...**" message was displayed, press the **Return/Enter** key.

- The **OMS CI Main Menu** is displayed.

6 To perform another task using the **OMS CI** (if the **OMS CI Main Menu** is being displayed), go to the applicable procedure from the following list:

- **Process Input Files Specified for Synergy III Exceptions** (Section 18.5.15) (to add or delete ESDT collections, media types, and/or FtpPush destinations to/from those processed in S3 (Synergy III) processing mode).
- **Configure How Long Order-Tracking Information is Kept in the OMS Database** (Section 18.5.16) (to configure how long order-tracking information is kept in the OMS database).
- **Switch Between Synergy IV and Synergy III Operations** (Section 18.5.17) (to switch OMS Server processing between S4 (Synergy IV) operations and S3 (Synergy III) operations).

7 To exit from the **OMS CI** (when applicable) at the **OMS CI Main Menu** prompt enter:

x

- The **OMS CI** is closed.
- A UNIX command line prompt is displayed.

Table 18.5-30. Get OMS CI Help - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Start the **OMS CI** (if necessary)	Use procedure in Section 18.5.14
2	**4** (to display the first page of the **OMS CI Help**)	**enter text, press Enter**
3	Either the **Return/Enter** key or the space bar (to view additional help information)	**press**
4	**q** (to exit from the **OMS CI Help**) (when applicable)	**enter text, press Enter**
5	**Return/Enter** key (to display the **OMS CI Main Menu**)	**press**
6	Perform the appropriate operational procedure (as needed)	Use applicable procedure(s) in Sections 18.5.15 through 18.5.17
7	**x** (to exit from the **OMS CI**) (when applicable)	**enter text, press Enter**

18.6 Troubleshooting DDIST and Order Manager GUI Problems

Troubleshooting is a process of identifying the source of problems on the basis of observed trouble symptoms. Most problems with data distribution can be traced to some part of the Data Server Subsystem:

- Data Distribution.
- Science Data Server.
- Storage Management.

However, a common source of problems involves the reliance on messages or data from other subsystems. Like many other operational areas in ECS, data distribution has interfaces with

other subsystems. Consequently, it is possible to trace some problems to another ECS subsystem, including (but not necessarily limited to) those in the following list:

- Communications Subsystem (CSS).
- System Management Subsystem (MSS).
- Order Manager Subsystem (OMS).

The general process of troubleshooting involves the following activities:

- Review the trouble symptoms.
- Check the status of relevant hosts/servers (as necessary).
- Check log files (as necessary).
- Take action to correct the problem(s).

If the problem cannot be identified and fixed without help within a reasonable period of time, the appropriate response is to call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 18.6-1, below, provides an Activity Checklist for troubleshooting DDIST problems.

Table 18.6-1. Troubleshooting DDIST and Order Manager GUI Problems - Activity Checklist (1 of 2)

Order	Role	Task	Section	Complete?
1	Distribution Technician	Troubleshoot a Data Distribution, Storage Management, or Order Manager GUI Failure	(P) 18.6.1	
2	Distribution Technician	Check Connections to Hosts/Servers	(P) 18.6.1.1	
3	Distribution Technician	Check Log Files	(P) 18.6.1.2	
4	Distribution Technician	Recover from a Data Distribution Failure	(P) 18.6.2	
5	Distribution Technician	Respond to Requests that Exceed the Distribution Request Threshold	(P) 18.6.2.1	
6	Distribution Technician	Check the Connection to the Remote FTP Host	(P) 18.6.2.2	
7	Distribution Technician	Check the Request Manager Server Debug Log	(P) 18.6.2.3	
8	Distribution Technician	Check the Science Data Server Log Files	(P) 18.6.2.4	
9	Distribution Technician	Check the Archive Server Log Files	(P) 18.6.2.5	
10	Distribution Technician	Check the Staging Disk	(P) 18.6.2.6	

Table 18.6-1. Troubleshooting DDIST and Order Manager GUI Problems - Activity Checklist (2 of 2)

Order	Role	Task	Section	Complete?
12	Distribution Technician	Check the Space Available in the Staging Area	(P) 18.6.2.8	
11	Distribution Technician	Check the Staging Disk ALOG File	(P) 18.6.2.7	
13	Distribution Technician	Check Database Connections	(P) 18.6.2.9	

Fault Recovery

Each request that crosses a client/server boundary is assigned a system-unique identifier referred to as an RPC ID. (RPC refers to Remote Procedure Call, the mechanism by which requests are submitted from client to server.) The RPC ID facilitates the automatic fault recovery events that occur whenever there is a client or server failure.

- As a request propagates through the system, each associated client/server exchange is assigned a unique RPC ID.
  - The RPC ID for each interaction is derived from the previous RPC ID received by the client for the request. Consequently, all RPC IDs associated with a given request have a common portion that relates the various client/server calls to one another.
  - Given the previous RPC ID, clients consistently reproduce the same RPC ID that was submitted to the server on the subsequent event.
- The concept of reproducible RPC IDs is central to the ECS fault recovery capability.
  - When requests are retried from client to server, they are always submitted with the same RPC ID that was used in the original submission of the request, even if either the client or server has crashed between retries.
- The RPC ID is also central to the check-pointing aspect of fault recovery.
  - As requests arrive at fault recovery-enabled servers, they are recorded in a persistent store (typically a database), tagged with the RPC ID, which identifies the request.
  - As the request is serviced, check-pointing state information may be updated in the persistent store, up to and including the completion status of the request.
  - This allows the servers to resume servicing from the last check-pointed state, particularly upon resubmission from a client.

Data Server Subsystem and Order Manager Subsystem components check-point the following types of information:

- **EcDsScienceDataServer** - Asynchronous “acquire” requests that have been accepted for processing and subscription server event notifications.

- **EcDsHdfEosServer** - None.
- **EcDsDistributionServer** - Requests (which have been accepted for processing).
- **EcDsStArchiveServer** - "Store" and "retrieve" request state information.
- **EcDsStStagingDiskServer** - Resource allocation and ownership for staging disks.
- **EcDsStFtpServer** - Request state information.
- **EcDsStCacheManagerServer** - None.
- **EcDsStDTFServer** - None.
- **EcDsStRequestManagerServer** - None.
- **EcOmOrderManager** - Requests (which have been submitted).

Fault Handling

Failure events are classified according to the following three severity levels:

- Fatal error.
  - Returned when a request cannot be serviced, even with operator intervention.
  - For example, if a request is made to distribute data via ftp to a non-existent host, the request is failed with a fatal error.
- Retry error.
  - Potentially recoverable error.
  - Normally, a retry error would be returned to the client only when the server cannot recover from the error automatically.
  - A retry error may require operator assistance during recovery. For example, a tape left in a tape drive might have to be removed manually.
- Warning.
  - Provided when operations can proceed without interruption, but an unexpected circumstance was detected.
  - For example, the Distribution Technician would use the Data Distribution Operator GUI to manually request resumption of a distribution request that had been "suspended with errors."

Transient errors (such as network errors) are always retry errors.

- In general, clients and servers that experience transient retry errors first attempt to recover by retrying the operation automatically.
- One special case of this is "rebinding," which refers to the process by which a client automatically attempts to re-establish communication with a server in the event communication is disrupted.
  - The disruption may be caused by transient network failure, or by the server crashing or being brought down.
  - In any case, the client automatically attempts to reconnect to the server for a configurable period of time on a client-by-client basis.

ECS processes encountering an error or receiving an error from a server request can either pass the error back to a higher-level client or present it to the operator for operator intervention. The specific fault handling policies for Data Server Subsystem and Order Manager Subsystem client processes are shown in Table 18.6-2.

Table 18.6-2. Data Server Subsystem and Order Manager Subsystem Fault Handling Policies

Client Process	Fault Handling Policy
EcDsScienceDataServer **EcDsHdfEosServer**	**Retry errors:** Errors are retried a configurable number of times, then passed back to the calling client process unchanged. The default retry policy for Science Data Servers is "retry forever." For asynchronous "acquire" requests involving subsetting, retry errors encountered with the HDF servers are not returned to the client. Instead, the request is queued for future execution. **Fatal errors:** Errors are passed back to the calling client process. **NOTE:** Errors associated with asynchronous requests are logged but do not appear on any GUI. The Operator restarts HDF servers manually.
EcDsDistributionServer	Errors are presented to the operator via the **Data Distribution Operator GUI**. **Retry errors:** Errors are presented as "Suspended with Errors" and can be resumed by the operator. **Fatal errors:** Errors are presented as "Failed." For synchronous requests, fatal errors are also passed back to the calling client process. For asynchronous requests, fatal errors are sent as part of the e-mail notification.
EcDsStRequestManagerServer **EcDsStDTFServer**	**Retry errors:** Errors are passed back to the calling client process. **Fatal errors:** Errors are passed back to the calling client process.
EcOmOrderManager	**Retry errors:** Errors are retried a configurable number of times and then the request status is changed to "Operator Intervention" in the MSS database.

Client Crash and Restart

When a client of a SDSRV or DDIST server crashes, the server (i.e., EcDsScienceDataServer, EcDsHdfEosServer, or EcDsDistributionServer) continues to service the requests that were in process at the time of the client's crash. When a client of a STMGT server (i.e., EcDsStArchiveServer, EcDsStRequestManagerServer, EcDsStCacheManagerServer, EcDsStPullMonitorServer, EcDsStFtpServer, EcDsStDTFServer, or EcDsStStagingDiskServer) crashes, the requests that were in process are cancelled by another client process and there is no impact to the outside requester server.

The EcOmOrderManager does not care whether or not a client crashes.

When a client restarts in the ECS system, it sends a restart notification to each server with which it interacts.

- Clients notify servers that they have come up either “cold” or “warm.”
- Generally, the notification temperature sent to the server matches the temperature at which the client process is restarted.
- However, there are some exceptions; for example:
  - EcDsScienceDataServer always notifies EcDsDistributionServer that it has performed a warm restart.
  - The default behavior for both EcDsHdfEosServer and EcDsStDTFServer is to send EcDsStRequestManagerServer cold restart notification.
- When a client sends restart notification to the EcDsStRequestManagerServer, the server calls a stored procedure to clean up the old request and staging disk (if any) created by the client, based on whether it was a cold or warm start.
  - The Storage Management Servers are not directly notified when a restart has occurred.
  - The Storage Management Servers respond to the event according to the fact that a previous request has been marked as failed and any staging disk resources they have allocated have been released.

The default server behavior in response to startup notification from a client is as follows:

- Warm Notification.
  - Outstanding requests for the restarted clients remain available in the persistent store.
  - The outstanding requests may be resubmitted by the client, and are serviced to completion upon resubmission.
  - Associated resources are left allocated until the requests are completed.
- Cold Notification.
  - All outstanding requests for the restarted client are cancelled.
  - If the client resubmits any cancelled request using the same RPC ID (e.g., by pressing the Retry button from an operator GUI), it is failed with a fatal error due to the client cold startup notification.
  - Any resources associated with the cancelled requests are released and reclaimed by the system.

The following servers have some non-standard responses to startup notification:

- **EcDsStArchiveServer.**
  - **Warm Notification:** Default server behavior (as previously described).
  - **Cold Notification:** For partially completed Ingest operations, all files stored are removed. (Partial granules are never permitted in the archive.)
- **EcDsStStagingDiskServer.**
  - **Warm Notification:** All staging disks owned by the restarted client are retained, including temporary staging disks.
  - **Cold Notification:** All staging disks owned by the restarted client are released.

Server Crash and Restart

When a server crashes, clients cannot continue to submit requests for processing.

- Synchronous requests in progress result in a Distributed Computing Environment (DCE) exception being thrown back to the client process, which enters a rebinding failure recovery mode (as previously mentioned).
- Attempts to submit requests while the server is down result in the client blocking until a communication timeout has been reached.
- Although DCE has been replaced by socket-based library calls (i.e., CCS Middleware), the DCE exception code is handled by the CCS Middleware.

When a server restarts, it may perform various resynchronization activities in order to recover from an unexpected termination.

- In the event of a server cold start or cold restart, the server typically cancels all outstanding requests and reclaims all associated resources.
- In general, existing request queues are retained for warm restarts and cleared for cold starts or cold restarts.
- **EcDsScienceDataServer**- and **EcDsHdfEosServer**-specific activities upon start/restart:
  - **Warm Restart:** Restart asynchronous "acquire" requests that were in progress before the crash; retain the queue of asynchronous "acquire" requests; it is expected that synchronous requests would be resubmitted by the respective senior client applications (i.e., PRONG or INGST); send event notifications to the Subscription Server for any services completed before the crash for which a subscribed event is registered but has not been sent to the Subscription Server.
  - **Cold Start or Cold Restart:** Purge the queue of asynchronous "acquire" requests; purge the queue of Subscription Server Event Notifications.
- **EcDsDistributionServer**-specific activities upon start/restart:
  - **Warm Restart:** Request Processing is restarted from the last check-pointed state.
  - **Cold Start or Cold Restart:** EcDsDistributionServer deletes all (prior) request information from its database.
- **EcDsStArchiveServer**-specific activities upon start/restart:
  - **Warm Restart:** Retains existing request queues.
  - **Cold Start or Cold Restart:** For partially completed "store" requests, the files copied into the archive are removed; for partially completed "retrieve" requests, the access count is decremented in the read-only cache.
- **EcDsStCacheManagerServer**-specific activities upon start/restart:
  - **Warm Restart:** The contents of the read-only cache are synchronized with the database; discrepancies are logged and removed.
  - **Cold Start or Cold Restart:** All files are removed from the read-only cache; links to files in the read-only cache are left dangling.

- **EcDsStStagingDiskServer**-specific activities upon start/restart:
  - **Warm Restart:** The set of staging disks in the staging area is synchronized with the database; discrepancies are logged and removed; existing request queues are cleared.
  - **Cold Start or Cold Restart:** All staging disks are removed.
- **EcDsStPullMonitorServer**-specific activities upon start/restart:
  - **Warm Restart:** The contents of the Pull Area and user request areas are synchronized with the database; discrepancies are logged and removed.
  - **Cold Start or Cold Restart:** All files in the Pull Area and all user request areas are removed.
- **EcDsStFtpServer**-specific activities upon start/restart:
  - **Warm Restart:** Existing request queues are retained.
  - **Cold Start or Cold Restart:** Existing request queues are cleared.

Request Resubmission

Upon restarting a crashed client or server, requests are typically resubmitted. If the restarted process was started warm, the fault-recovery capabilities permit the server to resume processing of the request from its last check-pointed state. This prevents needless repetition of potentially time-consuming activities.

- **EcDsScienceDataServer**- and **EcDsHdfEosServer**-specific activities upon resubmission of a request:
  - All requests are serviced as if they are new requests.
  - RPC IDs are generated automatically and reproducibly; consequently, the Science Data Server typically recreates the same allocation requests on a resubmission; this can trigger special logic to handle requests for which an allocated staging disk has been transferred to the Data Distribution Server.
- **EcDsDistributionServer**-specific activities upon resubmission of a request:
  - If previously submitted and completed, the request status is returned based on the check-pointed request status.
  - Otherwise, the client request thread is synchronized with the worker thread actually servicing the request.
- **EcDsStArchiveServer**-specific activities upon resubmission of a request:
  - The request is restored from the last check-pointed state.
  - For “store” requests, copies into the archive are resumed from the last file copied.
  - For “retrieve” requests, the entire “retrieve” request is reprocessed; however, files previously retrieved for the request are, in all likelihood, still in the read-only cache.
- **EcDsStCacheManagerServer**- and **EcDsStFtpServer**-specific activities upon resubmission of a request:
  - If previously submitted and completed, the request status is returned based on the check-pointed request status.
  - Otherwise, the request is processed anew.

- **EcDsStStagingDiskServer**-specific activities upon resubmission of a request:
  - For staging disk allocation, the results are returned to the client if the client resubmits the allocation request under which the disk was created.
- **EcDsStPullMonitorServer**- and **EcDsStDTFServer**-specific activities upon resubmission of a request:
  - The resubmitted request is processed as if it were a new request.
- **EcOmOrderManager**-specific activities upon resubmission of a request:
  - EcOmOrderManager uses a different RPC ID for request resubmission.

18.6.1 Troubleshoot a Data Distribution, Storage Management, or Order Manager GUI Failure

1 If it is not possible to log in to the Operations Workstation host or any other host, ask the Operations Controller/System Administrator to verify that the host is "up."
- Examples of Operations Workstation host names include **e0acs03**, **g0acs02**, **l0acs01**, and **n0acs03**.

2 If the GUI (e.g., the **Data Distribution Operator GUI** or the **Storage Management Control** GUI) or web browser is not displayed when the start-up script or command has been properly invoked, ensure that the DISPLAY variable was set properly.
- For detailed instructions refer to the applicable procedure.
  - **Log in to ECS Hosts** (Section 18.2.1).
  - **Launch the Data Distribution Operator and Storage Management Control GUIs** (Section 18.2.2).

3 If an error message associated with the **Data Distribution Operator GUI** is received, refer to Table 18.6-3, Data Distribution Operator GUI User Messages and/or Table 18.6-4, Storage Management User Messages.
- Table 18.6-3, Data Distribution Operator GUI User Messages, is adapted from the corresponding table in 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project.*
- Table 18.6-4, Storage Management User Messages, is adapted from DsShErrorMessages.txt and DsStErrorMessages.txt in the /usr/ecs/<MODE>/CUSTOM/data/DSS directory on the DSS hosts.

4 If an error message associated with the **Storage Management Control** GUI is received, refer to Table 18.6-4, Storage Management User Messages.
- The table is adapted from DsShErrorMessages.txt and DsStErrorMessages.txt in the /usr/ecs/<MODE>/CUSTOM/data/DSS directory on the DSS hosts.

5 If an error message associated with the **Order Manager GUI** is received, refer to Table 18.6-5, Order Manager GUI User Messages.

- The table is adapted from the corresponding table in 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*.

6 If the status of a request changes to "Suspended with Errors" (indicating a data distribution failure) and the suspended request is an FtpPush request to a remote host (e.g., ftp.averstar.com), ensure that it is possible to connect to the remote host.

- For detailed instructions refer to the **Check the Connection to the Remote FTP Host** procedure (Section 18.6.2.2).

7 If the status of a request changes to "Suspended with Errors," indicating a data distribution failure, ensure that it is possible to connect to the necessary hosts and servers.

- For detailed instructions refer to the **Check Connections to Hosts/Servers** procedure (Section 18.6.1.1).

8 If the status of a request changed to "Suspended with Errors" and if the necessary hosts/servers are all "up," notify the Operations Controller/System Administrator to have the STMGT servers bounced.

- Bouncing servers involves shutting down and immediately restarting the servers.

9 If the status of a request changed to "Suspended with Errors" and if the STMGT servers have been bounced, resume processing of the suspended request.

- For detailed instructions refer to the **Suspend/Resume Data Distribution Requests** procedure (Section 18.2.7).

10 If processing of a suspended request does not resume, go to the **Recover from a Data Distribution Failure** procedure (Section 18.6.2).

11 If some other type of problem is encountered, check the log files for error messages.

- Examples of log files include EcDsDdistGui.ALOG, EcDsDistributionServer.ALOG, EcDsStRequestManagerServer.ALOG, and EcDsStStagingDiskServerDIP1.ALOG.
- Log files are located in the /usr/ecs/<MODE>/CUSTOM/logs directory.
- For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).

12 If the problem cannot be identified and fixed without help within a reasonable period of time, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 18.6-3. Data Distribution Operator GUI User Messages (1 of 7)

Message Text	Impact	Cause and Corrective Action
Cannot create connection pool.	Attempt to create connection pool to database failed.	1. Refresh the GUI display (**single-click** on the **Refresh** button). 2. Check the database connections. [For detailed instructions refer to the **Check Database Connections** procedure (Section 18.6.2.8).] 3. Refresh the GUI display (**single-click** on the **Refresh** button). 4. If the problem recurs, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
Cannot create the DsDdDistRequestList.	The Data Distribution Request List was not created.	1. Refresh the GUI display (**single-click** on the **Refresh** button). 2. Check the database connections. [For detailed instructions refer to the **Check Database Connections** procedure (Section 18.6.2.8).] 3. Refresh the GUI display (**single-click** on the **Refresh** button). 4. If the problem recurs, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
Cannot get a dbInterface connection pool.	Attempt to get a dbInterface from connection pool to database failed.	1. Refresh the GUI display (**single-click** on the **Refresh** button). 2. Check the database connections. [For detailed instructions refer to the **Check Database Connections** procedure (Section 18.6.2.8).] 3. Refresh the GUI display (**single-click** on the **Refresh** button). 4. If the problem recurs, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 18.6-3. Data Distribution Operator GUI User Messages (2 of 7)

Message Text	Impact	Cause and Corrective Action
DDist Cancel Failure.	GUI received failure from server. Request was not canceled.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab). Canceling the request may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Enter: **ps -ef | grep EcDsDistributionServer** (Ensure that the Distribution Server is "up.") 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (**single-click** on the **Refresh** button). 5. Try again to cancel the request. [For detailed instructions refer to the **Cancel Data Distribution Requests** procedure (Section 18.2.8).] 6. If repeated attempts to cancel the request fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
DDist Mark Shipped Failure.	GUI received failure from server. Request was not marked "Shipped."	No Longer Applicable.
DDist Refresh Failure.	Data Distribution Refresh Error. Dialogue Message GUI was not able to get new request list from server.	1. Check the database connections. [For detailed instructions refer to the **Check Database Connections** procedure (Section 18.6.2.8).] 2. Refresh the GUI display (**single-click** on the **Refresh** button). 3. If the problem recurs, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 18.6-3. Data Distribution Operator GUI User Messages (3 of 7)

Message Text	Impact	Cause and Corrective Action
DDist Resume All Failure.	GUI received failure from server. Requests were not resumed.	1. Check the current state of the distribution request(s) (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab). Resuming the request(s) may not be a valid operation in the current state(s) (e.g., if the current state is "Shipped"). 2. Enter: **ps -ef | grep EcDsDistributionServer** (Ensure that the Distribution Server is "up.") 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (**single-click** on the **Refresh** button). 5. Try again to resume the request(s). [For detailed instructions refer to the **Suspend/Resume Data Distribution Requests** procedure (Section 18.2.7).] 6. If repeated attempts to resume request processing fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
DDist Resume Failure.	GUI received failure from server. Request was not resumed.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab). Resuming the request may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Enter: **ps -ef | grep EcDsDistributionServer** (Ensure that the Distribution Server is "up.") 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (**single-click** on the **Refresh** button). 5. Try again to resume the request. [For detailed instructions refer to the **Suspend/Resume Data Distribution Requests** procedure (Section 18.2.7).] 6. If repeated attempts to resume request processing fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 18.6-3. Data Distribution Operator GUI User Messages (4 of 7)

Message Text	Impact	Cause and Corrective Action
DDist Set Priority Failure.	GUI received failure from server. Request set priority failed.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab). Setting priority may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Enter **ps -ef | grep EcDsDistributionServer** (Ensure that the Distribution Server is "up.") 3. If the server has gone down, notify the Operations Controller/System Administrator to have it brought back up. 4. Try again to set the priority of the selected distribution request. [For detailed instructions refer to the **Change the Priority of Data Distribution Requests** procedure (Section 18.2.6).] 5. If repeated attempts to set the request priority fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
DDist Suspend All Failure.	GUI received failure from server. Requests will not be submitted in a SuspendAll state.	1. Check the current state of the distribution request(s) (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab). Suspending the request(s) may not be a valid operation in the current state(s) (e.g., if the current state is "Shipped"). 2. Enter: **ps -ef | grep EcDsDistributionServer** (Ensure that the Distribution Server is "up.") 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (**single-click** on the **Refresh** button). 5. Try again to suspend the request(s). [For detailed instructions refer to the **Suspend/Resume Data Distribution Requests** procedure (Section 18.2.7).] 6. If repeated attempts to suspend request processing fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 18.6-3. Data Distribution Operator GUI User Messages (5 of 7)

Message Text	Impact	Cause and Corrective Action
DDist Suspend Failure.	GUI received failure from server. Request was not suspended.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab). Suspending the request may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Enter: **ps -ef | grep EcDsDistributionServer** (Ensure that the Distribution Server is "up.") 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (**single-click** on the **Refresh** button). 5. Try again to suspend the request. [For detailed instructions refer to the **Suspend/Resume Data Distribution Requests** procedure (Section 18.2.7).] 6. If repeated attempts to suspend request processing fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
DsDdRequestMgrC Cancel Failure.	GUI received failure from server. Request was not canceled.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab). Canceling the request may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Enter: **ps -ef | grep EcDsDistributionServer** (Ensure that the Distribution Server is "up.") 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (**single-click** on the **Refresh** button). 5. Try again to cancel the request. [For detailed instructions refer to the **Cancel Data Distribution Requests** procedure (Section 18.2.8).] 6. If repeated attempts to cancel the request fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
DsDdRequestMgrC create handle error.	Error cannot create Request Manager Handle to the Data Distribution Server.	1. **Single-click** on the **Refresh** button to try again. 2. Check the database connections. [For detailed instructions refer to the **Check Database Connections** procedure (Section 18.6.2.8).] 3. Refresh the GUI display (**single-click** on the **Refresh** button). 4. If the problem recurs, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 18.6-3. Data Distribution Operator GUI User Messages (6 of 7)

Message Text	Impact	Cause and Corrective Action
DsDdRequestMgrC Mark Shipped Failure.	GUI received failure from server. Request was not marked "Shipped."	No Longer Applicable.
DsDdRequestMgrC Resume Failure.	GUI received failure from server. Request was not resumed.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab). Resuming the request may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Enter: **ps -ef | grep EcDsDistributionServer** (Ensure that the Distribution Server is "up.") 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (**single-click** on the **Refresh** button). 5. Try again to resume the request. [For detailed instructions refer to the **Suspend/Resume Data Distribution Requests** procedure (Section 18.2.7).] 6. If repeated attempts to resume request processing fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
DsDdRequestMgrC Set Priority Failure.	GUI received failure from server. Request priority was not changed.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab). Setting priority may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Enter: **ps -ef | grep EcDsDistributionServer** (Ensure that the Distribution Server is "up.") 3. If the server has gone down, notify the Operations Controller/System Administrator to have it brought back up. 4. Try again to set the priority of the selected distribution request. [For detailed instructions refer to the **Change the Priority of Data Distribution Requests** procedure (Section 18.2.6).] 5. If repeated attempts to set the request priority fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
Invalid text field entry.	Invalid data was entered.	1. Enter valid data in the relevant field. 2. Retry the operation that led to the error message.

Table 18.6-3. Data Distribution Operator GUI User Messages (7 of 7)

Message Text	Impact	Cause and Corrective Action
No Ddist request selected. Please select one.	An operation was performed without first selecting a request from the scrolled list.	1. **Single-click** on (highlight) the appropriate request in the list. 2. Retry the operation that led to the error message.

Table 18.6-4. Storage Management User Messages (1 of 36)

Message Text	Impact	Cause and Corrective Action
.lib section in a.out corrupted	Standard system error.	
550 The file to be ftp pulled does not exist at the source location. Either the file never existed at the source location or the source locations file system or network is having problems.	Error returned by the FTP protocol.	Retry.
553 The destination for the file does not exist or the destination exist but the permissions are such on the directory that the file cannot be written or the file already exist and can not be overwritten.	Error returned by the FTP protocol.	Retry.
A command to remove a file failed	Error from DsStStagingMonitor.	
A component of the path prefix is not a directory.	Error from SCSI.	
A configuration parameter had a null or invalid value	Error from DsStStagingMonitor.	
A daemon process was cold restarted so your request has been cancelled	Error returned from DsStCacheManagerServer.	

Table 18.6-4. Storage Management User Messages (2 of 36)

Message Text	Impact	Cause and Corrective Action
A [sic] error occured [sic] using a class destructor [sic].	Error for Archive.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
A file name was not found as expected in the database	Error from DsStStagingMonitor.	
A file size was not the length expected.	Error for Archive.	Retry.
A [sic] interrupted signal was caught.	Error from SCSI.	Retry.
A network error has occurred	Staging disk error message.	Retry.
A request has completed all processing	Error from DsStStagingMonitor.	[No action necessary.]
A request has not completed all processing	Error from DsStStagingMonitor.	[No action necessary.]
A Restart Backup request has failed.	Error for Archive.	Retry.
A search for a file to be retrieved has exhausted all locations.	Error for Archive.	Retry.
A staging disk object was not created in GetLocation()	Error for Archive.	1. Note all possible details related to the error. 2. Report all possible details to the vendor. 3. Retry.
A Store request failed because the volume group is closed.	Error for Archive.	1. Modify the desired volume group location to the valid path. 2. Retry.
Accessing a corrupted shared library	Standard system error.	
Address already in use	Standard system error.	Specify a free port on the server or specify a different server.
Address family not supported by protocol family	Standard system error.	
Advertise error	Standard system error.	

Table 18.6-4. Storage Management User Messages (3 of 36)

Message Text	Impact	Cause and Corrective Action
After the directory was made, the directory could not be stat [sic]	Staging disk error message.	1. Check the SYSLOG for errors. [For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).] 2. Retry after problems have been corrected.
All request slots are currently busy	Error returned from DsStCacheManagerServer.	Retry.
An attempt to delete a file failed.	Error for Archive.	1. Change the permissions on the file. 2. Retry the request.
An attempt to find a Cache Manager serverId has failed.	Error for Archive.	Retry.
An attempt to find a needed server has failed.	Error for Archive.	Retry.
An attempt to generate Restart Backup File requests failed.	Error for Archive.	Retry.
An attempt to generate Store File requests failed.	Error for Archive.	Retry.
An attempt to reserve space for a Retrieve request failed.	Error for Archive.	Retry.
An attempt to retrieve data values from the database failed.	Error from DsStStagingMonitor.	
An attempt to spawn a read thread failed.	Error for Archive.	Retry.
An attempt to spawn a service thread failed.	Error for Archive.	Retry.
An attempt to spawn a write thread failed.	Error for Archive.	Retry.
An attempt to submit a reserve file for a Retrieve request failed.	Error for Archive.	Retry.
An attempt to submit a reserve space for a Retrieve request failed.	Error for Archive.	Retry.

Table 18.6-4. Storage Management User Messages (4 of 36)

Message Text	Impact	Cause and Corrective Action
An error was encountered generating ArDeleteFile requests.	Error for Archive.	Retry.
An internal error has occurred while communicating with Sybase	Error from database.	1. Check the Sybase error log for Sybase communication errors. 2. Ensure that Sybase is up and running properly. 3. Bounce the STMGT server warm to clear any transient error that may have corrupted the connection to the database.
An unknown exception has occurred	DsSt error.	[This error is an internal error in STMGT. It should never happen.] Report the error to the ECS DAAC Help Desk immediately.
An unknown request checkpoint state was found in the database.	Error for Archive.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
An unknown request type has been submitted to this server	Error returned from DsStCacheManagerServer.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Anode table overflow	Standard system error.	
Archive location does not contain requested file	Error for Archive.	Verify the spelling/path name of the requested file.
Archive location does not exist as defined in db tables	Error for Archive.	1. Check the spelling of the archive location that was entered. 2. If the spelling is correct, contact the System Administrator to determine whether the name should be made a new entry.
Archive location does not have adequate permissions	Error for Archive.	1. Ensure that the user ID used when logging in has the proper permissions. 2. If necessary, contact the Archive Administrator to have the permissions set properly.
Archive location does not have adequate permissions for files	Error for Archive.	1. Ensure that the user ID used when logging in has the proper permissions. 2. If necessary, contact the Archive Administrator to have the permissions set properly. 3. Retry.

Table 18.6-4. Storage Management User Messages (5 of 36)

Message Text	Impact	Cause and Corrective Action
Archive Store failed due to illegal file path	Error for Archive.	1. Verify that the file path given is a valid file path. 2. Retry.
Archive Store Failed EcUtFileCopy.Copy() failed	Error for Archive.	
Arg list too long	Standard system error.	
Attempting to link in more shared libraries than system limit	Standard system error.	
BackupOffsite() failed -- Offsite ID == DsCStEmptyString	Error for Archive.	1. Modify the ID of the desired offsite location. (The ID of the desired offsite location must be given and must not be an empty string.) 2. Retry
BackupOnlineLocation failed -- SP DsCStVGSelectHistory execute failed	Error for Archive.	Retry.
BackupTemporaryAndOffsite() failed -- Offsite ID == DsCStEmptyString	Error for Archive.	1. Modify the ID of the desired offsite location. (The ID of the desired offsite location must be given and must not be an empty string.) 2. Retry
Bad address	Standard system error.	If the error arose from a gethostname() call, check the name and namelen parameters.
Bad command sequence -- error in ftp #503	Error returned by the FTP protocol.	
Bad exchange descriptor	Standard system error.	
Bad file descriptor	Standard system error.	1. Check whether the file exists. 2. Check file permissions.
Bad font file format	Standard system error.	
Bad request code	Standard system error.	
Bad request descriptor	Standard system error.	
Bad XDR Stream	Error from DsStFileInfo.	Retry.
Block device required	Standard system error.	
Broken pipe	Standard system error.	

Table 18.6-4. Storage Management User Messages (6 of 36)

Message Text	Impact	Cause and Corrective Action
Cache file entry not in db	Error returned from DsStCacheManagerServer.	[No action necessary.]
calculate checksum is disabled	DsSt error.	[Not an error.]
calculated checksum not equal to specified	DsSt error.	Retry.
Cancelled by a STMGT client	STMGT restart code.	
Cancelled due to client restart	STMGT restart code.	
Cancelled due to STMGT server cold start	STMGT restart code.	[The STMGT server reporting the error was cold started while the submitted request was in queue.] Resubmit the request. (It will be re-processed as if it were a new request.)
Cannot access a needed shared library	Standard system error.	
Cannot assign requested address	Standard system error.	Specify a free port on the server.
Cannot delete from DsStBackup Table -- SP DsCStBDelete execute() failed	Error for Archive.	[No action necessary.]
Cannot delete from DsStRestore Table -- SP DsCStRDelete execute() failed	Error for Archive.	[No action necessary.]
Cannot exec a shared library directly	Standard system error.	
Cannot insert key -- file already exist [sic] in list	Error from DsStStagingDataList.	[No action necessary.]
Cannot open input file	Error from DsStPosixUtil.	Verify that the current user ID has read permission for the file.
Cannot open output file	Error from DsStPosixUtil.	1. Verify that the file is not already open for output. 2. Verify that the current user ID has write permission for the file.
Cannot send after socket shutdown	Standard system error.	
Can't open data connection -- error in ftp #425	Error returned by the FTP protocol.	
CDS path is null	Error for DsStArchiveProxy.	

Table 18.6-4. Storage Management User Messages (7 of 36)

Message Text	Impact	Cause and Corrective Action
Channel number out of range	Standard system error.	
Command not available -- error in ftp #502	Error returned by the FTP protocol.	
Command not implemented for that parameter -- error in ftp #504	Error returned by the FTP protocol.	
Communication error on send	Standard system error.	
Components of path require hopping to multiple remote machines and the file system does not allow it.	Error from SCSI.	
Connection closed, transfer aborted -- error in ftp #426	Error returned by the FTP protocol.	
Connection refused	Standard system error.	1. Verify that the target machine is connected. 2. Verify that the listening server is running.
Connection reset by peer	Standard system error.	
Connection timed out	Standard system error.	1. Check the condition of the network. 2. Retry.
could not close input file	Error from DsStPosixUtil.	[No action necessary.]
could not close output file	Error from DsStPosixUtil.	[No action necessary.]
could not create a pull monitor object	Error from DsStDistributionFtp.	Retry.
could not create a stagingdisk for inftp	Error from inftp.	Retry.
could not create global pointer	Error from DsStDistributionFtp.	
could not create pointer to config file	Error from DsStDistributionFtp.	
Could not determine file size of file.	Error for Archive.	Verify the spelling/path name of the requested file.
Could not remove the staging disk entry from the database	Staging disk error message.	1. Check whether the staging disk exists in the database. (Probable that the disk does not exist.) 2. Retry.

Table 18.6-4. Storage Management User Messages (8 of 36)

Message Text	Impact	Cause and Corrective Action
Could not stat [sic] the file, possible NFS problems or file does not exist	Staging disk error message.	1. Check whether the file exists in the file system. 2. If the file does exist, check the SYSLOG for network file system (NFS) errors. [For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).] 3. Retry after problems have been corrected.
Cross-device link	Standard system error.	Substitute a symbolic link.
DB Session unusable to previous error	Error from database.	[An attempt has been made to continue with a database operation when the previous operation failed. The previous failure has left the connection in a state that is unsuitable for continuing.] Retry.
DCE object not created	Error for DsStArchiveProxy.	Retry.
Deadlock situation detected/avoided	Standard system error.	
default	Error from DsStDistributionFtp.	
Denial of service -- error in ftp #702	Error returned by the FTP protocol.	
Destination address required	Standard system error.	
Device busy	Standard system error.	
Device is already open.	Error from SCSI.	
Device is not open.	Error from SCSI.	
Device Name should be specified to this device control operation	Media error message.	
Directory not empty	Standard system error.	
Drive element number in database does not match any of the physical drives.	Media error message.	
Eject tape Failed	Media error message.	
Empty archive location -- (myArchiveLocation == DsCStEmptyString)	Error for Archive.	[The name of the desired archive location must be given.]

Table 18.6-4. Storage Management User Messages (9 of 36)

Message Text	Impact	Cause and Corrective Action
empty archive location -- failed in SetBackupOnlineLocation()	Error for Archive.	Retry.
Empty file in move request not added to database	Error from DsStStagingMonitor.	
Empty Offline Location	Error for Archive.	[The name of the off-line location must be given.]
empty VG Key	Error for Archive.	
Empty Volume group error	Error for DsStArchiveProxy.	
Environmental variable POSIXUTILCONFIG not set	Error from DsStPosixUtil.	1. Determine an appropriate value for the variable. 2. Set the variable to the appropriate value. 3. Run the command.
Error : User | Password | Host | Source | RequestID are not entered	Error from inftp.	[Any one or more of the following have not been entered: User, Password, Host, Source, or RequestID.] Verify that non-empty strings have been provided for all fields.
Error 47	Standard system error.	
Error close ftp control connection	DsSt error.	Retry.
Error close ftp data connection	DsSt error.	Retry.
Error closing server	Error for DsStFtpUtility.	Retry.
Error encountered in stored procedure	Error for Archive.	[See the description from the stored procedure DsCStSPBSelectByName.] Retry.
Error encountered in stored procedure	Error from database.	[See the description from the stored procedure.] Retry.
Error in accepting socket with accept	DsSt error.	Retry.
Error in closing server	Error for DsStFtpUtility.	Retry.
Error in closing the server	Error for DsStFtpUtility.	Retry.
Error in closing the server	Error from DsStNetworkResource.	Retry.
Error in executing ftp command	DsSt error.	Retry.

Table 18.6-4. Storage Management User Messages (10 of 36)

Message Text	Impact	Cause and Corrective Action
Error in executing ftp Exec()	Error from DsStNetworkResource.	Retry.
Error in FTP Unable to open file to FTP	Error from DsStNetworkResource.	1. Verify that the file exists. 2. Retry.
Error in opening server	Error for DsStFtpUtility.	Retry.
Error in opening the server	Error from DsStNetworkResource.	Retry.
Error in Receiving files	Error for DsStFtpUtility.	Retry.
Error in receiving files	Error from DsStNetworkResource.	Retry.
Error in sending files	Error from DsStNetworkResource.	Retry.
Error in setting hostname	Error for DsStFtpUtility.	Retry.
Error in setting local directory	Error for DsStFtpUtility.	Retry.
Error in setting the local directory	Error from DsStNetworkResource.	Retry.
Error in setting the remote directory	Error from DsStNetworkResource.	Retry.
Error in setting user	Error for DsStFtpUtility.	Retry.
Error in setting user name	Error from DsStNetworkResource.	Retry.
Error in setting User Password	Error for DsStFtpUtility.	Retry.
Error Open File descriptor	DsSt error.	Fatal
Error opening the server	Error for DsStFtpUtility.	Retry.
Error receiving files	Error for DsStFtpUtility.	Retry.
Error Recieving [sic] file	Error for DsStFtpUtility.	Retry.

Table 18.6-4. Storage Management User Messages (11 of 36)

Message Text	Impact	Cause and Corrective Action
Error returned when distributes [sic] files from a staging disk to the tape media in tar format.	Error for tape.	
Error returned when ingests [sic] files from the tape media to a staging disk in tar format.	Error for tape.	
Error returned when verify [sic] the source file list.	Error for tape.	
Error selecting data from the database	Error for Archive.	[A stored procedure is returning a failed status code for a stored procedure.] 1. Set the debug level (for the relevant server) at 3 in the Registry database. 2. Reproduce the error.
Error setting hostname	Error for DsStFtpUtility.	Retry.
Error setting hostname -- host not exist [sic] or network error	Error from DsStNetworkResource.	Retry.
Error setting local directory	Error for DsStFtpUtility.	Retry.
Error setting remote directory	Error for DsStFtpUtility.	Retry.
Error setting server	Error for DsStFtpUtility.	Retry.
Error setting user	Error for DsStFtpUtility.	Retry.
Error setting user name	Error for DsStFtpUtility.	Retry.
Error setting user password	Error from DsStNetworkResource.	Retry.
Error setting user password function	Error for DsStFtpUtility.	Retry.
Error updating the initial RegMgrNotifiedFlag	Media error message.	[No action necessary.]
Error writing file in fast copy	Error from DsStPosixUtil.	Retry.

Table 18.6-4. Storage Management User Messages (12 of 36)

Message Text	Impact	Cause and Corrective Action
Exceeded maximum number of allowable connections to Sybase	Error from database.	1. Verify that the Sybase database configuration has been configured with an adequate number of connections. 2. Retry.
Exceeded storage allocation for current directory or dataset -- error in ftp #552	Error returned by the FTP protocol.	
Exec format error	Standard system error.	
execute() of Stored Procedure -- DsStGRInsert -- failed	Error from DsStDistributionFtp.	[No action necessary.]
Failed attempting to connect to Sybase server	Error from database.	1. Ensure that DBServer for the server has been set properly in the Registry database. 2. Ensure that DBName for the server has been set properly in the Registry database. 3. Retry.
Failed attempting to login to Sybase	Error from database.	1. Verify that the Application ID for the server has been properly set in the Registry database. 2. Verify that login accounts have been properly set up in the Sybase database. 3. Retry.
Failed in checking the slot status.	Media error message.	
Failed in checking the status of tape drive	Media error message.	
Failed in executing stored procedure to retrieve device info by stackerId.	Media error message.	
Failed in executing stored procedure to retrieve slot info by stackerId.	Media error message.	
Failed in executing stored procedure to retrieve stacker info by stackerId.	Media error message.	
Failed to allocate a tape device	Error from SCSI.	
failed to build the client object with parameters for the CDS path	Error for DsStArchiveProxy.	

Table 18.6-4. Storage Management User Messages (13 of 36)

Message Text	Impact	Cause and Corrective Action
Failed to deallocate a tape device	Error from SCSI.	
Failed to get necessary information from database	Error for Archive.	[No action necessary.]
Failed to get the cellname	Error for DsStArchiveProxy.	
Failed to get the client mode	Error for DsStArchiveProxy.	1. Ensure that a mode has been specified as an option on the command line or in the calling script. 2. If a mode has been entered, ensure that it is a valid mode and that all other required command-line options have been entered.
Failed to get the PF config File Pointer	Error for DsStArchiveProxy.	[This command requires a ConfigFile option, where the word ConfigFile is followed by a valid PF config file name.]
Failed to get the PF Global pointer	Error for DsStArchiveProxy.	
Failed to insert the file into the staging disk inventory	Staging disk error message.	(This error should not occur.) 1. Verify that the staging disk exists. 2 Retry.
Failed to load tape (time out).	Error from SCSI.	Retry.
Failed to rename the file in the file system	Staging disk error message.	1. Check the SYSLOG for errors. [For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).] 2. Resubmit the request after problems have been corrected.
Failed to rename the file in the file system and could not reset the original file in the staging disk inventory	Staging disk error message.	Retry.
Failed to rename the file in the staging disk inventory	Staging disk error message.	1. Check the staging disk inventory for the file to be renamed. 2. Retry if the file exists. (If the file does not exist, the request should not be attempted again.)
Failed to stat [sic] the created staging disk directory and the staging disk entry could not be removed from the database	Staging disk error message.	1. Check NFS for errors. 2. The directory entry should be cleaned out of the database upon a warm or cold startup. 3. Retry.
Failed to stat [sic] the created staging disk directory.	Staging disk error message.	1. Check for NFS errors. 2. Retry. [If the directory does exist, the directory entry should be removed upon a warm or cold start of the server.]

Table 18.6-4. Storage Management User Messages (14 of 36)

Message Text	Impact	Cause and Corrective Action
Failed trying to make the directory entry in the file system.	Staging disk error message.	1. Check the SYSLOG for NFS errors. [For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).] 2. Check the permissions of the rootpath. 3. Retry after problems have been corrected.
Failed trying to make the directory entry in the file system. The directory entry could not be removed from the Database.	Staging disk error message.	1. Check the SYSLOG for NFS errors. [For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).] 2. Check the permissions on the rootpath. (the directory entry will be cleaned out of the database upon a warm start or cold start of the server.)
Failure in updating database table(s).	Media error message.	
Failure to close file -- not enough space to flush unwritten bytes	Error from DsStStream.	Retry.
Failure to close file in DsStStream	Error from DsStStream.	
Failure to establish a tcp connection	Error returned by the FTP protocol.	
Failure to open file in DsStStream	Error from DsStStream.	Verify that the file name is spelled correctly and the path is correct.
Fatal error returned by Data Distribution.	Error detected by Data Distribution.	
Fildes is not a valid open file descriptor.	Error from SCSI.	
Fildes is not associated with a device driver that accepts control functions.	Error from SCSI.	
File descriptor in bad state	Standard system error.	
File does not exist	Error from DsStUnixCompress.	Verify that the file name is spelled correctly and its path is correct.
File does not exist to copy	Error from DsStPosixUtil.	Verify the path and the spelling of the file name.
File exists	Standard system error.	
File locking deadlock	Standard system error.	
File name of type RWCString is null	Error from DsStFileCompress.	[The file to be compressed was not given a name.] Enter a non-empty string to indicate file name before attempting this operation.

Table 18.6-4. Storage Management User Messages (15 of 36)

Message Text	Impact	Cause and Corrective Action
File name too long	Standard system error.	
File not found	Error from DsStFileCompress.	
File size in archive and DsMdFileStorage are different.	DsSt error.	1. Notify the Archive Manager to compare the entries in the SDSRV database DsMdFileStorage table and the file in the archive to determine whether the file size is incorrect in the database table or the file in archive is corrupted. 2. When the Archive Manager reports that the problem has been corrected, cancel the distribution request using the Data Distribution Operator GUI. 3. Resubmit the distribution request.
File table overflow	Standard system error.	
file to [sic] big for buffer -- cannot do fast copy	Error from DsStPosixUtil.	
file to [sic] big to read	Error from DsStPosixUtil.	
File too large	Standard system error.	
FTP file transfer failed without an FTP error code (unknown cause)	Error returned from DsStCacheManagerServer.	Retry.
Generic error returned by Data Distribution.	Error detected by Data Distribution.	
Get Location failed -- pathIndex > DsStNullIndex	Error for Archive.	
Get Sense Data failed.	Error from SCSI.	
GetVolGroupLocation failed -- SP DsCStVGSelectHistory execute failed	Error for Archive.	Retry.
Host is down	Standard system error.	
I/O error	Standard system error.	Retry.
ID not set	Error from DsStDistributionFtp.	[Could not find the parameter that indicates the request ID for this request (request parameter is currently an empty string).]

Table 18.6-4. Storage Management User Messages (16 of 36)

Message Text	Impact	Cause and Corrective Action
Identifier removed	Standard system error.	
If the file exist [sic] with enforced record locking enabled, record locks are on the file	Error from SCSI.	
Illegal byte sequence	Standard system error.	
Illegal seek	Standard system error.	
Inappropriate I/O control operation for device	Standard system error.	
Ingest starts	Media error message.	[No action necessary.]
InsertBackupTable() failed -- Unable to Insert into the DsStBackup table -- SP DsCStBInsert execute() failed	Error for Archive.	
InsertRestoreTable() failed - Unable to Insert into the DsStRestore table -- SP DsCStRInsert execute() failed	Error for Archive.	
Insufficient space to move file to the read only cache area	Error from DsStStagingMonitor.	Retry.
Insufficient storage -- error in ftp #452	Error returned by the FTP protocol.	
Interrupted system call, possibly during a select() call	Standard system error.	
Invalid Archive area specified for retrieve	Error for Archive.	
Invalid drive path.	Media error message.	
Invalid function argument.	Standard system error.	[If this occurred after the bind() command, the namelen parameter may indicate an incorrect size, or the indicated socket may already be bound.]
Invalid put method type	Error returned from DsStCacheManagerServer.	

Table 18.6-4. Storage Management User Messages (17 of 36)

Message Text	Impact	Cause and Corrective Action
Invalid slot	Standard system error.	
Invalid slot number.	Media error message.	
Invalid stacker path.	Media error message.	
Invalid Transfer stage returned from DB -- err in RestartBackup() or RestartRestore()	Error for Archive.	
Is a directory	Standard system error.	Either select a different file name, select a file under the specified directory, or delete the directory.
Level 2 halted	Standard system error.	
Level 2 not synchronized	Standard system error.	
Level 3 halted	Standard system error.	
Level 3 reset	Standard system error.	
Link exists	Error returned from DsStCacheManagerServer.	
Link has been severed	Standard system error.	
Link number out of range	Standard system error.	
Link of files failed	Staging disk error message.	1. Check the staging disk log to identify the reason for the symlink failure. 2. Retry.
Local error in processing -- error in ftp #451	Error returned by the FTP protocol.	
Machine is not on the network	Standard system error.	
Making space	Error returned from DsStCacheManagerServer.	[Space needed in cache.] Retry
Managed directory path is invalid	Error returned from DsStCacheManagerServer.	Check path and mount points.
Math argument out of domain of function	Standard system error.	
Message tables full	Standard system error.	

Table 18.6-4. Storage Management User Messages (18 of 36)

Message Text	Impact	Cause and Corrective Action
Message too long for message buffer	Standard system error.	
Missing request parameters	Media error message.	
MountTape Failed	Media error message.	
msg	Error for DsStArchiveProxy.	Retry.
Multihop attempted	Standard system error.	
Name not unique on network	Standard system error.	
Need account for storing files -- error in ftp #532	Error returned by the FTP protocol.	
Network dropped connection because of reset	Standard system error.	
Network is down	Standard system error.	Wait for the network to come back up.
Network is unreachable	Standard system error.	
No available drive.	Media error message.	
No buffer space available	Standard system error.	
No child processes	Standard system error.	
No CSI structure available	Standard system error.	
No data available	Standard system error.	
No disk space in pull monitor	Error from DsStDistributionFtp.	Retry.
No entries available to be deleted by Batch Delete function	Error for Archive.	[No action necessary.]
No entries in the queue	From DsStDiskRequestManager.	[No action necessary.]
No filename to delete from the amass cache	Error for DsStArchiveProxy.	Retry.

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Message Text	Impact	Cause and Corrective Action
NO hwci	Error for DsStArchiveProxy.	1. Ensure that a Hardware Configuration Item (HWCI) has been specified as an option on the command line or in the calling script. 2. If an HWCI has been entered, ensure that it is valid and that all other required command-line options have been entered.
No hwci:volgrp error	Error for DsStArchiveProxy.	
No HWCI:volumegroup was passed	Error for Archive.	
No instance of queue exists	Error from DsStDiskRequestManager.	1. Note all circumstances related to the error. 2. Submit a trouble ticket.
No message of desired type	Standard system error.	
No online stacker.	Media error message.	
No record locks available	Standard system error.	
No records found in file to FTP	Error from DsStNetworkResource.	Check staging disk for file with list. Retry.
No requests have been cancelled for this server	Error returned from DsStCacheManagerServer.	[Not an error.] [The server is checking to see if any requests have been cancelled in order to process the cancellation. No requests have been cancelled. This error can be safely ignored as it is internal to STMGT.]
No resource (drive/slot) available for request	Error for tape.	1. Check stacker/drive status. 2. If appropriate, refill stacker. 3. Retry.
No route to host	Standard system error.	
NO SCSI device	Error from SCSI.	
No servers need to be awakened to service this request	Error returned from DsStCacheManagerServer.	[Not an error.] [The submitted request is a trivial request that can be fulfilled solely from the database. No servers will be notified as part of the request processing.]
No space left on device	Standard system error.	
No space left on device.	Error from SCSI.	
No such device	Standard system error.	

Table 18.6-4. Storage Management User Messages (20 of 36)

Message Text	Impact	Cause and Corrective Action
No such device or address; server exited before connection was complete	Standard system error.	
No such file or directory	Standard system error.	Verify the path name of the file or directory.
No such process	Standard system error.	
No such volume group	Error for Archive.	
No value for Capacity set in configuration file	Error from DsStFtpResourceConfig.	1. Ensure that the capacity has been queried on a valid device. 2. Ensure that the ftp resource config file exists. 3. Ensure that the ftp resource config file contains a value for CAPACITY.
Not a data message	Standard system error.	
Not a directory	Standard system error.	Verify the directory path.
Not a stream device	Standard system error.	
Not enough space	Standard system error.	1. Kill unnecessary processes. 2. Re-nice necessary processes if possible.
Not logged in - error in ftp #530 - username or password incorrect	Error returned by the FTP protocol.	
Not owner	Standard system error.	Either change the permissions or ownership of the file/executable, or run as a different user.
Null UserId or Password	Error for Archive.	[A valid UNIX userID must be entered and must contain at least one character.]
Number of symbolic links encountered during path name traversal exceeds MAXSYMLINKS	Standard system error.	[There are probably symbolic links pointing to each other.]
Object is remote	Standard system error.	
Online Backup Failed EcUtFileCopy.Copy() failed	Error for Archive.	[No action necessary.]
Operation already in progress	Standard system error.	Wait for an operation on the socket or other object to complete.

Table 18.6-4. Storage Management User Messages (21 of 36)

Message Text	Impact	Cause and Corrective Action
Operation not applicable/not implemented	Standard system error.	
Operation not supported on transport endpoint	Standard system error.	
Operation now in progress	Standard system error.	
Option not supported by protocol	Standard system error.	
Out of stream resources	Standard system error.	Wait for other processes to release resources.
Package not installed	Standard system error.	
Page type unknown -- error in ftp #551	Error returned by the FTP protocol.	
Parameter syntax error in FTP -- error in ftp #501	Error returned by the FTP protocol.	
Path points to a remote machine, and the link to that machine is no longer active.	Error from SCSI.	
Path points to an illegal address.	Error from SCSI.	
path to pull monitor not set	Error from DsStDistributionFtp.	[Could not find the parameter that indicates the effective root directory for the pull monitor.] Verify that a path is being supplied.
Pending write is greater than the allocated space	Error from DsStStream.	Temporarily write data to a disk with more free space.
Permission denied	Standard system error.	1. Execute as root. 2. If already root, choose another socket type or protocol.
Possible space limitation or the disk does not exist in the database	Staging disk error message.	1. Check whether the server has space available. 2. Retry when sufficient space exists. (If the disk does not exist in the database, the request should be failed.)
Process chosen as database deadlock victim	Error from database.	[Command is automatically re-run.]
Protocol driver not attached	Standard system error.	

Table 18.6-4. Storage Management User Messages (22 of 36)

Message Text	Impact	Cause and Corrective Action
Protocol error	Standard system error.	
Protocol family not supported	Standard system error.	
Protocol not supported	Standard system error.	Call socket() with a different protocol.
Protocol wrong type for socket	Standard system error.	[Source code needs to be checked; name struct passed to connect command must reflect the protocol type used to open the socket.]
Pull monitors [sic] pull directory is null	Error from DsStDistributionFtp.	[Could not find the parameter that indicates the pull directory for this ftp request.] Verify that a path is being supplied.
Read only cache location does not have adequate permissions	Error for Archive.	1. Ensure that the user ID used when logging in has the proper permissions. 2. If necessary, contact the Cache Manager Administrator to have the permissions set properly.
Read-only file system	Standard system error.	1. Determine whether it is possible to write to the destination directory (i.e., check permissions). 2. If it is possible to write to the destination directory, remount the device that contains the directory.
Remote address changed	Standard system error.	
Remote archive not created for BackupOnline or BackupOffline	Error for Archive.	Retry.
Request or arg is not valid for this device.	Error from SCSI.	
Request size exceeds Capacity or Threshold.	Error detected by Data Distribution.	Retry.
Requested file action not taken -- error in ftp #450	Error returned by the FTP protocol.	
Resource temporarily unavailable	Standard system error.	Either kill all unnecessary processes or wait for other processes to terminate.
RestartBackup() failed -- SP DsCStBSelectByNam e execute() failed	Error for Archive.	
RestartNotification function failed x	Error for DsStArchiveProxy.	[No action necessary.]

Table 18.6-4. Storage Management User Messages (23 of 36)

Message Text	Impact	Cause and Corrective Action
RestartRestore() failed -- SP DsCStRSelectByName execute() failed	Error for Archive.	
Restore Offline failed	Error for Archive.	
Result too large	Standard system error.	
Retry error returned by Data Distribution.	Error detected by Data Distribution.	Retry.
SCSI device is busy	Error from SCSI.	Retry.
SCSI device is in check status	Error from SCSI.	Retry.
SCSI device is not accessible.	Error from SCSI.	
Server crashed	STMGT restart code.	1. Check the logs for the identified server to ascertain the cause of the crash. 2. Restart the server as soon as possible 3. Contact the ECS Help Desk for additional support.
Server crashed and is being automatically restarted (warm)	STMGT restart code.	Check the logs for the identified server to ascertain the cause of the crash.
Server is temporarily unavailable	STMGT restart code.	[The requested server is not running.} 1. If the server is expected to be running, check the logs to determine why the server is no longer running. 2. Restart the server. 3. Resubmit the request.
Service not available -- error in ftp #421	Error returned by the FTP protocol.	
Slot number in database does not match any of the physical slot numbers.	Media error message.	
Socket operation on non-socket	Standard system error.	[Source code needs to be checked; program should not attempt to perform socket operations on non-socket file descriptors.] Submit a trouble ticket.
Socket type not supported	Standard system error.	
Software caused connection abort	Standard system error.	
Some physical I/O error has occurred.	Error from SCSI.	

Table 18.6-4. Storage Management User Messages (24 of 36)

Message Text	Impact	Cause and Corrective Action
Source file for a retrieve request was not found	Error for Archive.	1. Verify the spelling and pathname of the file to be retrieved. 2. Retry.
Source file for link or delete not found	Staging disk error message.	Verify the spelling and pathname of the file to be deleted or linked.
source parameters are not set	Error from DsStDistributionFtp.	[Could not find the parameter that indicates the source for the ftp transfer (source parameter is currently an empty string).] Ensure that the source is being supplied.
Space has not been reserved in cache for this file	Error returned from DsStCacheManagerServer.	1. Check for server cold start. 2. Resubmit request.
space not available on staging disk for inftp	Error from inftp.	1. If the file is bigger than the space allocated for staging disk, modify the staging disk configuration. 2. If the file is not bigger, wait for other requests to complete so that space will be freed on the staging disk. 3. Retry.
Srmount error	Standard system error.	
StagingMonitor object was not created in GetStagingMonitor()	Error for Archive.	Retry.
Stale NFS file handle	Standard system error.	
Stored procedure not found or invalid	Error from database.	1. Check the database and/or contact the Database Administrator. 2. Retry.
Sybase does not recognize the specified login name	Error from database.	1. Ensure that, if the DBLoginName parameter has been set in the Registry database, it has been set to a login that actually exists in the Sybase database. 2. Retry.
system compress 'compress' function failed	Error from DsStUnixCompress.	[There may not be enough space on the partition for the compressed and uncompressed versions to exist simultaneously.] 1. Temporarily move the file to a partition with more space. 2. Compress the file in the temporary location. 3. Move the compressed file back to the original location.
System copy function failed	Error from DsStFileCompress.	
system move 'mv' failed	Error from DsStUnixCompress.	1. Verify that the current user ID has write permission for the file. 2. Verify that the current user ID has write permission in the target directory. 3. Verify that the destination file does not exist already.

Table 18.6-4. Storage Management User Messages (25 of 36)

Message Text	Impact	Cause and Corrective Action
system symlink failed to make a symbolic link from a source file to the target filename	Error from DsStUtility.C.	
system uncompress 'uncompress' failed	Error from DsStUnixCompress.	[There may not be enough space on the partition for the compressed and uncompressed versions to exist simultaneously.] 1. Temporarily move the file to a partition with more space. 2. Compress the file in the temporary location. 3. Move the compressed file back to the original location.
Temporary Backup Failed EcUtFileCopy.Copy() failed	Error for Archive.	[No action necessary.]
Text file busy	Standard system error.	
The named file does not exist.	Error from SCSI.	
The Cache Manager Copy Into Cache function failed	Error for Archive.	Retry.
The Cache Manager Reserve Space function failed	Error for Archive.	Retry.
The child of a daemon process servicing your request crashed	Error returned from DsStCacheManagerServer.	Retry.
The construction invoked is not valid for use.	Error for Archive.	
The database could not create a staging disk. Possible space limitations	Staging disk error message.	1. Check the available space of the staging disk server on the Storage Management Control GUI (Storage Config tab). 2. Retry.
The destination directory where the file is to be copied does not exist	Staging disk error message.	1. Check the SYSLOG for NFS errors. [For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).] 2. If the destination is a staging disk, verify that the staging disk exists. 3. Retry after problems have been corrected.
The execute() failed in Commit Transaction	Error for Archive.	Retry.

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Message Text	Impact	Cause and Corrective Action
The execute() failed in DsStCommonDBIF	Error for Archive.	Retry.
The file could not be removed from the staging disk database inventory and no attempt will be made to remove the file from the file system	Staging disk error message.	1. Check the staging disk logs for database errors concerning the removal of the file from the database. 2. Retry.
The file does not exist and write permission is denied by the parent directory of the file to be created.	Error from SCSI.	
The file to be deleted does not exist in the file system	Staging disk error message.	1. Check the SYSLOG for NFS errors. [For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).] 2. Verify that the staging disk exists. 3. Retry after problems have been corrected.
The file was deleted from the staging disk database inventory but was unable to be removed from the file system.	Staging disk error message.	1. Verify that the file exists. 2. Check for NFS errors in the SYSLOG. [For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).] 3. Retry after problems have been corrected.
The file was not found	DsSt error.	1. Verify that the file name is spelled correctly. 2. Verify that the path is correct. 3. Retry.
The host for ftp does not have a valid IP address and can not be connect to.	Media error message.	1. Verify the host name. 2. Retry.
The host for ftp exist [sic] but cannot be connected to. Check the FtpServers [sic] debug log for the errno.	Media error message.	1. Check the FtpServer debug log for the errno. 2. Respond to the error. 3. Retry.
The input path is neither a regular file nor a directory	Error from DsStUtility.C.	[It appears that a device-special file has been passed as a source path for a copy operation. This type of operation is not supported.] 1. Verify that the input path is correct. 2. Retry.

Table 18.6-4. Storage Management User Messages (27 of 36)

Message Text	Impact	Cause and Corrective Action
The length of the path argument exceeds {PATH_MAX}, or the length of a path component exceeds {NAME_MAX}.	Error from SCSI.	
The linked file created by the Cache Manger does not exist	Staging disk error message.	1. Check the SYSLOG for NFS errors. [For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).] 2. Check the CacheManager logs for errors. 3. Retry after problems have been corrected.
The method to suspend a request to be deleted failed	Error for DsStArchiveProxy.	Retry.
the mode the client passed does not match the mode the client is running in -- backup mode should match primary mode	Error for Archive.	Retry.
the move request failed during the copy	Error from DsStStagingMonitor.	Retry.
The move request was failed because it is a dupe of a failed request	Error from DsStStagingMonitor.	Retry.
The named file exists	Error from SCSI.	
The named file is a character special or block special file, and the device associated with this special file does not exist.	Error from SCSI.	
The named file is a directory and flag is write or read/write	Error from SCSI.	
The named file resides on a read-only file system.	Error from SCSI.	
the passed MasterList must be same size as retrieve from DB in ResumeStoreRequest or ResumeRetrieveRequest	Error for Archive.	

Table 18.6-4. Storage Management User Messages (28 of 36)

Message Text	Impact	Cause and Corrective Action
The process has too many open files	Error from SCSI.	
The request has invalid input parameters	Error for Archive.	
The request has invalid input parameters	Error from DsStStagingMonitor.	
The request has not completed in the maximum amount of time allocated	Error from DsStStagingMonitor.	Retry.
The request is already being serviced	Error returned from DsStCacheManagerServer.	[This is an internal error detected by STMGT. A request that is already being serviced by a thread was identified by a manager thread as being available for servicing. The attempt to assign the request to a second thread has failed.]
The request was cancelled because of a failure earlier in the processing.	Error for Archive.	1. Check the error code of all sub-requests of the main request. 2. Retry.
The requested function cannot be performed due to the permission settings on the file/directory	Staging disk error message.	1. Change the permissions on the file. 2. Retry.
The server was unable to allocate a socket for listening	Error returned from DsStCacheManagerServer.	[A UNIX error has occurred preventing the allocation of a socket for listening purposes. This is an extremely unusual circumstance.] 1. Document the error. 2. Refer the error to the System Administrator for investigation.
The slot or drive returned from allocate is invalid	Error for tape.	1. Check stacker/drive status. 2. If appropriate, refill stacker. 3. Retry.
The source file for a link does not exist	Staging disk error message.	1. Check the file system for the source file. 2. If the source file exists in the file system, check the SYSLOG for NFS errors. [For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).] 3. Retry after problems have been corrected.
The source file to be copied does not exist in the file system	Staging disk error message.	1. Check the SYSLOG for NFS error. [For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).] 2. Retry after problems have been corrected.

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Message Text	Impact	Cause and Corrective Action
The specified tape drive is empty.	Media error message.	
The specified tape drive is occupied.	Media error message.	
The Staging Disk no longer exist [sic] in the Database	Staging disk error message.	1. Check whether the staging disk was cold started, which would have destroyed the disks. 2. If the disk was a virtual disk, check whether the path still exists. 3. Check the SYSLOG for file system errors. [For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).] 4. Retry if possible after problems have been corrected.
The Staging Monitor Move function failed	Error for Archive.	
The staging monitor request queue encountered an error retrieving or writing data.	Error from DsStStagingMonitor.	
The submission of a Cache Manager Copy Into Cache function failed	Error for Archive.	Retry.
The system file table is full.	Error from SCSI.	
The system is unable to allocate a send descriptor.	Error from SCSI.	
The system remove function failed in Delete()	Error for Archive.	[No action necessary.]
The thread pool is not configured for the server	Error returned from DsStCacheManagerServer.	1. Check the configuration of the server to be started (i.e., verify from the Storage Management Control GUI that the service thread pool has been defined.) 2. Retry.
This is not an error -- detailed portion is null	Error returned by the FTP protocol.	[Not an error.]
Timer expired	Standard system error.	
Too many links	Standard system error.	
Too many open files	Standard system error.	1. Direct the process to close some open files. 2. Retry.
Too many references: cannot splice	Standard system error.	

Table 18.6-4. Storage Management User Messages (30 of 36)

Message Text	Impact	Cause and Corrective Action
Too many symbolic links were encountered in translating path.	Error from SCSI.	
Too many users	Standard system error.	
Transport endpoint is already connected	Standard system error.	[It may not be necessary to attempt to establish a connection.] 1. If necessary, disconnect. 2. Retry.
Transport endpoint is not connected	Standard system error.	
Type mismatch in retreiving [sic] data from database	Error for Archive.	[A stored procedure is returning a different type of data than is expected by the code.] 1. Set the debug level (for the relevant server) at 3 in the Registry database. 2. Reproduce the error.
Type mismatch in retreiving [sic] data from database	Error from DsStDistributionFtp.	[A stored procedure is returning a different type of data than is expected by the code.] 1. Set the debug level (for the relevant server) at 3 in the Registry database. 2. Reproduce the error.
Unable to allocate a stream.	Error from SCSI.	
Unable to attach/stat [sic] to source location	Error returned from DsStCacheManagerServer.	1. Create/verify source path. 2. Retry.
Unable to checkpoint file -- SP DsCStSPCheckpoint File execute() failed	Error from DsStFileParameters.	[No action necessary.]
Unable to checkpoint inftp request as generic request -- SP DsCStSPCheckpoint GenericRequest execute() failed	Error from inftp.	[No action necessary.]
Unable to checkpoint inftp request as inftp request	Error from inftp.	[No action necessary.]
Unable to checkpoint retrieve request as generic request	Error for Archive.	[No action necessary.]
Unable to checkpoint store request as generic request	Error for Archive.	[No action necessary.]

Table 18.6-4. Storage Management User Messages (31 of 36)

Message Text	Impact	Cause and Corrective Action
Unable to clean files from destination dir when cancelling a push	Error from DsStNetworkResource.	1. Check destination permissions. 2. Retry.
Unable to clean files from pull cache when cancelling a pull	Error from DsStNetworkResource.	1. Check pull cache permissions. 2. Retry.
Unable to create entry for link	Error returned from DsStCacheManagerServer.	1. Check the database for permissions/errors. 2. Verify that the entry exists. 3. Retry.
Unable to free sufficient space	Error returned from DsStCacheManagerServer.	1. Manually expire cache files to free more space. 2. Retry.
Unable to get the temporary directory from Backup -- SP DsCStBSelectTempDir execute() failed	Error for Archive.	
Unable to get the temporary directory from restore -- SP DsCStRSelectTempDir execute() failed	Error for Archive.	
Unable to insert BackupID -- BackupID is Null	Error from DsStFileParameters.	1. Modify the BackupID. (A valid BackupID is required. It must be a string with at least one character.) 2. Retry.
Unable to insert checkSum of file -- CheckSum = 0	Error from DsStFileParameters.	If possible, rerun the checksum on the file. (A checksum of 0 is meaningless.)
Unable to insert current position of a search of a volume group	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Unable to insert file size of file -- file size = 0	Error from DsStFileParameters.	Try to get file size again. (File size of 0 represents a file containing no information.)
Unable to insert managed directory entry	Error returned from DsStCacheManagerServer.	1. Check the database for permissions/errors. 2. Verify that the entry exists. 3. Retry
Unable to insert OffsiteID -- OffsiteID is Null	Error from DsStFileParameters.	1. Modify the ArchiveID. (A valid ArchiveID is required. It must be a string with at least one character.) 2. Retry.

Table 18.6-4. Storage Management User Messages (32 of 36)

Message Text	Impact	Cause and Corrective Action
Unable to insert the archive unique name of file -- UniqueFileName is Null	Error from DsStFileParameters.	[A non-empty unique file name must be entered here.]
Unable to Insert the ArchiveID -- ArchiveID is Null	Error from DsStFileParameters.	1. Modify the ArchiveID. (A valid ArchiveID is required. It must be a string with at least one character.) 2. Retry.
Unable to insert the checkpoint state of the request -- CheckpointState is Null	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Unable to insert the file index of the request -- EventMessage is Null	Error from DsStFileParameters.	
Unable to insert the file index of the request -- file index is less than 0	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Unable to insert the location of a source file.	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Unable to insert the serverid of a remote archive server.	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Unable to Insert the StagingID -- StagingID is Null	Error from DsStFileParameters.	1. Modify the ArchiveID. (A valid StagingID is required. It must be a string with at least one character.) 2. Retry.
Unable to insert the status of the file (success or failure) -- errorMsg is Null	Error from DsStFileParameters.	[No action necessary.]

Table 18.6-4. Storage Management User Messages (33 of 36)

Message Text	Impact	Cause and Corrective Action
Unable to insert the user(client) name of file -- UserFileName is Null	Error from DsStFileParameters.	1. Modify the path/filename. (The file name must have a full path or staging disk ID, and must be non-empty.) 2. Retry.
Unable to insert the VolumeGroupId.	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Unable to insert type of search on a retrieve request.	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Unable to make the directory	Staging disk error message.	1. Check the SYSLOG for errors. [For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).] 2. Retry after problems have been corrected.
Unable to mark request as suspended	Error returned from DsStCacheManagerServer.	[The stored procedure used to mark a request as suspended (or internally pending) failed. The request cannot be marked as suspended. This may result in the request needlessly being processed repeatedly.] Retry.
Unable to mark server as up in the database	Error returned from DsStCacheManagerServer.	[The database could not be updated to reflect that the server is up.] 1. Check for previous errors that might indicate why the stored procedure could not be executed. 2. Correct the errors.
Unable to read files from source directory when storing a file	DsSt error.	Check the source directory file.
Unable to remove a stored file from the archive.	Error from DsStFileParameters.	1. Check the archive for permission errors. 2. Submit a request to the System Administrator to correct permission errors. 3. Retry when permission errors have been corrected.
Unable to remove link entry	Error returned from DsStCacheManagerServer.	1. Check the database for permissions/errors. 2. Verify that the entry exists. 3. Retry
Unable to remove managed directory entry	Error returned from DsStCacheManagerServer.	1. Check the database for permissions/errors. 2. Verify that the entry exists. 3. Retry

Table 18.6-4. Storage Management User Messages (34 of 36)

Message Text	Impact	Cause and Corrective Action
Unable to restore checkpointed IngestFtp request from DB	Error from inftp.	
Unable to restore checkpointed retrieve request from database	Error for Archive.	
Unable to restore checkpointed store request from database	Error for Archive.	
Unable to retrieve the base block size value from configuration file	Error from DsStFtpResourceConfig.	1. Ensure that the block size has been queried on a valid device. 2. Ensure that the ftp resource config file exists. 3. Ensure that the ftp resource config file contains a value for BLOCKSIZE.
Unable to retrieve the number of FTP retries from configuration file	Error from DsStFtpResourceConfig.	1. Ensure that the number of retries has been queried on a valid device. 2. Ensure that the ftp resource config file exists. 3. Ensure that the ftp resource config file contains a value for RETRIES.
Unable to retrieve the pause time from the resource configuration file	Error from DsStFtpResourceConfig.	1. Ensure that the sleep time has been queried on a valid device. 2. Ensure that the ftp resource config file exists. 3. Ensure that the ftp resource config file contains a value for SLEEPTIME.
Unable to retrieve the value for Pullfile from the configuration file	Error from DsStFtpResourceConfig.	1. Ensure that the pullfile name has been queried on a valid device. 2. Ensure that the ftp resource config file exists. 3. Ensure that the ftp resource config file contains a value for PULLFILENAME.
Unable to update checkpoint state for checkpointed request	Error for Archive.	[No action necessary.]
Unable to update checkpoint state for checkpointed request	Error from inftp.	[No action necessary.]
Unable to update checkpoint state for file -- SP DsCStSPCheckpointFileState execute() failed	Error from DsStFileParameters.	[No action necessary.]

Table 18.6-4. Storage Management User Messages (35 of 36)

Message Text	Impact	Cause and Corrective Action
Unable to update checkpoint status for checkpointed request	Error for Archive.	
Unable to update checksum for file -- SP DsCStSPCheckpoint Checksum execute() failed	Error from DsStFileParameters.	[A checksum is a way of validating a file. From this point, it may not be possible to verify the file's completeness and genuineness.] [No action necessary.]
Unable to update file index for checkpointed request	Error for Archive.	[No action necessary.]
Unable to update file size	Error returned from DsStCacheManagerServer.	1. Check the database for permissions/errors. 2. Verify that the entry exists. 3. Retry.
Unable to update file state	Error returned from DsStCacheManagerServer.	1. Check the database for permissions/errors. 2. Verify that the entry exists. 3. Retry
Unable to update fileSize for file -- SP DsStFUpdateFileSize execute() failed	Error from DsStFileParameters.	N/A
Unable to update physical location for file -- SP DsCStSPCheckpoint FileLoc execute() failed	Error from DsStFileParameters.	[No action necessary.]
Unable to update stage and status in DsStBackup table -- SP DsCStBUpdStageAnd Status execute() failed	Error for Archive.	[No action necessary.]
Unable to update stage and status in DsStRestoreTable -- SP DsCStRUpdStageAn dStatus execute() failed	Error for Archive.	[No action necessary.]

Table 18.6-4. Storage Management User Messages (36 of 36)

Message Text	Impact	Cause and Corrective Action
Unable to update staging disk tag for file -- SP DsCStSPCheckpoint SDTag execute() failed	Error from DsStFileParameters.	[No action necessary.]
Unable to update status(failed) for file -- SP DsCStSPCheckpoint FileFailure execute() failed	Error from DsStFileParameters.	
Unable to write a block of data. Check if the destination directory is full or if there are network errors	Error from DsStNetworkResource.	1. Check whether the destination directory has space available. 2. Check for network errors. 3. Retry when sufficient space exists or network errors have been corrected.
Unauthenicated [sic] kftp user -- error in ftp #705	Error returned by the FTP protocol.	
Unknown command -- error in ftp #500	Error returned by the FTP protocol.	
Unknown device error returned.	Error from SCSI.	
Unknown Error	Error returned by the FTP protocol.	
Unknown RPC failure	Staging disk error message.	Retry.
UnMountTape Failed	Media error message.	
Update of multiple row selects not supported	Error from database.	[This is an internal STMGT error.] 1. Note all circumstances associated with the error, including the identity of the server reporting the error. 2. Report the error to the ECS DAAC Help Desk as soon as possible.
Users [sic] quota full	Error from SCSI.	
Value too large for defined data type	Standard system error.	
Your request is still in process -- please be patient	Error returned from DsStCacheManagerServer.	1. Wait. 2. Retry if necessary.

Table 18.6-5. Order Manager GUI User Messages (1 of 12)

Message Text	Impact	Cause and Corrective Action
!!! ERROR: It appears that all granules have been failed. You can not submit or partition a request with all FAILED granules. This request should be failed. To do this, Select "Fail Request" from the Request Disposition section and try again. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page. If all the granules in a request have been failed, the request can no longer be submitted or partitioned. The only corrective action is to fail the entire request or place it on hold. 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. Either fail the entire request or place it on hold. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]
All of the granules for this request have been failed. You can not submit or partition the request because the submission will fail and another operator intervention will be created for it. This request should be failed. Return to the previous page and select "Fail Request" under the Request Disposition section.	Intervention cannot be resolved.	The operator failed all the granules for a particular request and tried to submit or partition it. Since there are no granules, there is nothing to submit or partition. The entire request should be failed. 1. **Single-click** on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** (**Intervention for Request *x***) page. 2. Fail the entire request. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]
An error has occurred with the page you are requesting. Error Message: <message>	Various.	The message appears on the **Error** page and is displayed in response to a stored procedure or system fault. Although the previously attempted operation can be retried, in most cases the error is a fatal one (e.g., a binary was installed incorrectly or is missing). 1. If feasible, retry the operation that resulted in the error message. 2. If repeated attempts to perform the operation fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
An error message was not available. Please contact the system administrator for further assistance.	Various.	The message appears on the **Error** page when there is a problem with the Perl code or a stored procedure that did not give a specific reason as to why it failed. There is no operator-level corrective action to take in this case. Call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 18.6-5. Order Manager GUI User Messages (2 of 12)

Message Text	Impact	Cause and Corrective Action
An undefined error occurred executing the stored procedure	Various.	The problem is an internal error due to a bad database connection, incorrect stored procedure arguments, or a system fault. It is not due to operator error. The first possible solution is to resubmit the changes for the Intervention (essentially retrying the database connection). 1. Resubmit the changes for the intervention. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).] 2. If resubmitting the changes for the intervention is not successful, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
Error executing SweeperStart: <message>	Server Statistics or Queue Status page does not display correct information, or the affected pages do not display at all.	The message appears either on the **Error** page, **OM Queue Status** page, or **OM Server Statistics** page. **SweeperStart** is a shell script that runs the Sweeper binary, which tells the system whether or not certain servers are up and running. If either the shell script or the Sweeper binary is corrupt, missing, not executable, or has the wrong permissions, the error message is displayed. The **OM GUI** must be reinstalled or the binary or shell script must be manually copied to its proper location and given the proper permissions. Call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
Error: <VALUE> is an invalid number for this parameter." [Displayed in a dialogue box]	A parameter value does not get modified.	The error message can appear on the **Media Configuration** page or **Server Configuration** page. It is probably the result of trying to change a parameter value (which requires a number) to a value that either contains non-numeric characters, is outside the valid range for the parameter, or contains a decimal point when the value should be an integer. 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. Enter a valid value for the parameter. [For detailed instructions refer to the **Check/Modify OM Configuration Parameters** procedure (Section 18.5.8).]

Table 18.6-5. Order Manager GUI User Messages (3 of 12)

Message Text	Impact	Cause and Corrective Action
ERROR: An [sic] database error was encountered: deadlock could not be resolved after <NUMBER> tries	An action requiring a call to a stored procedure or access to a database table is not taken.	The message appears on the **Error** page after a stored procedure could not be executed due to a database (or table) deadlock. The command is retried a number of times (depending on the DEADLOCK_RETRIES parameter in the configuration file) before the message is displayed. Retrying later may be successful. However, it may be that the OMS or MSS database is experiencing a heavy load or is corrupt in some way. If the problem cannot be quickly resolved, there might be a performance issue or the stored procedure may contain an error. 1. At a later time retry the operation that resulted in the error message. 2. If the operation fails again, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
ERROR: Can't open session file: <message>	Requested page does not display.	This error message can occur on any page. The session file is like a cookie – it can expire or become corrupt. For this reason, bookmarks should not be saved for specific **OM GUI** pages. If a session is more than five (5) days old, and the GUI has not been restarted in that amount of time, the error is certain to occur. Reload the GUI by starting it from a bookmark or manually typing the base URL (without a session ID). [For detailed instructions refer to the **Launch the Order Manager GUI** procedure (Section 18.5.1).]
ERROR: Invalid name entered into Worked by field. You must enter a name into this field before proceeding. [Displayed in a dialogue box]	Actions cannot be taken on an intervention.	The message appears on the **Open Intervention Detail** page when the operator attempts to enter non-alphanumeric characters, nothing, or just white space into the **Worked by:** field. A real name or a user ID must be entered in the field. Numbers and spaces are allowed. 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. In the **Worked by:** text entry box on the **Open Intervention Detail** page enter: **<name>** [valid name] [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]

Table 18.6-5. Order Manager GUI User Messages (4 of 12)

Message Text	Impact	Cause and Corrective Action
ERROR: It appears that all granules have been failed. You can not submit or partition a request with all FAILED granules. This request should be failed. To do this, Select "Fail Request" from the Request Disposition section and try again. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page. If all the granules in a request have been failed, the request can no longer be submitted or partitioned. The only corrective action is to fail the entire request or place it on hold. 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. Either fail the entire request or place it on hold. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]
Error: Not that many rows or invalid row number. [Displayed in a dialogue box]	The Operator is unable to navigate through rows (on various pages).	An invalid row number was entered in the navigation box at the top of a listing. The error can appear on any page with the navigation feature. 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. In the navigation box enter: **<number>** [row number within the range of rows displayed on the GUI screen] 3. **Single-click** on the **ok** button.
ERROR: Partition days must be an integer. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page if the operator was partitioning the request and entered a fractional number (or some garbage characters) in the **days** field. The number of days should be entered as a whole number only. 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. Verify that the **Partition (current size is *x* MB)** button has been selected (**single-click** on the button if necessary). 3. In the **days** text box enter: **<number of days>** [whole number of days for the time period] 4. Complete the intervention. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]

Table 18.6-5. Order Manager GUI User Messages (5 of 12)

Message Text	Impact	Cause and Corrective Action
ERROR: Partition hours must be an integer. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page if the operator was partitioning the request and entered a fractional number (or some garbage characters) in the **hours** field. The number of hours should be entered as a whole number only. 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. Verify that the **Partition (current size is *x* MB)** box has been selected (**single-click** on the box if necessary). 3. In the **hours** text box enter: **<number of hours>** [whole number of hours for the time period] 4. Complete the intervention. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]
ERROR: You can not change the media type and update the FTP Push parameters. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page, probably due to inadvertently checking the **Update FtpPush Parameters** box. Either the button should be un-checked or the distribution medium should be changed the proper way. 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. If the **Update FtpPush Parameters** box was inadvertently checked, **single-click** on the box to uncheck it. 3. If the **Update FtpPush Parameters** box was checked on purpose, verify that the **Change Media to:** box is not checked. (**Single-click** on it if necessary). 4. If the **Update FtpPush Parameters** box was checked on purpose, verify that the **New Medium** option button is displaying "**- -**". [If necessary, **single-click** and **hold** the **New Medium** option button to display a menu of media, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.] 5. Complete the intervention. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]

Table 18.6-5. Order Manager GUI User Messages (6 of 12)

Message Text	Impact	Cause and Corrective Action
ERROR: You can not change the media type from <MEDIA> to <MEDIA> - the media types are the same. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page if the operator tried to change the media type to whatever it already is. If the media type should not be changed, the **New Medium** option button should be set to "**- -**". 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. Verify that the **Change Media to:** box is not checked. (**Single-click** on it if necessary). 3. Verify that the **New Medium** option button is displaying "**- -**". [If necessary, **single-click** and **hold** the **New Medium** option button to display a menu of media, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.] 4. Complete the intervention. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]
ERROR: You can not modify request-level attributes and place the intervention on hold. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page if the operator attempted to modify request-level attributes (e.g., change the media type, update ftp push parameters, or disable limit checking) and then tried to place the intervention on hold. If the selected request-level attribute(s) should be implemented, the request should either be submitted or partitioned. If the selected request-level attribute(s) should not be implemented, the intervention may be placed on hold. 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. If the selected request-level attribute(s) should be implemented, either submit or partition the request. [For detailed instructions refer to the **View Open Intervention Information on the OM GUI** procedure (Section 18.5.2).] 3. If the selected request-level attribute(s) should not be implemented, **single-click** on the **Reset** button, then place the intervention on hold. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]

Table 18.6-5. Order Manager GUI User Messages (7 of 12)

Message Text	Impact	Cause and Corrective Action
ERROR: You can not modify request-level attributes if you are failing the request. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page if the operator attempted to modify request-level attributes (e.g., change the media type, update ftp push parameters, or disable limit checking), then tried to fail the entire request. If the request should be failed, the request-level attribute changes should be deselected, then the request can be failed. 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. If the selected request-level attribute(s) should be implemented, either submit or partition the request. [For detailed instructions refer to the **View Open Intervention Information on the OM GUI** procedure (Section 18.5.2).] 3. If the request should be failed, first deselect the request-level attribute(s), then fail the request. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]
ERROR: You must assign a worker to this intervention before proceeding. [Displayed in a dialogue box]	Actions cannot be taken on an intervention.	The message appears on the **Open Intervention Detail** page if the operator attempted to take an action on an open intervention before assigning a name in the **Worked by:** text box. (No worker name is required to view the intervention without taking any action.) A real name or a user ID must be entered in the field. Numbers and spaces are allowed. 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. In the **Worked by:** text entry box on the **Open Intervention Detail** page enter: **<name>** [valid name] [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]
ERROR: You must enter a name into the Worked by field before proceeding. [Displayed in a dialogue box]	Actions cannot be taken on an intervention.	The message appears on the **Open Intervention Detail** page if the operator attempted to take an action on an open intervention before assigning a name in the **Worked by:** text box. (No worker name is required to view the intervention without taking any action.) A real name or a user ID must be entered in the field. Numbers and spaces are allowed. 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. In the **Worked by:** text entry box on the **Open Intervention Detail** page enter: **<name>** [valid name] [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]

Table 18.6-5. Order Manager GUI User Messages (8 of 12)

Message Text	Impact	Cause and Corrective Action
INPUT ERROR: There was a problem with the input parameter for a User Profile. Please contact your system's administrator to fix this problem.	Information about a User profile is not displayed.	The error message is rare; it appears when the UserId parameter (usually embedded in the URL) is empty. It indicates that the page was probably accessed directly (i.e., the operator did not arrive at the page via a link). If the operator did arrive at the page through a link, there could be a serious database error or a problem with the Perl code, since the User ID associated with the order was not passed to the page. 1. **Single-click** on the Netscape browser **Back** button to redisplay the previous page. 2. **Single-click** on the appropriate link to access the desired page. 3. If the same error message is displayed again, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
INPUT ERROR: There was a problem with the input parameter for ECS Order. Please contact your system's administrator to fix this problem.	Information about an ECS Order does not get displayed.	The error message is rare; it appears when the ecs_order parameter (usually embedded in the URL) is empty. It indicates that the page was accessed directly (i.e., the operator did not arrive at the page via a link). If the operator did arrive at that page through a link, there could be a serious database error or a problem with the Perl code, since the ECS Order ID was not passed to the page. 1. **Single-click** on the Netscape browser **Back** button to redisplay the previous page. 2. **Single-click** on the appropriate link to access the desired page. 3. If the same error message is displayed again, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
Please hit your browser's Back button and enter a valid name into the "worked by" field and click on "Override Current Worker	Intervention cannot be resolved.	No name has been entered in the **Worked by:** field on the **Open Intervention Detail** page . Before any action on the intervention will be accepted, a name must be entered. 1. **Single-click** on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. In the **Worked by:** text entry box on the **Open Intervention Detail** page enter: **<name>** [valid name] [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]

Table 18.6-5. Order Manager GUI User Messages (9 of 12)

Message Text	Impact	Cause and Corrective Action
Please hit your browser's Back button and select a disposition.	Intervention cannot be resolved.	No disposition was selected on the **Open Intervention Detail** page. Go to the previous page and select a disposition. 1. **Single-click** on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. Select an appropriate disposition on the **Open Intervention Detail** page. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]
Sweeper error: <message>	Server Statistics or Queue Status page does not display correct information, or the affected pages do not display at all.	The message appears either on the **Error** page, **Queue Status** page, or **OM Server Statistics** page. **SweeperStart** is a shell script that runs the Sweeper binary, which tells the system whether or not certain servers are up and running. If either the shell script or the Sweeper binary is corrupt, missing, not executable, or has the wrong permissions, the error message is displayed. The **OM GUI** must be reinstalled or the binary or shell script must be manually copied to its proper location and given the proper permissions. Call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
The e-mail text box is empty – it should contain a message to the user if you want e-mail sent out. [Displayed in a dialogue box]	Intervention resolution cannot be submitted.	The message appears if there is an e-mail text box on the **Close Confirmation** page and the operator did not enter any message text. Some text should be entered and the form should be resubmitted. 1. **Single-click** on the **OK** button to dismiss the dialogue box. 2. Either **single-click** on the **Don't send e-mail** box or in the e-mail text box enter: **<text>** [supplemental e-mail text] (as applicable). 3. Complete the intervention. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]
You can not change the FTP Push parameters and change the media type at the same time. Please hit your browser's Back button and correct this	Intervention cannot be resolved.	The message appears if the media type for the request is ftp push. The operator probably elected to change the media type and checked the **Update FtpPush Parameters** box at the same time. The operator should go back to the previous page and uncheck the box. 1. **Single-click** on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. **Single-click** on the **Update FtpPush Parameters** box to uncheck it. 3. Complete the intervention. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]

Table 18.6-5. Order Manager GUI User Messages (10 of 12)

Message Text	Impact	Cause and Corrective Action
You can not update the FTP Push parameters for this request because the media type is <old media>. Please hit your browser's Back button and correct this.	Intervention cannot be resolved.	This message appears if the operator inadvertently checked the **Update FtpPush Parameters** box, even though the media type for the request is not ftp push. The operator should go back and uncheck this box. The error message should be quite rare, because normally the **Update FtpPush Parameters** box does not appear if the media type is not ftp push. 1. **Single-click** on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. **Single-click** on the **Update FtpPush Parameters** box to uncheck it. 3. Complete the intervention. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]
You have entered partitioning days/hours, but have not indicated that you want to spread the request over this time period! (you probably forgot to check the AND box). Hit your browser's Back button to correct this.	Intervention cannot be resolved.	The operator probably intended to partition the request but forgot to check the "and" box. The redundancy is intended to ensure that the correct action is taken. 1. **Single-click** on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. **Single-click** on the box in front of **and spread request over**. 3. Complete the intervention. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]

Table 18.6-5. Order Manager GUI User Messages (11 of 12)

Message Text	Impact	Cause and Corrective Action
You have indicated you want to change the media, but did not select the media type. Hit your browser's Back button to correct this	Intervention cannot be resolved.	The operator checked the **Change Media to:** but did not select a different medium from the **New Medium** option button. The operator should go back to the previous page and either select a new medium or uncheck the **Change Media to:** box and ensure that the **New Medium** option button is set to "**- -**". 1. **Single-click** on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. If a new distribution medium is being selected, verify that the **Change Media to:** box is checked. (**Single-click** on it if necessary). 3. If a new distribution medium is being selected, verify that the **New Medium** option button is displaying the appropriate medium. [If necessary, **single-click** and **hold** the **New Medium** option button to display a menu of media, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.] 4. If the old distribution medium is being retained, verify that the **Change Media to:** box is not checked. (**Single-click** on it if necessary). 5. If the old distribution medium is being retained, verify that the **New Medium** option button is displaying "**– –**". [If necessary, **single-click** and **hold** the **New Medium** option button to display a menu of media, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.] 6. Complete the intervention. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]

Table 18.6-5. Order Manager GUI User Messages (12 of 12)

Message Text	Impact	Cause and Corrective Action
You have selected a new media type, but not did indicate you actually wanted the media changed. Hit your browser's Back button to correct this.	Intervention cannot be resolved.	The operator changed the distribution medium for the request on the **Open Intervention Detail** page but did not check the **Change Media to:** box. The redundancy is intended to ensure that the operator does indeed want to change the distribution medium. The operator should go back to the previous page and either check the **Change Media to:** box or ensure that the **New Medium** option button is set to "**- -**". (indicating no change). 1. **Single-click** on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. If a new distribution medium is being selected, verify that the **Change Media to:** box is checked. (**Single-click** on it if necessary). 3. If a new distribution medium is being selected, verify that the **New Medium** option button is displaying the appropriate medium. [If necessary, **single-click** and **hold** the **New Medium** option button to display a menu of media, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.] 4. If the old distribution medium is to be retained, verify that the **Change Media to:** box is not checked. (**Single-click** on it if necessary). 5. If the old distribution medium is to be retained, verify that the **New Medium** option button is displaying "**– –**". [If necessary, **single-click** and **hold** the **New Medium** option button to display a menu of media, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.] 6. Complete the intervention. [For detailed instructions refer to the **Respond to an Open Intervention** procedure (Section 18.5.2.2).]

18.6.1.1 Check Connections to Hosts/Servers

The procedure to **Check Connections to Hosts/Servers** is a part of the **Troubleshoot a Data Distribution, Storage Management, or Order Manager GUI Failure** procedure (Section 18.6.1). Table 18.6-6 presents (in a condensed format) the steps required to check connections to hosts/servers. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the Distribution Server host.

- Examples of Distribution Server host (Sun internal server host) names include **e0acs06**, **g0acs06**, **l0acs06,** and **n0acs06**.
- Most other ECS hosts are acceptable for checking connections.
- Log-in is described in the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the command line prompt enter:

cd /usr/ecs/<MODE>/CUSTOM/utilities

- Change directory to the directory containing the utility scripts.

3 At the command line prompt enter:

EcCsIdPingServers <MODE>

- The following type of response is displayed (only a few representative lines are shown):

  /usr/ecs/TS2/CUSTOM/bin/CSS/Sweeper -nsh x0icg01 -nsp 18202
  FoSwSweeper application started...
  We made a connection with EntryId =x0acs06:38709:23057 --- EcSrTransportSubServer
  We made a connection with EntryId =x0acs06:38712:23057 --- EcSrTransportSubEventServer
  We made a connection with EntryId =x0acs06:33379:17033 --- DsShQuitIDL
  […]

4 Observe the results displayed on the screen to determine whether connections can be made with the necessary hosts and servers.

- The necessary hosts and servers are listed in Table 18.6-7, Hosts, Servers, Clients and Other Software Relevant to Data Distribution and the Order Manager GUI.

5 If pinging the servers (Step 3) indicated a problem with any connection, ping the servers again (at the command line prompt enter: **EcCsIdPingServers <MODE>**).

6 Observe the results displayed on the screen to determine whether connections can be made with the necessary hosts and servers.

7 If it is not possible to connect to any needed host(s)/server(s), notify the Operations Controller/System Administrator to check the hosts/servers and bring them back up if necessary.

8 Return to the procedure that recommended checking connections to hosts.

Table 18.6-6. Check Connections to Hosts/Servers - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (Sun internal server)	**single-click** or use procedure in Section 18.2.1
2	**cd /usr/ecs/<MODE>/CUSTOM/utilities**	**enter text, press Enter**
3	**EcCsIdPingServers <MODE>**	**enter text, press Enter**
4	**EcCsIdPingServers <MODE>** [again]	**enter text, press Enter**
5	Identify hosts and servers with which connections cannot be made	**read text**
6	Notify the Operations Controller/System Administrator to bring hosts/servers back up (if applicable)	**contact Operations Controller**
7	Return to the procedure that recommended checking connections to hosts	

Table 18.6-7. Hosts, Servers, Clients and Other Software Relevant to Data Distribution and the Order Manager GUI (1 of 2)

HOST	SERVER/CLIENT/OTHER SOFTWARE
Sun internal server (e.g., x0acs06)	Distribution Server (EcDsDistributionServer) 8mm Server (EcDsSt8MMServer) Storage Management Request Manager (EcDsStRequestManagerServer) Staging Disk Server (EcDsStStagingDiskServer) Granule Deletion Process (EcDsGranuleDelete) Science Data Server (EcDsScienceDataServer) Science Data Server Client (EcDsScienceDataServerClient) Subscription Server (EcSbSubServer)
Operations Workstation (e.g., x0acs02)	Data Distribution Operator GUI (EcDsDdistGui) Storage Management Control GUI (EcDsStmgtGui) Science Data Server GUI (EcDsSdSrvGui)
Access/Process Coordinators (APC) Server (e.g., x0acg01)	Archive Server (EcDsStArchiveServer) Cache Manager Servers (EcDsStCacheManagerServer) (including Pull Area Manager) FTP Server (EcDsStFtpServer) Staging Disk Server (EcDsStStagingDiskServer)

Table 18.6-7. Hosts, Servers, Clients and Other Software Relevant to Data Distribution and the Order Manager GUI (2 of 2)

HOST	SERVER/CLIENT/OTHER SOFTWARE
FSMS Server (e.g., x0drg01)	HDF EOS Server (EcDsHdfEosServer) Archive Server (EcDsStArchiveServer) Cache Manager Server (EcDsStCacheManagerServer) FTP Server (EcDsStFtpServer) Staging Disk Server (EcDsStStagingDiskServer)
Ingest Server (e.g., x0icg01)	Name Server (EcCsIdNameServer) Registry Server (EcCsRegistry)
Data Pool Server (e.g., x0dps01)	Order Manager GUI (EcOmGuiHomePage.pl)

18.6.1.2 Check Log Files

The procedure to **Check Log Files** is a part of the **Troubleshoot a Data Distribution, Storage Management, or Order Manager GUI Failure** procedure (Section 18.6.1). Checking log files can provide indications of the following types of problems (among others):

- Communication problems.
- Database problems.
- Lack of disk space.

Table 18.6-8 presents (in a condensed format) the steps required to check log files. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the appropriate host.

- Sun internal server (e.g., **e0acs06, g0acs06, l0acs06,** or **n0acs06**) has the following data distribution, storage management, science data server, and subscription server (SBSRV) log files:
  - EcDsDistributionServer.ALOG.
  - EcDsSt8MMServerNONE.ALOG.
  - EcDsStRequestManagerServer.ALOG
  - EcDsStStagingDiskServerDIP1.ALOG.
  - EcDsGranuleDelete.ALOG.
  - EcDsScienceDataServer.ALOG.
  - EcDsScienceDataServerClient.ALOG.
  - EcDsSdSrvGui.ALOG.
  - EcSbSubServer.ALOG file.

- APC Server (e.g., **e0acg11, g0acg01, l0acg02,** or **n0acg01**) has the following storage management ALOG files:
  - EcDsStArchiveServerACM1.ALOG.
  - EcDsStCacheManagerServerACM1.ALOG.
  - EcDsStFtpServerNONE.ALOG.
  - EcDsStStagingDiskServerACM1.ALOG.
- FSMS Server (e.g., **e0drg11, g0drg01, l0drg01,** or **n0drg01**) has the following storage management ALOG files:
  - EcDsHdfEosServer.ALOG.
  - EcDsStArchiveServerDRP1.ALOG
  - EcDsStCacheManagerServerDRP1.ALOG.
  - EcDsStFtpServerDRP1.ALOG.
  - EcDsStStagingDiskServerDRP1.ALOG.
- Operations Workstation (e.g., **e0acs03, g0acs02, l0acs01,** or **n0acs03**) has the following science data server log files:
  - EcDsDdistGui.ALOG.
  - EcDsStmgtGui.ALOG.
  - EcDsSdSrvGui.ALOG.
- In addition to the ALOG files mentioned the preceding hosts have corresponding debug log files.

2 At the command line prompt enter:

cd /usr/ecs/<MODE>/CUSTOM/logs

- **<MODE>** is current mode of operation.
  - TS1 - Science Software Integration and Test (SSI&T)
  - TS2 - New Version Checkout
  - OPS - Normal Operations
- "**logs**" is the directory containing data distribution, science data server, or storage management log files (e.g., EcDsDdistGui.ALOG, EcDsDistributionServer.ALOG).

3 At the command line prompt enter:

pg <file name>

- **<file name>** refers to the log file to be reviewed (e.g., EcDsDdistGui.ALOG, EcDsDistributionServer.ALOG).
- The first page of the log file is displayed.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **more**, **vi**, **view**) can be used to review the log file.

4 Review the log file to identify problems that have occurred.

- To exit from **pg** at the **:** prompt enter:

  q

  – The command line prompt is displayed.

5 Respond to problems as follows:

- DDIST- or STMGT-related problems.
  – Perform the appropriate procedure(s) from those listed in Table 18.6-1, Troubleshooting DDIST Problems.
- Communication problems.
  – Notify the Operations Controller/System Administrator of suspected communication problems.
- Database problems.
  – Verify that relevant database servers are running.
  – Check for lack of (or corruption of) data in the database using either a database browser or interactive structured query language (isql) commands.
  – Notify the Database Administrator of suspected database problems.
- Lack of disk space.
  – Remove unnecessary files.
  – Notify the Operations Controller/System Administrator of recurring disk space problems.

Table 18.6-8. Check Log Files - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window logged in to appropriate host	**single-click** or use procedure in Section 18.2.1
2	**cd /usr/ecs/<MODE>/CUSTOM/logs**	**enter text, press Enter**
3	**pg <file name>**	**enter text, press Enter**
4	Identify problems indicated in the log file	**read text**
5	Respond to problems as necessary	

18.6.2 Recover from a Data Distribution Failure

The automated data distribution processes (push and pull) normally do not require intervention by the Distribution Technician. However, when a data distribution fault (error) occurs, there may be a requirement for action to recover from the error. For example, recovery actions may be made necessary by the failure of storage management to acquire granules from the archive so they can be distributed. When a fault (error) occurs, the request status on the **Distrib'n Requests** tab of the **Data Distribution Operator GUI** is likely to change to "Suspended with Errors."

The Distribution Technician may use the **Data Distribution Operator GUI Distrib'n Requests** tab and/or log files on various host machines to review the failure event.

Diagnosing an acquire failure involves examining the following system log files and directories involved in the process:

- Request Manager server debug log file (EcDsStRequestManagerServerDebug.log), if available.
- Science Data Server ALOG file (EcDsScienceDataServer.ALOG) and/or Science Data Server debug log file (EcDsScienceDataServerDebug.log).
- Archive Server ALOG file (EcDsStArchiveServer<HWCIn>.ALOG) and/or Archive Server debug log file (EcDsArchiveServerDebug.log).
  - <HWCIn> represents a particular hardware configuration item; for example, EcDsStArchiveServerACM1.ALOG would be located on the APC Server x0acg01.
- Staging Area.
  - Presence of the relevant file(s).
  - Staging disk log files (EcDsStStagingDiskServer<HWCIn>.ALOG, EcDsStagingDiskServerDebug.log) or cache manager log files (EcDsStCacheManagerServer<HWCIn>.ALOG, EcDsCacheManagerServerDebug.log).
  - Space available in the staging area.

Table 18.6-9 presents (in a condensed format) the steps required to respond to recover from a data distribution failure. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Observe the information displayed on the **Distrib'n Requests** tab of the **Data Distribution Operator GUI** to identify distribution requests with a status of "Suspended with Errors."

2 If a suspended request has the error mnemonic **DsEDdXLargeRequest** associated with it, perform the **Respond to Requests that Exceed the Distribution Request Threshold** procedure (Section 18.6.2.1).

3 Perform the appropriate procedure(s) for responding to an acquire failure:
- **Check the Connection to the Remote FTP Host** (Section 18.6.2.2).
- **Check the Request Manager Server Debug Log** (Section 18.6.2.3).
- **Check the Science Data Server Log Files** (Section 18.6.2.4).
- **Check the Archive Server Log Files** (Section 18.6.2.5).
- **Check the Staging Disk** (Section 18.6.2.6).
- **Check the Staging Disk ALOG File** (Section 18.6.2.7).
- **Check the Space Available in the Staging Area** (Section 18.6.2.8).

4 If additional information is needed, open and read the appropriate log file in the **/usr/ecs/<MODE>/CUSTOM/logs** directory on the appropriate host machine(s).
- Applicable host machines are listed in Table 18.6-7, Hosts, Servers, Clients and Other Software Relevant to Data Distribution and the Order Manager GUI.
- For detailed instructions refer to the **Check Log Files** procedure (Section 18.6.1.2).

5 If the problem could not be identified through any of the preceding steps, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

6 When the problem has been corrected, review the information displayed on the **Distrib'n Requests** tab of the **Data Distribution Operator GUI** to determine whether the distribution request resumed processing.

7 If the distribution request does not resume processing after the problem has been corrected, return to Step 3.

Table 18.6-9. Recover from a Data Distribution Failure - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Identify distribution requests with a status of "Suspended with Errors" (on the **Distrib'n Requests** tab of the **Data Distribution Operator GUI**)	**read text**
2	Respond to requests that exceed the distribution request threshold (if applicable)	Use procedure in Section 18.6.2.1
3	Respond to the acquire failure (if applicable)	Use applicable procedure(s) in Sections 18.6.2.2 through 18.6.2.8
4	Check log files (if applicable)	Use procedure in Section 18.6.1.2
5	Submit a trouble ticket (if applicable)	Use procedure in Chapter 8
6	Determine whether the distribution request resumed processing (on the **Distrib'n Requests** tab of the **Data Distribution Operator GUI**)	**read text**
7	Return to Step 3 (if necessary)	

18.6.2.1 Respond to Requests that Exceed the Distribution Request Threshold

The procedure to **Respond to Requests that Exceed the Distribution Request Threshold** is a part of the **Recover from a Data Distribution Failure** procedure (Section 18.6.2).

When a distribution request exceeds the corresponding distribution request threshold (e.g., FtpPushThreshold or FtpPullThreshold), the request is suspended in DDIST with the following error mnemonic:

- DsEDdXLargeRequest

Table 18.6-10 presents (in a condensed format) the steps required to respond to requests that exceed the distribution request threshold. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Record (e.g., write down) the Request ID (as displayed on the **Distrib'n Requests** tab of the **Data Distribution Operator GUI**) for the request that exceeds the distribution request threshold.

2 Cancel the request.
- For detailed instructions refer to the **Cancel Data Distribution Requests** procedure (Section 18.2.8).

3 Contact User Services to determine whether or not the user's request should be processed.
- User Services may contact the requester to verify whether or not the requester intended to order so much data.

4 If User Services responds that the request should be completed, determine whether User Services or Distribution will partition and resubmit the request.

5 If User Services responds that the request should be completed and that Distribution should partition the request, partition and resubmit the request.
- For detailed instructions refer to the **View Distribution Request Information on the OM GUI** procedure (Section 18.5.3).

Table 18.6-10. Respond to Requests that Exceed the Distribution Request Threshold - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Record the Request ID	**write text**
2	Cancel the data distribution request	Use procedure in Section 18.2.8
3	Determine whether or not the user's request should be processed	**contact User Services**
4	Determine whether User Services or Distribution will partition and resubmit the request	**contact User Services**
5	Partition/resubmit the request (as applicable)	Use procedure in Section 18.5.3

18.6.2.2 Check the Connection to the Remote FTP Host

The problem is that a distribution request for FtpPush of data to a remote host (e.g., ftp.averstar.com) shows a status of "Suspended with Errors" and it is suspected that it may not be possible to connect to the remote host.

In order to check the connection to remote hosts the necessary script to support pinging (e.g., "st") must be available on ECS and the Distribution Technician must know its location. For example, at one DAAC the script "st" (written to support operations in the OPS mode) might be available in the home directory for the "train1" user.

Table 18.6-11 presents (in a condensed format) the steps required to check the connection to the remote ftp host. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the APC Server host.

- Examples of APC Server host names include **e0acg11**, **g0acg01**, **l0acg02,** and **n0acg01**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd <path>

- **<path>** represents the directory path (e.g., /home/train1) to the directory containing the necessary script.
- The necessary script (e.g., "st") to support pinging the remote host through the firewall must be available and the Distribution Technician must know its location.

3 At the UNIX command line prompt enter:

./st -ping <remotehost>

- **<remotehost>** represents the remote host to be checked.
- For example:

  ./st -ping ftp.averstar.com

- The following type of response indicates successful pinging of the remote host:

  PING 192.5.114.4: (192.5.114.4): 56 data bytes
  64 bytes from 192.5.114.4: icmp_seq=0 ttl=247 time=26 ms
  64 bytes from 192.5.114.4: icmp_seq=1 ttl=247 time=23 ms
  64 bytes from 192.5.114.4: icmp_seq=2 ttl=247 time=23 ms
  64 bytes from 192.5.114.4: icmp_seq=3 ttl=247 time=28 ms
  64 bytes from 192.5.114.4: icmp_seq=4 ttl=247 time=25 ms

- If there is no such response within a few seconds (no more than 20 seconds), it is likely that pinging has failed and the remote host is not currently accessible.

- The same general syntax can be used to perform a trace; i.e., at the UNIX command line prompt enter:

  ```
  ./st  -trace  <remotehost>
  ```

4 To stop sending packets to the remote host at the UNIX command line prompt enter:

Ctrl-c

- The following type of response after entering **Ctrl-c** is another type of indication that pinging failed:

  ```
  ----ftp.averstar.com PING Statistics----
  43 packets transmitted, 0 packets received, 100.0% packet loss
  ```

5 If pinging the remote host failed, go to Step 12.

6 If pinging the remote host was successful, at the UNIX command line prompt enter:

```
ftp  <firewall host>
```

- **<firewall host>** represents the firewall host.
  - The System Administrator can identify the firewall host if necessary.
- The following type of response should be displayed:

```
Connected to x0host0.daac.ecs.nasa.gov.
220-*******************************************************************
220-*
220-*  THIS U.S. GOVERNMENT COMPUTING SYSTEM IS FOR
AUTHORIZED USERS
220-*  ONLY.  ANYONE USING IT IS SUBJECT TO MONITORING AND
RECORDING
220-*  OF ALL KEYSTROKES WITHOUT FURTHER NOTICE.  THIS RECORD
MAY BE
220-*  PROVIDED AS EVIDENCE TO LAW ENFORCEMENT OFFICIALS.
220-*
220-*******************************************************************
220 [002-0018] x0host0.daac.ecs.nasa.gov FTP proxy 4.0.1 ready.
Name (x0host0:user1):
```

7 At the **Name (…):** prompt press the **Enter** key.

- The following type of response should be displayed:

  ```
  230- user user1 logged in.
  230 [002-0024] Specify Remote Destination with: quote site hostname
  Remote system type is UNIX.
  ftp>
  ```

8 At the **ftp>** prompt enter:

quote site <remotehost>

- **<remotehost>** represents the remote host to be checked.
- For example:

  quote site ftp.averstar.com

- The following type of response should be displayed:

  220-([002-0059] Firewall connected to ftp.averstar.com (192.5.114.4).)
  220-(220 ftp FTP server (Version wu-2.4(3) Thu Jan 9 12:48:46 EST 1997) ready.)
  220 [002-0060] login with: user name
  ftp>

9 At the **ftp>** prompt enter:

user anonymous

- Log in to the remote host for anonymous ftp.
- The following type of response should be displayed:

  331 Guest login ok, send your complete e-mail address as password.
  Password:

10 At the **ftp>** prompt enter:

<password>

- Use a valid e-mail address as the password for anonymous ftp.
- The following type of response should be displayed:

  230 Guest login ok, access restrictions apply.
  ftp>

11 At the **ftp>** prompt enter:

ls

- The following type of response should be displayed:

  200 PORT command successful.
  150 Opening ASCII mode data connection for /bin/ls.
  total 16
  dr-xr-xr-x 6 root other 512 Feb 11 1997 .
  dr-xr-xr-x 6 root other 512 Feb 11 1997 ..
  -r-------- 1 root other 0 Feb 10 1997 .forward
  -r-------- 1 root other 0 Feb 10 1997 .rhosts
  lrwxrwxrwx 1 root other 7 Feb 7 1997 bin -> usr/bin
  dr-xr-xr-x 2 root other 512 Feb 7 1997 dev

d--x--x--x 2 root other 512 Feb 7 1997 etc
dr-xr-sr-x 57 root ftp 1536 Jan 8 2002 pub
d--x--x--x 5 root other 512 Feb 7 1997 usr
226 Transfer complete.
ftp>

- The purpose of this step is to verify accessibility to directories on the remote host.

12 At the **ftp>** prompt enter:

quit

- The connection to the ftp host is terminated.

13 If a connection could not be made with the remote ftp server or if pinging was successful but the ftp could not be negotiated, notify the remote system's point of contact of the problem.

14 If the remote system's point of contact has been notified of a problem pinging or making an ftp connection, wait until the communication problem has been resolved.

15 When the communication problem has been resolved (or after waiting a reasonable period of time), return to Step 1.

- If necessary, the supervisor can provide guidance concerning what is a "reasonable" period of time to wait.

16 After a successful ftp test of the connection with the remote host, resume the affected distribution request(s).

- For detailed instructions refer to the **Suspend/Resume Data Distribution Requests** procedure (Section 18.2.7).

17 If the same distribution request(s) show(s) a status of "Suspended with Errors" again, recover from the data distribution failure using the **Recover from a Data Distribution Failure** procedure (Section 18.6.2).

Table 18.6-11. Check the Connection to the Remote FTP Host - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	UNIX window (APC Server)	**single-click** or use procedure in Section 18.2.1
2	**cd <path>**	**enter text, press Enter**
3	**./st -ping <remotehost>**	**enter text, press Enter**
4	**Ctrl-c**	**enter text**
5	Go to Step 12 (if pinging failed)	
6	**ftp <firewall host>**	**enter text, press Enter**

Table 18.6-11. Check the Connection to the Remote FTP Host - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
7	**Enter** key	**press**
8	**quote site <remotehost>**	**enter text, press Enter**
9	**user anonymous**	**enter text, press Enter**
10	**<password>**	**enter text, press Enter**
11	**ls**	**enter text, press Enter**
12	**quit**	**enter text, press Enter**
13	Notify the remote system's point of contact of the problem (if applicable)	**contact remote system's point of contact**
14	Wait until the communication problem has been resolved (if applicable)	**wait**
15	Return to Step 1 (if applicable)	
16	Resume the affected distribution request(s) (after successful ftp test)	Use procedure in Section 18.2.7
17	Go the **Recover from a Data Distribution Failure** procedure [if the same distribution request(s) is (are) suspended with errors again]	Use procedure in Section 18.6.2

18.6.2.3 Check the Request Manager Server Debug Log

The procedure to **Check the Request Manager Server Debug Log** is a part of the **Recover from a Data Distribution Failure** procedure (Section 18.6.2). It is performed in response to an acquire failure.

The Request Manager server processes requests from external clients (processes outside of Storage Management). Requests between Storage Management servers are passed directly from one server to another.

- Requests that require one of the Storage Management servers to perform processing are checkpointed (except requests that can be serviced solely through SQL).
  - Checkpointing involves recording the request's state (e.g., "checkpointed," "failed," "completed") in the database to assist in error recovery.
- Requests that can be serviced solely through SQL are considered "trivial" requests.
  - Trivial requests are not checkpointed.
  - Examples include attaching to a staging disk, getting capacity, and getting block size.
  - Trivial requests submitted from outside Storage Management are serviced by the Request Manager server.
  - Trivial requests originating within Storage Management are passed directly from the client to the database server.

The Request Manager server (like other Storage Management servers) can manage several concurrent activities. This is accomplished through the use of threads. There are several different kinds of threads:

- Manager thread.
  - One per Storage Management server.
  - Responsible for dequeuing requests and assigning them to service threads.
  - Checks for cancelled requests.
- Service thread.
  - Multiple threads per Storage Management server.
  - Responsible for the actual servicing of requests.
  - Logs all progress including all changes of request state.
  - Notifies submitter when request has been completed.
- Receptionist thread.
  - One per Storage Management server.
  - Registers the server as "up" in the database.
  - Sits on a socket, waiting for connections from other Storage Management servers.
  - Unregisters the server at shutdown.
- Inbound RPC thread.
  - Spawned by a request from a Storage Management client.
  - Hands off the request to the manager thread and waits for completion of the request.
- Housekeeper thread.
  - Watches for completed requests, which haven't previously been seen and processed.

Information concerning Request Manager server processing of requests (identified by thread) is recorded in the Request Manager server debug log (assuming some level of debug log recording is specified in the Registry database).

Trivial requests typically involve the following types of activities:

- Inbound RPC thread appears with a request.
- Manager thread dequeues the request and assigns it to a service thread.
- Service thread recognizes the thread as "trivial."
  - A "No checkpointing required -- going straight to responded" message is recorded in the Request Manager server debug log.
- Service thread executes the database transaction for results.
  - When the request is completed, a "Done servicing" message is recorded in the Request Manager server debug log.
  - If the request fails, an "Unable to service" message is recorded in the Request Manager server debug log.

- Service thread hands the results to the inbound RPC thread.
  - A "Notifying the client" message is recorded in the Request Manager server debug log.
- Inbound RPC thread silently returns to the client with the results.

Non-trivial requests are forwarded to the appropriate Storage Management server (e.g., EcDsStFtpServer, EcDsStStagingDiskServer, EcDsStArchiveServer) for processing.

- Some of the same types of entries are made in the Request Manager server debug log for non-trivial requests as for trivial requests. For example:
  - "Waking up service thread" (Request Manager is preparing to process the request).
  - "Done servicing" (request processing has been completed).
  - "Unable to service" (the request has failed).
- Although some trivial requests include "token" statements, tokens are characteristic of non-trivial requests.
- A token includes request information that varies with the type of operation to be performed.
- For example, a token for an ftp request might include the following types of data:
  - Stored procedure (e.g., DsStFRInsert) [other types of stored procedures include DsStSDRInsert and DsStGRMapLogicalArchiveId].
  - RPC ID (e.g., RPCId=1821_535_1109-1124464729_171062001_x0acs06.xdc.ecs.nasa.gov:SBSVSDSV1DSDD1DSDD4:).
  - Username.
  - Encrypted password.
  - Host.
  - Source path.
  - Destination path.
  - External request ID.
  - Server name (e.g., EcDsStFtpServerNONE) [other types of operations might involve the EcDsStStagingDiskServerDRP1 for example].
  - Type of operation (e.g., FtpPush) [other types of operations include ArRetrieve, SDAllocateDisk, SDLinkFile].
  - Submitter (e.g., DSDD) [other types of operations might involve SDSV].
  - Priority.
- The server to which the request was sent is identified by name (ServerName).
- Transaction ID is embedded in the RPC ID (the portion before the first colon in the RPC ID).

A "transaction" may involve multiple operations on a host or several hosts. Consequently, multiple threads may be used on each relevant host.

Table 18.6-12 presents (in a condensed format) the steps required to check the Request Manager Server debug log. If you are already familiar with the procedures, you may prefer to use the

quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the Distribution Server host.

- Examples of Distribution Server host (Sun internal server host) names include **e0acs06**, **g0acs06**, **l0acs06**, and **n0acs06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd /usr/ecs/<MODE>/CUSTOM/logs

- **<MODE>** is current mode of operation.
- "**logs**" is the directory containing Request Manager Server debug log files (e.g., EcDsStRequestManagerServerDebug.log).

3 At the command line prompt enter:

pg <file name>

- **<file name>** refers to the appropriate Request Manager debug log file.
- For example:

  pg EcDsStRequestManagerServerDebug.log

- The content of the first page of the specified file is displayed.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view**, **more**) can be used to review the log file.

4 At the **:** prompt enter:

/<date> <time>

- **<date> <time>** refers to the approximate date and time of the problem.
  - For example:

    06/18/01 12:17:31

- The file is searched for the specified text.
  - If the specified text is in the log file, the following type of response is displayed.

    ...skipping forward
    06/18/01 12:17:31: Thread ID : 105 : DsShTSStorage: creating the MutexVec for this thread
    […]

  - If the specified text is not in the log file, the following type of response is displayed.

    Pattern not found:

– If the specified text is not in the log file, verify that the proper file was opened (Step 3) and that the date and time were entered correctly (Step 4).

5 At the **:** prompt enter:

/Unable to service

- **pg** searches the file for the specified text.
  - If the specified text is in the log file, the following type of response is displayed.

    ...skipping forward
    2:IngestRQ409GR1 Unable to service | Thread 52
    […]

  - If the specified text is not in the log file, the following type of response is displayed.

    Pattern not found:

- If the specified text is in the file, go to Step 7.
- If the specified text is not in the file, go to Step 6.

6 Examine the contents of the log file to determine which thread is associated with the problem being investigated.

- The following **pg** commands (at the **:** prompt) are useful:
  - ***n*** then **Return/Enter** (go to Page *n*).
  - **Return/Enter** or **+1** then **Return/Enter** (go down to the next page).
  - **-1** then **Return/Enter** (go back to the preceding page).
  - **+*n*** then **Return/Enter** (go down *n* number of pages).
  - **-*n*** then **Return/Enter** (go back *n* number of pages).
  - **+*n*l** then **Return/Enter** (go down *n* number of lines).
  - **-*n*l** then **Return/Enter** (go back *n* number of lines).
  - **$** then **Return/Enter** [go to the last page (end of file)].
  - **q** then **Return/Enter** (exit from **pg**).

7 At the **:** prompt enter:

<search text>

- To search back toward the beginning of the file enter:

  ^Waking up service thread <number>^

- To search back toward the end of the file enter:

  /Waking up service thread <number>

- For example:

  ^Waking up service thread 52^

  – The file is searched back toward the beginning of the file for the specified text.

- If the specified text is in the log file, the following type of response is displayed.

  ...skipping backward
  06/18/01 12:17:31: Thread ID : 102 : Waking up service thread 52 | Thread 102
  […]

- If the specified text is not in the log file, the following type of response is displayed.

  Pattern not found:

- The entries "Waking up service thread <number>" and "Unable to service | Thread <number>" bracket the thread servicing in which an error occurred.

NOTE: Thread IDs are reused frequently. There are likely to be many processes with the same thread ID in any particular log file. It is important to follow the correct instance of the thread.

NOTE: It is likely that the Request Manager would try again to process a failed request. Subsequent request processing may use the same thread ID or a different thread ID. However, it would involve the same transaction ID.

- A "No checkpointing required -- going straight to responded" entry associated with the thread ID indicates that the request is "trivial."

8 At the **:** prompt enter:

/SEARCHING

- The file is searched for the specified text.
  - If the specified text is in the log file, the following type of response is displayed.

    ...skipping forward
    06/18/01 12:17:31: Thread ID : 52 : SEARCHING FOR: 30148 (Found) | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : SEARCHING FOR: 30148 (Found) | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : DsStStoredProcedures::Execute - ERROR: Could not execute stored procedure | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : Error encountered in stored procedure | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : DBIF:Execute: Ultimate SQL: ROLLBACK TRANSACTION OUTER_7077776 | Thread 52
    06/18/01 12:17:32: Thread ID : 52 : 1_4501810_1217-1124633447_169062001_x0icg01.xdc.ecs.nasa.gov:IPOBIPOB1INRM1IGSA15:IngestRQ409GR1 Done servicing | Thread 52

06/18/01 12:17:32: Thread ID : 52 : 1_4501810_1217-1124633447_169062001_x0icg01.xdc.ecs.nasa.gov:IPOBIPOB1INRM1IGSA15:IngestRQ409GR1 Unable to service | Thread 52
06/18/01 12:17:32: Thread ID : 52 : 1_4501810_1217-1124633447_169062001_x0icg01.xdc.ecs.nasa.gov:IPOBIPOB1INRM1IGSA15:IngestRQ409GR1 Marked as unassigned | Thread 52
06/18/01 12:17:32: Thread ID : 52 : 1_4501810_1217-1124633447_169062001_x0icg01.xdc.ecs.nasa.gov:IPOBIPOB1INRM1IGSA15:IngestRQ409GR1 Notifying the client | Thread 52
06/18/01 12:17:32: Thread ID : 52 : Waiting for work | Thread 52
06/18/01 12:17:32: Thread ID : 52 : Waking up manager thread | Thread 52
[…]

- In the example the expression **SEARCHING** is associated with Thread ID 52.
- The context of the SEARCHING statement indicates the type and source of the problem; in this case there appears to be a problem executing a stored procedure.
- If the specified text is not in the log file, the following type of response is displayed.

  Pattern not found:

9 If the expression **SEARCHING** is not associated with the specified thread in the lines displayed, repeat Step 8.

10 If necessary, at the **:** prompt enter:

-2l

- **pg** simulates scrolling the screen backward two lines (or any other number of lines that is typed at the prompt).
  - The file is redisplayed to include the two lines that preceded the page previously displayed.
  - For example:

    ...skipping backward
    06/18/01 12:17:31: Thread ID : 52 : DBIF:Execute: Ultimate SQL: exec DsStSDAttachDisk "/usr/ecs/TS2/CUSTOM/pdps/x0spg01/data/DpPrRm/x0spg01_disk", "SDSV", 0 | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : SEARCHING FOR: 30148 (Found) | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : SEARCHING FOR: 30148 (Found) | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : DsStStoredProcedures::Execute - ERROR: Could not execute stored procedure | Thread 52

06/18/01 12:17:31: Thread ID : 52 : Error encountered in stored procedure | Thread 52
[…]

- The additional lines preceding "SEARCHING FOR" in the example indicate that the stored procedure in which the error was encountered is DsStSDAttachDisk.

11 To quit the **pg** application at the **:** prompt enter:

q

- **pg** exits from the Request Manager server debug log file.

12 If the request is a trivial request, go to Step 22.

13 If the request is a non-trivial request, open a separate UNIX window.

- The results of related operations on the server involved in performing copy or ftp functions for the transaction are going to be checked in a separate UNIX window.

14 Access a terminal window logged in to the appropriate server host for the server involved in performing copy or ftp functions for the transaction.

- Examples of appropriate server host names include **e0drg11, g0drg01, l0drg01,** and **n0drg01**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

15 At the shell prompt enter:

grep '<Transaction ID>' <file name> | grep 'LogProgress'

- For example:

  grep 'af610628-' EcDsStArchiveServerDebug.log | grep 'LogProgress'

- **<file name>** refers to the name of the log file for the process involved in performing copy or ftp functions for the transaction.
- **<Transaction ID>** refers to the Transaction ID associated with the applicable request.
- In this example af610628-1dd1-11b2-a047-af3a589fd88e is the relevant Transaction ID.
  - However, usually it is not necessary to use the entire Transaction ID in the command; a representative sample (e.g., af610628- from the example) should be sufficient.
  - References to other Transaction IDs and entries that do not contain the string "LogProgress" are filtered out so references to the specified Transaction ID that contain the string "LogProgress" are the only log entries displayed. (The string "LogProgress" is a filter for references to stored procedure DsStGRLogProgress.)
  - Progress is logged for copy and ftp input/output at each block.

– The following type of response is displayed:

06/26/01 12:46:00: Thread ID : 65674 : myTransactionList[1]: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732", 0, 1, "files" | Thread 65674
06/26/01 12:46:00: Thread ID : 65674 : DBIF:Execute: Ultimate SQL: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732", 0, 1, "files" | Thread 65674
06/26/01 12:46:43: Thread ID : 65674 : : 06/26/01 12:46:43: read ID : 2:46:43: myTransactionmyTransactionList[1]: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732", 60, 60, "MB"List[1]: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732", 60, 60, "MB"65714read 65674 : 74
06/26/01 12:46:43: Thread ID : 65674 : DBIF:Execute: Ultimate SQL: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732", 60, 60, "MB"0DBIF:Execute: Ultimate SQL: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732", 60, 60, "MB"06/26/01 12:46:43: 6/26/01 12:46:43: | Thread : 65714read 65674 : 74

- If no progress is indicated, go to Step 22.

16 **Single-click** in the UNIX window for the Distribution Server host (Sun internal server host).

17 In the UNIX window for the Distribution Server host (Sun internal server host) at the command line prompt enter:

/usr/ecs/<MODE>/CUSTOM/logs

- Change to the "logs" directory in the appropriate mode.

18 At the command line prompt enter:

grep '<Transaction ID>' <file name> | grep 'Done servicing'

- **<file name>** refers to the appropriate Request Manager debug log.
- For example:

  grep 'af610628-' EcDsStRequestManagerServerDebug.log | grep 'Done servicing'

- If the operation has been completed, the following type of response is displayed:

  06/26/01 12:46:00: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52
  06/26/01 12:46:44: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52
  06/26/01 12:46:45: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD2DSDD1DSDD3:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52
  06/26/01 12:46:47: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD2DSDD1DSDD3:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52
  06/26/01 12:46:47: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD2DSDD1DSDD7:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52
  06/26/01 12:46:50: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD2DSDD1DSDD7:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52
  06/26/01 12:46:51: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD4:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52
  06/26/01 12:46:56: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD4:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52
  06/26/01 12:46:56: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD8:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52
  06/26/01 12:46:59: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD8:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52

  - The statement "Done servicing" shows that the operation has been completed; however, it provides no indication as to whether the operation succeeded or failed.
  - If "Done servicing" is followed by "Unable to service," (as described in Step 19) the operation failed.
- If the operation has not been completed, no file entries are displayed (the UNIX prompt is displayed).
  - It may just be slow to complete.
- If the operation has been completed, go to Step 19.
- If the operation has not been completed, go to Step 20.

19 At the shell prompt enter:

grep '<Transaction ID>' <file name> | grep 'Unable to service'

- **<file name>** refers to the appropriate Request Manager debug log.
- For example:

  grep '2a7d4168-' EcDsStRequestManagerServerDebug.log | grep 'Unable to service'

- If the request has failed, the following type of response is displayed:

  06/26/01 12:56:22: Thread ID : 52 : 2a7d4168-1dd2-11b2-8c52-99d0f708dce5:PDPSSDSV1:MoPGE02#sy14182000TS2MOD02OBC Unable to service | Thread 52
  06/26/01 12:56:22: Thread ID : 52 : 2a7d4168-1dd2-11b2-8c52-99d0f708dce5:PDPSSDSV4:MoPGE02#sy14182000TS2MOD02OBC Unable to service | Thread 52

  – If the operation has failed, return to Step 7.
- If the operation has not failed, no file entries are displayed (the UNIX prompt is displayed).

20 At the shell prompt enter:

tail -f <file name> | grep '<Transaction ID>'

- **<file name>** refers to the appropriate Request Manager debug log.
- **<Transaction ID>** refers to the Transaction ID associated with the applicable request.
- For example:

  tail -f EcDsStRequestManagerServerDebug.log | grep 'af610628-'

- If new entries are being posted to the log, the operation has not finished yet.
  – If the same entries continue to be repeated over and over, there could be a problem with the server.
  – Notify the Operations Controller/System Administrator of suspected server problems.
- If it is necessary to exit from a tailed log, enter:

  ^c [**Ctrl-c**]

21 If the operation has not finished yet, monitor the tailed log for awhile.

- If the operation does not seem to finish (i.e., if entries continue to be made to the tailed log) after a reasonable period of time (e.g., 30 minutes), notify the Operations Controller/System Administrator of the problem.
- If it is necessary to exit from a tailed log, enter:

  ^c [**Ctrl-c**]

22 If problems were detected in the Request Manager server debug log and/or the log file for the process involved in performing copy or ftp functions for the transaction, notify the Operations Controller/System Administrator of the problem.

23 If problems were detected and corrected in the preceding steps, return to the **Recover from a Data Distribution Failure** procedure (Section 18.6.2).

24 If no problems were detected in the Request Manager server debug log or the log file for the process involved in performing copy or ftp functions for the transaction, continue with the **Check the Science Data Server Log Files** procedure (Section 18.6.2.4).

Table 18.6-12. Check the Request Manager Server Debug Log - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	UNIX window (Sun internal server)	**single-click** or use procedure in Section 18.2.1
2	**cd /usr/ecs/<MODE>/CUSTOM/logs**	**enter text, press Enter**
3	**pg <file name>** (Request Manager debug log)	**enter text, press Enter**
4	**/<date> <time>**	**enter text, press Enter**
5	**/Unable to service**	**enter text, press Enter**
6	Determine which thread is associated with the problem being investigated	**read text**
7	**<search text>** (Waking up service thread <number>)	**enter text, press Enter**
8	**/SEARCHING**	**enter text, press Enter**
9	Repeat the preceding step (if necessary)	
10	**-2l** (if necessary)	**enter text, press Enter**
11	**q** (when necessary)	**enter text, press Enter**
12	UNIX window (appropriate server host)	**single-click** or use procedure in Section 18.2.1
13	**grep '<Transaction ID>' <file name> | grep 'LogProgress'**	**enter text, press Enter**
14	UNIX window (Sun internal server)	**single-click**
15	**/usr/ecs/<MODE>/CUSTOM/logs**	**enter text, press Enter**
16	**grep '<Transaction ID>' <file name> | grep 'Done servicing'**	**enter text, press Enter**
17	**grep '<Transaction ID>' <file name> | grep 'Unable to service'**	**enter text, press Enter**
18	**tail -f <file name> | grep '<Transaction ID>'**	**enter text, press Enter**
19	Monitor the tailed log for awhile (if applicable)	**read text**
20	If problems were detected in the log files, notify the Operations Controller/System Administrator of the problem	**contact Operations Controller**

Table 18.6-12. Check the Request Manager Server Debug Log - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
21	If problems were detected and corrected in preceding steps, return to the **Recover from a Data Distribution Failure** procedure	Use procedure in Section 18.6.2
22	If problems were detected, continue with the **Check the Science Data Server Log Files** procedure	Use procedure in Section 18.6.2.4

18.6.2.4 Check the Science Data Server Log Files

The procedure to **Check the Science Data Server Log Files** is a part of the **Recover from a Data Distribution Failure** procedure (Section 18.6.2). It is performed in response to an acquire failure.

Acquire requests are processed through the Science Data Server. Consequently, it may be useful to inspect the Science Data Server log files (e.g., EcDsScienceDataServer.ALOG) to check for error messages associated with the ShortName of the file type.

Table 18.6-13 presents (in a condensed format) the steps required to check the Science Data Server log files. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the SDSRV Server host.

- Examples of SDSRV Server host (Sun internal server host) names include **e0acs06**, **g0acs06**, **l0acs06**, and **n0acs06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd /usr/ecs/<MODE>/CUSTOM/logs

- **<MODE>** is current mode of operation.
- "**logs**" is the directory containing archive server log files (e.g., EcDsScienceDataServer.ALOG).

3 At the command line prompt enter:

view <file name>

- **<file name>** is the name of the applicable Science Data Server ALOG file.
- For example:

  view EcDsScienceDataServer.ALOG

- Although this procedure has been written for the **view** command, any UNIX editor or visualizing command (e.g., **vi**, **pg**, **more**) can be used to review the log file.

4 Review the log file to determine whether the relevant file(s) was (were) successfully acquired.

- The following **view** editor commands are useful:
  - **h** (move cursor left).
  - **j** (move cursor down).
  - **k** (move cursor up).
  - **l** (move cursor right).
  - **a** (append text).
  - **i** (insert text).
  - **x** (delete a character).
  - **u** (undo previous change).
  - **Esc** (switch to command mode).
- The EcDsScienceDataServer.ALOG file should contain entries identifying the file to be acquired by the ShortName of the corresponding ESDT.
- The EcDsScienceDataServer.ALOG file should contain entries regarding the acquire activity. The following types of messages should be included in the ALOG file:

  PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDistributeOneDistributFile

  Msg: File 1 to be distributed: :SC:MOD03.001:55732:1.HDF-EOS, rpcID = 4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov:PDPS: MoPGE 02#sy14182000TS2SC:MOD03.001:55732 Priority: 0 Time : 06/18/01 17:27:47

  PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDistributeOneDistributFile

  Msg: File 2 to be distributed: SCMOD03.00155732.met, rpcID = 4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov:PDPS:MoPGE02# sy14182000TS2SC:MOD03.001:55732 Priority: 0 Time : 06/18/01 17:27:47

  PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDoDitributeCreateDsDdRequestMgrC

  Msg: Calling routine to execute DsDdRequestMgrC::Create, ddistRpcID=4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov: PDPSSDSV1:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Priority: 0 Time : 06/18/01 17:27:47

  PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDoDitributeSubmitAcquireToDDist

Msg: Calling routine to execute DsDdRequestMgrC::Submit(), ddistRpcID=4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov: PDPSSDSV1:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Priority: 0 Time : 06/18/01 17:27:47

PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDDISTSubmitDDistSubmitReturned

Msg: Calling routine to execute DsDdRequestMgrC::Submit, DDistRpcID=4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov: PDPSSDSV1:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Priority: 0 Time : 06/18/01 17:27:47

PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDDISTSubmitDDistSubmitReturned

Msg: Returned from DsDdRequestMgrC::Submit(), DDistRpcID=4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov: PDPSSDSV1:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Priority: 0 Time : 06/18/01 17:28:16

PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDoDitributeDistributeFile

Msg: Acquire Succeeded - DISTRIBUTED 2 filecount, rpcID = 4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov:PDPS:MoPGE02#sy14182000 TS2SC:MOD03.001:55732 Priority: 0 Time : 06/18/01 17:28:16

PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrSessionExecuteCommandComplt

Msg: Command 1/1 execution complete for Request ID 4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov:PDPS:MoPGE02#sy14182000 TS2SC:MOD03.001:55732, Success: 1 Priority: 0 Time : 06/18/01 17:28:16

PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsShSRequestRealSetStateSettingState

Msg: Request 4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov: PDPS:MoPGE02#sy14182000TS2SC:MOD03.001:55732 state set to DONE Priority: 0 Time : 06/18/01 17:28:16

- If the ShortName does not appear in the ALOG file, with a timestamp corresponding to the time of the attempted acquire, SDSRV may not be running, or may not be communicating with other servers.
- If the ALOG file does contain entries for that ShortName and indicates that two files (the file and its associated metadata file) are being distributed, SDSRV has completed its role in the acquire.

- If the ALOG contains the ShortName and also contains an error showing that the data file time stamp does not match the time stamp required by the acquire, the data file needs to be removed from the Science Data Server and reinserted.
  - This is usually done using a script called DsDbCleanGranules.

5 To quit the view application at the **view** program prompt enter:

:q!

6 If the ShortName does **not** appear in the ALOG file, with a timestamp corresponding to the time of the attempted acquire, ensure that it is possible to connect to the necessary hosts and servers.

- For detailed instructions refer to the **Check Connections to Hosts/Servers** procedure (Section 18.6.1.1).

7 If the ALOG contains the ShortName and also contains an error showing that the data file time stamp does not match the time stamp required by the acquire, notify the Archive Manager to have the data file(s) removed from the Science Data Server and reinserted.

8 If a problem was detected and corrected in one of the preceding steps (as indicated in the log file), return to the **Recover from a Data Distribution Failure** procedure (Section 18.6.2).

9 If the ALOG file does contain entries for the ShortName and indicates that the relevant data file(s) and associated metadata file(s) are being distributed, continue with the **Check the Archive Server Log Files** procedure (Section 18.6.2.5).

Table 18.6-13. Check the Science Data Server Log Files - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	UNIX window (Sun internal Server)	**single-click** or use procedure in Section 18.2.1
2	**cd /usr/ecs/<MODE>/CUSTOM/logs**	**enter text, press Enter**
3	**view <file name>** (Science Data Server ALOG)	**enter text, press Enter**
4	Determine whether the relevant file(s) was (were) successfully acquired	**read text**
5	**:q!** (when applicable)	**enter text, press Enter**
6	If the ShortName does not appear in the ALOG file, check the connections to hosts	Use procedure in Section 18.6.1.1
7	If the ALOG contains an error showing that the data file time stamp does not match the time stamp required by the acquire, notify the Archive Manager to have the data file(s) reacquired	**contact Archive Manager**

Table 18.6-13. Check the Science Data Server Log Files - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
8	If a problem was detected and corrected in one of the preceding steps, return to the **Recover from a Data Distribution Failure** procedure	Use procedure in Section 18.6.2
9	If the file(s) was (were) successfully acquired, continue with the **Check the Archive Server Log Files** procedure	Use procedure in Section 18.6.2.5

18.6.2.5 Check the Archive Server Log Files

The procedure to **Check the Archive Server Log Files** is a part of the **Recover from a Data Distribution Failure** procedure (Section 18.6.2). It is performed in response to an acquire failure.

Files to be acquired are retrieved from storage in the archive so the Archive Server is involved during an acquire. Consequently, it may be useful to inspect the Archive Server log files (e.g., EcDsStArchiveServer<HWCIn>.ALOG) to check for error messages associated with the ShortName of the file type.

Table 18.6-14 presents (in a condensed format) the steps required to check the Archive Server log files. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the APC Server host.

- Examples of APC Server host names include **e0acg11, g0acg01, l0acg02,** and **n0acg01**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd /usr/ecs/<MODE>/CUSTOM/logs

- **<MODE>** is current mode of operation.
- "**logs**" is the directory containing archive server log files (e.g., EcDsStArchiveServerACM1.ALOG).

3 At the command line prompt enter:

view <file name>

- **<file name>** is the name of the applicable archive server ALOG file.

- For example:

  view EcDsStArchiveServerACM1.ALOG

- Although this procedure has been written for the **view** command, any UNIX editor or visualizing command (e.g., **vi**, **pg**, **more**) can be used to review the log file.

4 Review the log file to determine whether the relevant file(s) was (were) successfully acquired.

- The following **view** editor commands are useful:
  - **h** (move cursor left).
  - **j** (move cursor down).
  - **k** (move cursor up).
  - **l** (move cursor right).
  - **a** (append text).
  - **i** (insert text).
  - **x** (delete a character).
  - **u** (undo previous change).
  - **Esc** (switch to command mode).

5 To quit the view application at the **view** program prompt enter:

:q!

6 If the relevant file(s) was (were) **not** successfully acquired, notify the Archive Manager to have the data file(s) reacquired.

7 If a problem was detected and corrected in one of the preceding steps, return to the **Recover from a Data Distribution Failure** procedure (Section 18.6.2).

8 If the relevant file(s) had been successfully acquired (as indicated in the log file), continue with the **Check the Staging Disk** procedure (Section 18.6.2.6).

Table 18.6-14. Check the Archive Server Log Files - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	UNIX window (APC Server)	**single-click** or use procedure in Section 18.2.1
2	**cd /usr/ecs/<MODE>/CUSTOM/logs**	**enter text, press Enter**
3	**view <file name>**(Archive Server ALOG)	**enter text, press Enter**
4	Determine whether the relevant file(s) was (were) successfully acquired	**read text**
5	**:q!** (when applicable)	**enter text, press Enter**

Table 18.6-14. Check the Archive Server Log Files - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
6	If the file(s) was (were) not successfully acquired, notify the Archive Manager to have the data file(s) reacquired	**contact Archive Manager**
7	If a problem was detected and corrected in one of the preceding steps, return to the **Recover from a Data Distribution Failure** procedure	Use procedure in Section 18.6.2
8	If the file(s) had been successfully acquired, continue with the **Check the Staging Disk** procedure	Use procedure in Section 18.6.2.6

18.6.2.6 Check the Staging Disk

The procedure to **Check the Staging Disk** is a part of the **Recover from a Data Distribution Failure** procedure (Section 18.6.2). It is performed in response to an acquire failure.

During an acquire, files are copied to a staging area as an intermediate step before distributing them to their destination. As part of diagnosing an acquire failure it is useful to check the staging area to ascertain whether the files have completed part of their journey. A subdirectory containing both the data granule and metadata file should have been written to the staging area.

Table 18.6-15 presents (in a condensed format) the steps required to check the staging disk. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the Distribution Server host.

- Examples of Distribution Server host (Sun internal server host) names include **e0acs06**, **g0acs06**, **l0acs06**, and **n0acs06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd /usr/ecs/<MODE>/CUSTOM/drp/<archive host>/data/staging/<disk number>

- **<MODE>** is current mode of operation.
- **<archive host>** refers to the applicable archive host (e.g., e0drg11, g0drg01, l0drg01, or n0drg01).
- **<disk number>** is the relevant staging disk for the distribution.

3 At the UNIX command line prompt enter:

ls -lrt

- A listing of the staging disk subdirectory contents is displayed.

4 Review the subdirectory contents to determine whether the relevant file(s) was (were) successfully staged.

- The subdirectory should contain both the relevant data granule(s) and corresponding metadata file(s).

5 If the relevant file(s) was (were) successfully staged, ensure that it is possible to connect to the necessary hosts and servers.

- For detailed instructions refer to the **Check Connections to Hosts/Servers** procedure (Section 18.6.1.1).

6 If the relevant file(s) was (were) successfully staged and if it is possible to connect to the necessary hosts and servers, return to the **Recover from a Data Distribution Failure** procedure (Section 18.6.2).

7 If the relevant file(s) was (were) **not** successfully staged, continue with the **Check the Staging Disk ALOG File** procedure (Section 18.6.2.7) to determine why the data were not successfully staged.

Table 18.6-15. Check the Staging Disk - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (Sun internal server)	**single-click** or use procedure in Section 18.2.1
2	**cd /usr/ecs/<MODE>/CUSTOM/drp/<archive host>/data/staging/<disk number>**	**enter text, press Enter**
3	**ls -lrt**	**enter text, press Enter**
4	Determine whether the relevant file(s) was (were) successfully staged	**read text**
5	If the relevant file(s) was (were) successfully staged, check the connections to hosts	Use procedure in Section 18.6.1.1
6	If the file(s) was (were) successfully staged, return to the **Recover from a Data Distribution Failure** procedure	Use procedure in Section 18.6.2
7	If the file(s) was (were) not successfully staged, continue with the **Check the Staging Disk ALOG File** procedure	Use procedure in Section 18.6.2.7

18.6.2.7 Check the Staging Disk ALOG File

The procedure to **Check the Staging Disk ALOG File** is a part of the **Recover from a Data Distribution Failure** procedure (Section 18.6.2). It may be performed in conjunction with the procedure to **Check the Staging Disk** (Section 18.6.2.6) in response to an acquire failure. If a failure occurs in copying files to the staging area, then the staging disk ALOG files (e.g., EcDsStStagingDiskServer.ALOG or EcDsStCacheManagerServer.ALOG) may reveal the cause.

Table 18.6-16 presents (in a condensed format) the steps required to check the staging disk ALOG file. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the Distribution Server host.

- Examples of Distribution Server host (Sun internal server host) names include **e0acs06**, **g0acs06**, **l0acs06**, and **n0acs06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd /usr/ecs/<MODE>/CUSTOM/logs

- **<MODE>** is current mode of operation.
  - TS1 - Science Software Integration and Test (SSI&T)
  - TS2 - New Version Checkout
  - OPS - Normal Operations
- "**logs**" is the directory containing data distribution, science data server, or storage management log files (e.g., EcDsDdistGui.ALOG, EcDsDistributionServer.ALOG).

3 At the command line prompt enter:

view <file name>

- **<file name>** refers to the Staging Disk Server ALOG or Cache Manager Server ALOG as applicable.
  - For example:

    view EcDsStStagingDiskServer.ALOG
- Although this procedure has been written for the **view** command, any UNIX editor or visualizing command (e.g., **vi**, **pg**, **more**) can be used to review the log file.

4 Review the log file to determine whether the relevant file(s) was (were) successfully staged.

- The following **view** editor commands are useful:
  - **h** (move cursor left).
  - **j** (move cursor down).

- **k** (move cursor up).
- **l** (move cursor right).
- **a** (append text).
- **i** (insert text).
- **x** (delete a character).
- **u** (undo previous change).
- **Esc** (switch to command mode).

5 To quit the view application at the **view** program prompt enter:

:q!

6 If the relevant file(s) was (were) successfully staged, ensure that it is possible to connect to the necessary hosts and servers.

- For detailed instructions refer to the **Check Connections to Hosts/Servers** procedure (Section 18.6.1.1).

7 If the relevant file(s) was (were) successfully staged and if it is possible to connect to the necessary hosts and servers, return to the **Recover from a Data Distribution Failure** procedure (Section 18.6.2).

8 If the relevant file(s) was (were) **not** successfully staged, continue with the **Check the Space Available in the Staging Area** procedure (Section 18.6.2.8).

Table 18.6-16. Check the Staging Disk ALOG File - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (Sun internal server)	**single-click** or use procedure in Section 18.2.1
2	**cd /usr/ecs/<MODE>/CUSTOM/logs**	**enter text, press Enter**
3	**view <file name>** (Staging Disk Server ALOG or Cache Manager Server ALOG as applicable)	**enter text, press Enter**
4	Determine whether the relevant file(s) was (were) successfully staged	**read text**
5	**:q!** (when applicable)	**enter text, press Enter**
6	If the relevant file(s) was (were) successfully staged, check the connections to hosts	Use procedure in Section 18.6.1.1
7	If the file(s) was (were) successfully staged, return to the **Recover from a Data Distribution Failure** procedure	Use procedure in Section 18.6.2
8	If the file(s) was (were) not successfully staged, continue with the **Check the Space Available in the Staging Area** procedure	Use procedure in Section 18.6.2.8

18.6.2.8 Check the Space Available in the Staging Area

The procedure to **Check the Space Available in the Staging Area** is a part of the **Recover from a Data Distribution Failure** procedure (Section 18.6.2). It may be performed in conjunction with the procedures to **Check the Staging Disk ALOG File** (Section 18.6.2.7) and **Check the Staging Disk** (Section 18.6.2.6) in response to an acquire failure. An acquire failure can be caused by a lack of space in the staging area.

Table 18.6-17 presents (in a condensed format) the steps required to check the space available in the staging area. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the Distribution Server host.

- Examples of Distribution Server host (Sun internal server host) names include **e0acs06**, **g0acs06**, **l0acs06**, and **n0acs06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd /usr/ecs/<MODE>/CUSTOM/drp/<archive host>/data/

- Change to the appropriate data subdirectory.
- **<MODE>** is current mode of operation.
- **<archive host>** refers to the applicable archive host (e.g., e0drg11, g0drg01, l0drg01, or n0drg01).

3 At the UNIX command line prompt enter:

df -k .

- Be sure to include the dot at the end of the command.
- The **df -k .** command generates a report of the number of free disk blocks and files.
  - For example:

```
Filesystem             kbytes    used   avail capacity  Mounted on
x0drg01:/usr/ecs/TS2/CUSTOM/drp/x0drg01/data
                     278586880 156217472 122369408    57%
/data1/ecs/TS2/CUSTOM/drp/x0drg01/data
```

4 Review the available space listed to determine whether there is adequate space for staging the relevant file(s).

5 If there is **not** adequate space for staging the relevant file(s), notify the Operations Controller/System Administrator of the lack of space.

6 If there is adequate space for staging the relevant file(s), notify the Archive Manager to have the data file(s) reacquired.

7 Return to the **Recover from a Data Distribution Failure** procedure (Section 18.6.2) after the problem has been corrected.

Table 18.6-17. Check the Space Available in the Staging Area - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (Sun internal server)	**single-click** or use procedure in Section 18.2.1
2	**cd /usr/ecs/<MODE>/CUSTOM/drp/<archive host>/data/**	**enter text, press Enter**
3	**df -k .**	**enter text, press Enter**
4	Determine whether there is adequate space for staging the relevant file(s)	**read text**
5	Notify the Operations Controller/System Administrator of the lack of space (if applicable)	**contact Operations Controller**
6	Notify the Archive Manager to have the data file(s) reacquired (if there is adequate space)	**contact Archive Manager**
7	Return to the **Recover from a Data Distribution Failure** procedure	Use procedure in Section 18.6.2

18.6.2.9 Check Database Connections

The storage management/data distribution shared database is the repository of data concerning data distribution requests. If applications (including the **Data Distribution Operator GUI**) are unable to connect to the database, the data distribution request data cannot be retrieved or (in the case of the GUI) displayed. Consequently, if the GUI does not display data or if the display does not refresh, checking the database connections is a logical step in trying to isolate the problem.

Table 18.6-18 presents (in a condensed format) the steps required to check database connections. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Submit a request to the Database Administrator to identify the values for the following parameters associated with the EcDsDistributionServer:

- **DBName.**
- **DBServer.**
- **DBMaxConnections.**

2 Access a terminal window logged in to the APC Server host.

- Examples of APC Server host names include **e0acg11, g0acg01, l0acg02,** and **n0acg01**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).
- APC Server typically hosts Sybase for the storage management/data distribution shared database.

3 At the UNIX command line prompt enter:

isql –U <user ID> -S <database server>

- **<user ID>** is the database user's identification; e.g., **stmgt_role**.
- **<database server>** is the database server; e.g., **x0acg01_srvr**.
- For example:

  isql –U stmgt_role –S x0acg01_srvr

4 At the **Password:** prompt enter:

<database password>

- **<database password>** is the password for logging in to the database using the specified **<user ID>**.
- A **1>** prompt is displayed, indicating that a connection has been made with the database.

5 At the **1>** prompt enter:

sp_who

- A **2>** prompt is displayed.

6 At the **2>** prompt enter:

go

- A listing of current log-ins to the database is displayed; it includes data in the following columns:
  - **spid.**
  - **status.**
  - **loginame.**
  - **hostname.**
  - **blk.**
  - **dbname.**
  - **cmd.**
- A listing similar to the following one is displayed (most lines have been deleted):

  spid status loginame hostname blk
  dbname cmd

```
------ ------------ ------------------------------ ---------- -----
    ------------------------------ ----------------
  1 recv sleep   stmgt_role                  x0acs03     0
    stmgtdb1_TS1                AWAITING COMMAND
  2 sleeping     NULL                             0
    master                    NETWORK HANDLER
  3 sleeping     NULL                             0
    master                    DEADLOCK TUNE
```

7 At the **1>** prompt enter:

sp_configure "user connections"

8 At the **2>** prompt enter:

go

- A listing similar to the following one is displayed:

```
Parameter Name                 Default     Memory Used Config Value
     Run Value
 ------------------------------ ----------- ----------- ------------
     -----------
 number of user connections           25       20195       255
          255
(1 row affected)
(return status = 0)
```

9 At the **1>** prompt enter:

quit

- The connection with the database is discontinued.
- A UNIX command line prompt is displayed.

10 Compare the number of actual connections with the number of connections for which the database has been configured.

- Number of actual connections is displayed in response to the **sp_who** isql command.
- Number of connections for which the database has been configured is displayed in response to the **sp_configure "user connections"** isql command.

11 If the number of actual connections is very close to the number of connections for which the database has been configured, notify the Database Administrator of the fact.

12 If the number of actual connections is **not** very close to the number of connections for which the database has been configured, compare the number of actual connections with the value for DBMaxConnections that the Database Administrator specified (Step 1).

- In Step 1 of this procedure a request was made to the Database Administrator to identify the value assigned to DBMaxConnections.

13 If the number of actual connections is very close to the value for DBMaxConnections, notify the Database Administrator of the fact.

- It may be advisable to increase the value assigned to the DBMaxConnections parameter in the Configuration Registry.

Table 18.6-18. Check Database Connections - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Request the Database Administrator to identify values for EcDsDistributionServer parameters **DBName**, **DBServer**, and **DBMaxConnections**	**contact Database Administrator**
2	UNIX window (APC Server)	**single-click** or use procedure in Section 18.2.1
3	**isql –U <user ID> -S <database server>**	**enter text, press Enter**
4	**<database password>**	**enter text, press Enter**
5	**sp_who**	**enter text, press Enter**
6	**go**	**enter text, press Enter**
7	**sp_configure "user connections"**	**enter text, press Enter**
8	**go**	**enter text, press Enter**
9	**quit**	**enter text, press Enter**
10	Compare the number of actual connections with the number for which the database has been configured	**read text**
11	Notify the Database Administrator that the number of actual connections is very close to the number of connections for which the database has been configured (if applicable)	**contact Database Administrator**
12	Compare the number of actual connections with the value for DBMaxConnections (If applicable))	**read text**
13	Notify the Database Administrator that the number of actual connections is very close to the value for DBMaxConnections (if applicable)	**contact Database Administrator**

18.7 Starting Up PDS

Hard (physical) media distribution on disks or tape cartridges is accomplished through the Product Distribution System (PDS), which supports distribution on the following types of media:

- 8mm tape cartridges.
- Digital Linear Tape (DLT).
- Compact disk (CD).
- DVD (formerly digital video disk or digital versatile disk now referred to as just "DVD").

The method of data distribution is dictated by the nature of the data distribution request. (The requester specifies the distribution method when ordering the data.)

When a requester submits a request for hard media distribution, the retrieved data and metadata files on the staging disk are transferred via ftp push to the designated PDS staging area. The PDS generates and mails the media; and sends an e-mail distribution notice (order shipment notification) in standard ECS format to the requester's e-mail address (as specified in the original order).

Table 18.7-1, below, provides an Activity Checklist for starting up PDS.

Table 18.7-1. Starting Up PDS - Activity Checklist

Order	Role	Task	Section	Complete?
1	Distribution Technician	Start the PDSIS Server and PDSIS Cron	(P) 18.7.1	
2	Distribution Technician	Start the PDS Cron	(P) 18.7.2	
3	Distribution Technician	Start the PDS Operator Interface (PDSOI)	(P) 18.7.3	
4	Distribution Technician	Start the PDSIS Operator Interface (PDSIS OI)	(P) 18.7.4	
5	Distribution Technician	Start the PDS Job Monitor	(P) 18.7.5	
6	Distribution Technician	Start the Rimage CD Production Software	(P) 18.7.6	
7	Distribution Technician	Start the PDS Quality Check GUI	(P) 18.7.7	
8	Distribution Technician	Start the PDS Maintenance Module	(P) 18.7.8	
9	Distribution Technician	Start the PDSIS Maintenance Module	(P) 18.7.9	

18.7.1 Start the PDSIS Server and PDSIS Cron

On rare occasions it may be necessary to start the PDSIS Server and/or the PDSIS cron processes.

The applications are invoked from a UNIX command line prompt. Table 18.7-2 presents (in a condensed format) the steps required to start the PDSIS Server and/or the PDSIS cron processes. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: A **PDSIS** user ID (e.g., **pdsis**, **pdsis_ts1**, **pdsis_ts2**) is used in this procedure.

1 Log in to the PDS Server host using the appropriate PDSIS user ID for the operating mode being used.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- PDSIS user IDs are **pdsis**, **pdsis_ts1**, and **pdsis_ts2**, which are used for PDSIS operations in the OPS, TS1, and TS2 modes respectively.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 To determine whether the PDSIS Server is running, in the terminal window, at the command line prompt, enter:

ps -ef | grep <userID>

- For example:

  ps -ef | grep pdsis_ts2

- The following type of message is displayed:

  pdsis_ts 13484969 13319855 0 Nov 17 ? 0:00 /tools/bin/perl -w /usr/local/pdsis_ts2/utilities/EcPdIsPdsisActivator -load 10
  pdsis_ts 26601639 26278381 0 13:34:34 pts/14 0:00 grep pdsis_ts2
  pdsis_ts 24679415 26856424 0 17:01:00 pts/12 0:27 /usr/java/bin/../bin32/sgi/native_threads/java -classpath /data1/pdsis_ts2/lib/
  pdsis_ts 13319855 724 0 Nov 17 ? 0:00 /bin/ksh - /usr/local/pdsis_ts2/utilities/EcPdIsStartActivateCron pdsis_ts2 sup

- If the PDSIS Server were **not** running, the following type of message only would be displayed:

  pdsis_ts 26601639 26278381 0 13:34:34 pts/14 0:00 grep pdsis_ts2

3 At the UNIX command line prompt enter:

cd /usr/local/pdsis_<mode>/utilities

- Change directory to the directory containing the PDSIS Server start-up script (e.g., EcPdPDSISServerStart).
- **pdsis_<mode>** refers to one of the following subdirectories:
  - pdsis (for OPS-mode operations).
  - pdsis_ts1 (for TS1-mode operations).
  - pdsis_ts2 (for TS2-mode operations).

4 If starting the PDSIS Server is desired, at the UNIX command line prompt enter:

EcPdPDSISServerStart <MODE> <debug> &

- <**MODE**> is one of the following values:
  - **pdsis.**
  - **pdsis_ts1.**
  - **pdsis_ts2.**
- <**debug**> is one of the following values:
  - **false** [no debug information is printed to the debug log].
  - **true** [debug information is printed to the debug log].
  - **super** [maximum debug information is printed to the debug log].
- The PDSIS Server starts.

5 If starting the PDSIS cron jobs is desired, at the UNIX command line prompt enter:

crontab EcPdIsCrontab

- The PDSIS cron jobs will start at the appropriate times (as specified in the cronfile **EcPdIsCrontab**).
- If an error message is displayed, verify that the proper PDSIS log-in was used (refer to Step 1).

6 To verify that the crons were started, at the UNIX command line prompt enter:

crontab -l

- The following type of response is displayed:

  0,5,10,15,20,25,30,35,40,45,50,55 * * * * /usr/local/$USER/utilities/EcPdPDSISCronStart $USER scli super >> /usr/local/$USER/logs/EcPdPDSISCronStartScli.log 2>&1
  #
  0,2,4,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58 * * * * /usr/local/$USER/utilities/EcPdPDSISCronStart $USER status super >> /usr/local/$USER/logs/EcPdPDSISCronStartStatus.log 2>&1
  #

0,2,4,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58 * * * * /usr/local/$USER/utilities/EcPdPDSISCronStart $USER cleanup super >> /usr/local/$USER/logs/EcPdPDSISCronStartCleanup.log 2>&1
#
 # Midnight cleanup cron
0 0 * * * /usr/local/$USER/utilities/EcPdPDSISMidnightCronStart $USER super >> /usr/local/$USER/logs/EcPdPDSISMidnightCronStart.log 2>&1
#
 # Auto activation script
 # Skip Thursday
2,22,42 * * * 0,1,2,3,5,6 /usr/local/$USER/utilities/EcPdIsStartActivateCron $USER super >> /usr/local/$USER/logs/EcPdIsActivateCronStart.log 2>&1
#
 # Thursday's activation cron (deactivated from 1142 - 2002)
2,22,42 0,1,2,3,4,5,6,7,8,9,10,11,20,21,22,23 * * 4 /usr/local/$USER/utilities/EcPdIsStartActivateCron $USER super >> /usr/local/$USER/logs/EcPdIsActivateCronStart.log 2>&1

7 If verifying that the crons were started, at the UNIX command line prompt enter:

pg EcPdIsCrontab

- The response should be identical to the response from the **crontab –l** command.
  - If the response is not identical to that of the **crontab –l** command, verify that the proper **PDSIS** log-in was used (refer to Step 1).
- To exit from **pg** type **q** then press **Return/Enter**.

Table 18.7-2. Start the PDSIS Server and PDSIS Cron - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server) (using appropriate PDSIS user ID)	**single-click** or use procedure in Section 18.2.1
2	**ps -ef | grep pdsis**	**enter text, press Enter**
3	**cd /usr/local/pdsis_<mode>/utilities**	**enter text, press Enter**
4	**EcPdPDSISServerStart <MODE> <debug> &** (if applicable)	**enter text, press Enter**
5	**crontab EcPdIsCrontab** (if applicable)	**enter text, press Enter**
6	**crontab -l** (if applicable)	**enter text, press Enter**
7	**pg EcPdIsCrontab** (if applicable)	**enter text, press Enter**

18.7.2 Start the PDS Cron

On rare occasions it may be necessary to start the PDS cron processes. There are three CRONs that need to be started for each PDS user account. The CRONs check flags in the database and automatically update tables during product generation. The CRONs are defined in a file named "pdscrontbl" and are started with the UNIX **crontab** command.

The applications are invoked from a UNIX command line prompt. Table 18.7-3 presents (in a condensed format) the steps required to start the PDS cron processes. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: A **PDS** user ID (e.g., **pds**, **pds_st**, **pds_it**) is used in this procedure.

1 Log in to the PDS Server host using the appropriate PDS user ID for the operating mode being used.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- PDS user IDs are **pds**, **pds_st**, and **pds_it**, which are used for PDS operations in the OPS, TS1, and TS2 modes respectively.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd /usr/local/pds_<mode>/pdscrons

- Change directory to the directory containing the appropriate pdscrontbl file.
- **pds_<mode>** refers to one of the following subdirectories:
  - pds (for OPS-mode operations).
  - pds_st (for TS1-mode operations).
  - pdsis_it (for TS2-mode operations).

3 At the UNIX command line prompt enter:

crontab pdscrontbl

- The PDS cron jobs will start at the appropriate times (as specified in the cronfile **pdscrontbl**).
- If an error message is displayed, verify that the proper PDS log-in was used (refer to Step 1).

4 To verify that the crons were started, at the UNIX command line prompt enter:

crontab -l

- The following type of response is displayed:

0,5,10,15,20,25,30,35,40,45,50,55 * * * * /data1/$USER/pdscrons/pds_insert.cron >> /data1/$USER/logs/pds_insert.log 2>&1
0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58 * * * * /data1/$USER/pdscrons/pds_job.cron >> /data1/$USER/logs/pds_job.log 2>&1
3,8,13,18,23,28,33,38,43,48,53,58 * * * * /data1/$USER/pdscrons/pds_completion.cron >> /data1/$USER/logs/pds_completion.log 2>&1

5 At the UNIX command line prompt enter:

pg pdscrontbl

- The response should be identical to the response from the **crontab –l** command.
  - If the response is not identical to that of the **crontab –l** command, verify that the proper **PDS** log-in was used (refer to Step 1).
- To exit from **pg** at the **:** prompt enter:

  q

Table 18.7-3. Start the PDS Cron - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server) (using appropriate PDS user ID)	**single-click** or use procedure in Section 18.2.1
2	**cd /usr/local/pds_<mode>/pdscrons**	**enter text, press Enter**
3	**crontab pdscrontbl**	**enter text, press Enter**
4	**crontab -l**	**enter text, press Enter**
5	**pg pdscrontbl**	**enter text, press Enter**

18.7.3 Start the PDS Operator Interface (PDSOI)

The PDS Operator Interface (PDSOI) is intended to run continually to allow the monitoring and control of jobs in PDS.

The PDS Operator Interface (PDSOI) is invoked from a UNIX command line prompt. Table 18.7-4 presents (in a condensed format) the steps required to start the PDS Operator Interface (PDSOI). If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.

- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 In the terminal window, at the command line prompt, enter:

pdsoi

- The PDSOI Startup Window is displayed.
  - It may take a few seconds for the window to be displayed.
- The following information is displayed near the top of the screen:
  - Name of the Oracle Form (e.g., PDSMTOIX).
  - Current version of the PDS (e.g., 2.3).
  - Database instance being run (e.g., PRODUCTION).
  - Current date.
- **pdsoi** is an alias for a UNIX script (pdsoi_prod.sh) that is used to start up the PDSOI.
  - The script is located in the "run" directory (e.g., /data1/pds_it/run).
  - The alias may vary somewhat depending on the site set-up.

3 **Single-click** and **hold** the **PDS Machine** option button to display a menu of machines, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.

- Selected machine is displayed on the **PDS Machine** option button when the mouse button is released.

4 In the **Console ID** window enter:

<console ID>

- The PDSOI Start-Up Selection Screen is displayed.
- The **Machine ID** and **Console ID** (linked with an underscore) are displayed in the header of the window.
  - For example, "PDS1_test" in the header of the window indicates that "PDS1" was chosen as the Machine ID and that "test" was typed in as the Console ID.
- Together the **PDS Machine** and **Console ID** constitute the **OI ID** for all jobs started up from the current window.
  - If the OI is shut down or goes down for some reason, it is necessary to log in to the system with the same Machine ID and Console ID to be able to continue work on any jobs started with the OI ID being used in the current session.

5 **Single-click** on the toggle button(s) corresponding to the desired priority(ies) in the **Priority** list.

- Options are: **All**, **1**, **2**, **3**, **4**, **5**, **6**, **7**, **8**, **9**.
- Priority meanings might be assigned (in the database) as follows (for example):

1 - Emergency -	Eight-hour turn-around required.
2 - High Priority -	Less than 24-hour turn-around.
3 - Priority -	Turn around in less than five working days.

4 - 6 - **Rush** - Two-week turn-around.
7 - 9 - **Standard Orders** - Four- to six-week turn-around.

- One button or several buttons may be selected.
- Options may change.
- Single-clicking on a button changes its state from unselected to selected or vice versa.
- Buttons have a depressed or sunken appearance rather than a raised appearance when selected.

6 **Single-click** on the toggle button(s) corresponding to the desired product media type(s) in the **Product Media** list.

- Options are: **All**, **CD**, **8H**, **D7**, **DVD**.
- Product media types might be defined (in the database) as follows (for example):

  CD - CDROM.
  8H - 8mm tape.
  D7 - DLT.
  DVD - DVD.

- Options may change.
- One button or several buttons may be selected.
- Single-clicking on a button changes its state from unselected to selected or vice versa.
- Buttons have a depressed or sunken appearance rather than a raised appearance when selected.

7 **Single-click** on the toggle button(s) corresponding to the desired due date(s) in the **Due Date** list.

- Options are: **All**, **Past Due**, **Today**, **1 Week**.
- Options may change.
- One button or several buttons may be selected.
- Single-clicking on a button changes its state from unselected to selected or vice versa.
- Buttons have a depressed or sunken appearance rather than a raised appearance when selected.

8 **Single-click** on the toggle button(s) corresponding to the desired product code(s) in the **Product Code** list.

- Options are: **All** and all valid individual product codes.
- One button or several buttons may be selected.
- Single-clicking on a button changes its state from unselected to selected or vice versa.
- Buttons have a depressed or sunken appearance rather than a raised appearance when selected.

9 **Single-click** and **hold** the appropriate **Sort By** option button to display a list of numbers indicating the order in which the sort criteria should be evaluated, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.

- Options are: **Job Key**, **Priority**, **Job Status**, **Product Media**, **Project Id**, **Product Code**, **Due Date**.
- Selected sort order number is displayed on the selected **Sort By** option button when the mouse button is released.
- It is not possible to select a sort order number for a sorting category if the number has already been assigned to another category.
  - For example, if Job Status was assigned Number 1, Product Media cannot be assigned Number 1 as well. If jobs should be sorted by Product Media first, it is necessary to change the Job Status assignment to some (unused) number other than one (1) then one (1) can be assigned to Product Media.

10 Repeat Step 9 as necessary to assign sorting order to additional categories.
- It is possible to select more than one **Sort By** item.
- If more than one **Sort By** option is selected the jobs will be selected by the sort order for the selection assigned Number 1, then within that sort order they would be sorted by the category assigned Number 2, etc.
  - For example, if Job Status were assigned the first sort order (1) and Due Date were assigned the second sort order (2), the jobs would be sorted by Job Status, then within each status the jobs would be sorted by Due Date. So the jobs containing the same status would be displayed together with the earliest due date for each status at the top of the list for that status.

11 **Single-click** on the **Execute** button.
- A **Querying Database** notice is displayed temporarily in a blue box.
  - The message line at the bottom of the screen displays "Working" while the Querying Database notice is being displayed.
  - If there are status files waiting to be read, another blue box may be displayed indicating "Reading Status files. Please wait…"
  - If no selection criteria were selected, a **Selection Error Dialogue** is displayed in a purple box.
  - **Single-click** on the **OK** button to dismiss the error window.
- The **Main OI Screen** is displayed when the **Querying Database** notice quits (indicating that database has been queried and the results are being displayed).

12 Set timer intervals.
- The timer interval determines how often the data displayed on the **Main OI Screen** are refreshed.
- For detailed instructions refer to the **Set Timer Intervals** procedure (Section 18.9.2).

Table 18.7-4. Start the PDS Operator Interface (PDSOI) - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**pdsoi**	**enter text, press Enter**
3	**<machine>** (from **PDS Machine** option button)	**single-click**
4	**<console ID>** (in **<console ID>** window)	**enter text, press Enter**
5	**<priority>** (in **Priority** list)	**single-click**
6	**<product media>** (in **Product Media** list)	**single-click**
7	**<due date>** (in **Due Date** list)	**single-click**
8	**<product code>** (in **Product Code** list)	**single-click**
9	**<sort order>** (on the applicable **Sort By** option button)	**single-click**
10	Repeat preceding step as necessary to assign sorting order	
11	**Execute** button	**single-click**
12	Set timer intervals	Use procedure in Section 18.9.2

18.7.4 Start the PDSIS Operator Interface (PDSIS OI)

Like the PDSOI, the PDSIS Operator Interface (PDSIS OI) is intended to run continually to allow the monitoring and control of orders in PDS. It may be useful to start the **PDSIS OI Main Screen** in a separate workspace from the PDS **Main OI Screen** to prevent crowding in the PDS workspace.

The **PDSIS OI Main Screen** is invoked from a UNIX command line prompt. Table 18.7-5 presents (in a condensed format) the steps required to start the PDSIS Operator Interface (PDSIS OI). If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID at the UNIX command line prompt enter:

    echo $PDSROOT

3 At the UNIX command line prompt enter:

pdsisoi

- The **PDSIS OI Main Screen** is displayed.
  - It may take a few seconds for the window to be displayed.
  - The following information is displayed near the top of the screen: Name of the Oracle Form (e.g., PDSISMTOIX); Current version of the PDS (e.g., 1.0); Database instance being run (e.g., PDSIS); Current date.
- **pdsisoi** is an alias for a UNIX script (pdsisoi_prod.sh) that is used to start up the PDSIS OI.
  - The script is located in the "run" directory (e.g., /data1/pds_it/run).
  - The alias may vary somewhat depending on the site set-up.

Table 18.7-5. Start the PDSIS Operator Interface (PDSIS OI) - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**cd**	**enter text, press Enter**
3	**pdsisoi**	**enter text, press Enter**

18.7.5 Start the PDS Job Monitor

The PDS **Job Monitor Main Window** is intended to run continually in conjunction with the PDS **Main OI Screen**.

The PDS **Job Monitor Main Window** is invoked from a UNIX command line prompt. Table 18.7-6 presents (in a condensed format) the steps required to start the PDS Job Monitor. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID at the UNIX command line prompt enter:

    echo $PDSROOT

3 At the command line prompt enter:

cd jobmon

- Change to the "jobmon" subdirectory.

4 At the command line prompt enter:

jobmonitor &

- The **Job Monitor Main Window** is displayed.
- The PDS **Job Monitor Main Window** is intended to run continually in conjunction with the PDS **Main OI Screen**.
- Hypothetically, there is no limit to the number of PDS Job Monitors that can be running at once; however, since the application consumes a small amount of resources, care should be taken to not run multiple instances excessively.

Table 18.7-6. Start the PDS Job Monitor - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**cd**	**enter text, press Enter**
3	**cd jobmon**	**enter text, press Enter**
4	**jobmonitor &**	**enter text, press Enter**

18.7.6 Start the Rimage CD Production Software

The following Rimage CD production software programs have to be started on the Rimage personal computer (PC):

- Data Publisher.
- Production Server.

NOTE: A Network File System (NFS) mount is needed in order to see the job control directory (e.g., /pdssa/rimage_jobcontrol) on the PDS system. When the Windows NT system for the Rimage PC is set up, the PDS job control directory on the PDS Server host (e.g., x0dig06) is typically mapped to the PC's Z: drive. Data Publisher watches the job control directory looking for order files that describe data to be transferred (so they can be written to disk). The order files are identified by a ".ORD" extension, which indicates that data are ready to be transferred. Data Publisher transfers the data (i.e., image files) via ftp from PDSSA to the "CD-R_Images" folder (directory) on one of the Rimage PC hard disk drives (e.g., the E: drive) and changes the ".ORD" extension on the order file to a ".dn0" extension.

Table 18.7-7 presents (in a condensed format) the steps required to start the Rimage CD production software. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Double-click** on the Data Publisher icon on the PC desktop.

- The program starts and a Data Publisher window is displayed on the PC.
- Data Publisher watches the job control directory looking for order files that describe data to be transferred (so they can be written to disk).
  - The order files are identified by a ".ORD" extension, which indicates that data are ready to be transferred.
- Data Publisher transfers data (i.e., image files) via ftp from PDSSA to the "CD-R_Images" folder (directory) on one of the Rimage PC hard drives (e.g., the E: drive) and changes the ".ORD" extension on the order file to a ".dn0" extension.

2 **Double-click** on the Production Server icon on the PC desktop.

- The program starts and a Production Server window is displayed on the PC.
- The Production Server does an initial hardware check on the Rimage CD/DVD burners, internal printer and the media carousel. The Production Server transfers data to disk media after Data Publisher has transferred the data onto one of the Rimage PC hard drives (e.g., the E: drive).

3 **Single-click** on the **Start** button in the Production Server window.

Table 18.7-7. Start the Rimage CD Production Software - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Data Publisher icon (on PC desktop)	**double-click**
2	Production Server icon (on PC desktop)	**double-click**
3	**Start** button (in Production Server window)	**single-click**

18.7.7 Start the PDS Quality Check GUI

The **PDS Quality Check** GUI is intended to run continually in conjunction with the PDS **Main OI Screen**.

The **PDS Quality Check** GUI is invoked from a UNIX command line prompt. Table 18.7-8 presents (in a condensed format) the steps required to start the **PDS Quality Check** GUI. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd $PDSROOT/run/verify

- Change the current directory to the "verify" subdirectory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID at the UNIX command line prompt enter:

    echo $PDSROOT

3 At the command line prompt enter:

EcPdSaQCGui &

- The **PDS Quality Check** GUI is displayed.
- The **PDS Quality Check** GUI is intended to run continually in conjunction with the PDS **Main OI Screen**.

4 To check the printer selection **single-click** on **Printer** near the top of the **PDS Quality Check** GUI.
- A list of printers is displayed; for example:
  - x0dit09.
  - x0vch06.

5 If checking the printer selection, verify that the proper printer has been selected to print verification reports.
- The shaded button next to a printer ID indicates which printer is the currently selected to print verification reports.
- **Single-click** on the button next to the proper printer if necessary.

6 To check the print options **single-click** on **Options** near the top of the **PDS Quality Check** GUI.
- Options are: **Print on Fail**, **Print on Pass**, and **Test DLT's**.

7 If checking the print options, verify that the proper option(s) has (have) been selected to print verification reports.
- The shaded box next to an option indicates that the option is currently selected.
- Multiple options are allowed.
- **Single-click** on the box next to each desired option if necessary.

Table 18.7-8. Start the PDS Quality Check GUI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**cd $PDSROOT/run/verify**	**enter text, press Enter**
3	**EcPdSaQCGui &**	**enter text, press Enter**
4	**<printer>** (from the **Printer** menu on the **PDS Quality Check** GUI) (if applicable)	**single-click**
5	**<print option(s)>** (from the **Options** menu on the **PDS Quality Check** GUI) (if applicable)	**single-click**

18.7.8 Start the PDS Maintenance Module

The PDS Maintenance Module contains Oracle Forms, which are used to look at and update the data within the database used by the PDSOI. The PDS **Maintenance Module** is intended to be run as it is needed to change data in certain fields in the database. It would not normally be running continuously.

The PDS Maintenance Module is invoked from a UNIX command line prompt. Table 18.7-9 presents (in a condensed format) the steps required to start the PDS Maintenance Module. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID at the UNIX command line prompt enter:

    echo $PDSROOT

3 At the command line prompt enter:

pds_maint

- The PDS **Maintenance Module Login Screen** is displayed.
- **pds_maint** is an alias for a UNIX script (pdsmaint.sh) that is used to start up the PDS Maintenance Module.
  - The script is located in the $PDSROOT/run directory (e.g., /data1/pds_it/run).
  - The alias may vary somewhat depending on the site set-up.

4 In the **Username** field of the PDS **Maintenance Module Login Screen** enter:

<user ID>

5 In the **Password** field of the PDS **Maintenance Module Login Screen** enter:

<password>

NOTE: It is not necessary to fill in the **Database** field on the PDS **Maintenance Module Login Screen**; it defaults to the correct database if left blank.

6 **Single-click** on the appropriate button from the following selections:

- **Connect** - to log in to the PDS Maintenance Module.
  - The PDS **Maintenance Module Main Menu** is displayed.

- **Cancel** - to dismiss the PDS **Maintenance Module Login Screen** without logging in to the PDS Maintenance Module.

Table 18.7-9. Start the PDS Maintenance Module - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**cd**	**enter text, press Enter**
3	**pds_maint**	**enter text, press Enter**
4	**<user ID>** (in **Username** field)	**enter text, press Tab**
5	**<password>** (in **Password** field)	**enter text, press Enter**
6	**Connect** button	**single-click**

18.7.9 Start the PDSIS Maintenance Module

The PDSIS Maintenance Module contains Oracle Forms, which are used to look at and update the data within the database tables used by the PDSIS OI. The **PDSIS Maintenance Module** is intended to be run as it is needed to change data in certain fields in the database. It would not normally be running continuously.

The PDSIS Maintenance Module is invoked from a UNIX command line prompt. Table 18.7-10 presents (in a condensed format) the steps required to start the PDSIS Maintenance Module. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID at the UNIX command line prompt enter:

    echo $PDSROOT

3 At the command line prompt enter:

pdsismaint

- The **PDSIS Maintenance Module Login Screen** is displayed (identical to the **PDS Maintenance Module Login Screen**).
- **pdsismaint** is an alias for a UNIX script (pdsismaint_<MODE>.sh) that is used to start up the PDSIS Maintenance Module.
  - The script is located in the $PDSROOT/run directory (e.g., /data1/pds_it/run).
  - The alias may vary somewhat depending on the site set-up.

4 In the **Username** field of the **PDSIS Maintenance Module Login Screen** enter:

<user ID>

5 In the **Password** field of the **PDSIS Maintenance Module Login Screen** enter:

<password>

NOTE: It is not necessary to fill in the **Database** field on the **PDSIS Maintenance Module Login Screen**; it defaults to the correct database if left blank.

6 **Single-click** on the appropriate button from the following selections:

- **Connect** - to log in to the PDSIS Maintenance Module.
  - The **PDSIS Maintenance Module Main Menu** is displayed.
- **Cancel** - to dismiss the **PDSIS Maintenance Module Login Screen** without logging in to the PDSIS Maintenance Module.

Table 18.7-10. Start the PDSIS Maintenance Module - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**cd**	**enter text, press Enter**
3	**pdsismaint**	**enter text, press Enter**
4	**<user ID>** (in **Username** field)	**enter text, press Tab**
5	**<password>** (in **Password** field)	**enter text, press Enter**
6	**Connect** button	**single-click**

18.8 Shutting Down PDS

Shutting down PDS is best done only after all executing PDS jobs have completed or are at a logical stopping point.

Table 18.8-1, below, provides an Activity Checklist for shutting down PDS.

Table 18.8-1. Shutting Down PDS - Activity Checklist

Order	Role	Task	Section	Complete?
1	Distribution Technician	Shut Down the PDS Maintenance Module	(P) 18.8.1	
2	Distribution Technician	Shut Down the PDS Job Monitor	(P) 18.8.2	
3	Distribution Technician	Shut Down the PDS Operator Interface (PDSOI)	(P) 18.8.3	
4	Distribution Technician	Shut Down the Rimage CD Production Software	(P) 18.8.4	
5	Distribution Technician	Shut Down the PDS Quality Check GUI	(P) 18.8.5	
6	Distribution Technician	Shut Down the PDSIS Maintenance Module	(P) 18.8.6	
7	Distribution Technician	Shut Down the PDSIS Operator Interface (PDSIS OI)	(P) 18.8.7	
8	Distribution Technician	Shut Down the PDSIS Server	(P) 18.8.8	

18.8.1 Shut Down the PDS Maintenance Module

The PDS **Maintenance Module Main Menu** provides the Distribution Technician with a means of shutting down the PDS Maintenance Module.

Table 18.8-2 presents (in a condensed format) the steps required to shut down the PDS Maintenance Module. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If one of the maintenance modules is being displayed, **single-click** on the **Exit** button at the bottom of the window.

- If the **Exit** button is not visible on the maintenance module form, **single-click** on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the PDS **Maintenance Module Main Menu** is displayed.

2 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, **single-click** on the appropriate button from the following selections:

- **Yes -** to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** is displayed.
- **No -** to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** is displayed.

3 **Single-click** on the **Exit** button at the bottom of the PDS **Maintenance Module Main Menu** window.

- The PDS **Maintenance Module Main Menu** is dismissed.
- The PDS maintenance module has been shut down.

Table 18.8-2. Shut Down the PDS Maintenance Module - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Exit** button (on PDS maintenance module) (if applicable)	**single-click**
2	**Yes** button (if applicable)	**single-click**
3	**Exit** button (on PDS **Maintenance Module Main Menu**)	**single-click**

18.8.2 Shut Down the PDS Job Monitor

The **Job Monitor Main Window** provides the Distribution Technician with a means of shutting down the PDS Job Monitor.

Table 18.8-3 presents (in a condensed format) the steps required to shut down the PDS Job Monitor. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Single-click** on the **Exit** button at the bottom of the **Job Monitor Main Window**.

- The **Job Monitor Main Window** is dismissed.

Table 18.8-3. Shut Down the PDS Job Monitor - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Exit** button (on **Job Monitor Main Window**)	**single-click**

18.8.3 Shut Down the PDS Operator Interface (PDSOI)

The PDS **Main OI Screen** provides the Distribution Technician with a means of shutting down the PDS Operator Interface (PDSOI).

Table 18.8-4 presents (in a condensed format) the steps required to shut down the PDS Operator Interface (PDSOI). If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Execute the following menu path from the pull-down menu (on the PDS **Main OI Screen**):

Shutdown → Stop All Jobs

- A yellow **Shutdown Confirmation** dialogue box is displayed.

2 **Single-click** on the appropriate button from the following selections:

- **Yes** - to shut down the PDSOI and dismiss the **Shutdown Confirmation** dialogue box.
  - The message line at the bottom of the screen displays a message indicating that the system is in shutdown mode.
  - The OI stops checking the status of jobs or starting jobs; however, the products may continue to be produced and status files may be generated.
  - Any status files generated while the OI is shut down will not be processed until the OI is up and running.
- **Cancel** - to dismiss the **Shutdown Confirmation** dialogue box without shutting down the PDSOI.

Table 18.8-4. Shut Down the PDS Operator Interface (PDSOI) - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Shutdown → Stop All Jobs** (on PDS **Main OI Screen**)	**single-click**
2	**Yes** button	**single-click**

18.8.4 Shut Down the Rimage CD Production Software

The Rimage Production Server and Data Publisher provide the Distribution Technician with means of shutting down the production programs.

Table 18.8-5 presents (in a condensed format) the steps required to shut down the Rimage CD production software. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Single-click** on the **X** in the box at the upper right-hand corner of the Rimage Production Server window.
- The Production Server window is dismissed.

2 **Single-click** on the **X** in the box at the upper right-hand corner of the Rimage Data Publisher window.
- The Data Publisher window is dismissed.

Table 18.8-5. Shut Down the Rimage CD Production Software - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**X** (upper right-hand corner of the Rimage Production Server window)	**single-click**
2	**X** (upper right-hand corner of the Rimage Data Publisher window)	**single-click**

18.8.5 Shut Down the PDS Quality Check GUI

The **PDS Quality Check** GUI provides the Distribution Technician with a means of shutting down the tool.

Table 18.8-6 presents (in a condensed format) the steps required to shut down the **PDS Quality Check** GUI. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Execute the following menu path from the pull-down menu (on the PDS **Quality Check** GUI):

File → Exit

- The **PDS Quality Check** GUI is dismissed.

Table 18.8-6. Shut Down the PDS Quality Check GUI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**File** → **Exit** (on **PDS Quality Check** GUI)	**single-click**

18.8.6 Shut Down the PDSIS Maintenance Module

The **PDSIS Maintenance Module Main Menu** provides the Distribution Technician with a means of shutting down the PDSIS Maintenance Module.

Table 18.8-7 presents (in a condensed format) the steps required to shut down the PDSIS Maintenance Module. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If one of the PDSIS maintenance modules is being displayed, **single-click** on the **Exit** button at the bottom of the window.
- If the **Exit** button is not visible on the maintenance module form, **single-click** on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the **PDSIS Maintenance Module Main Menu** is displayed.

2 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, **single-click** on the appropriate button from the following selections:
- **Yes** - to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** is displayed.
- **No** - to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** is displayed.

3 **Single-click** on the **Exit** button at the bottom of the **PDSIS Maintenance Module Main Menu** window.
- The **PDSIS Maintenance Module Main Menu** is dismissed.
- The PDSIS maintenance module has been shut down.

Table 18.8-7. Shut Down the PDSIS Maintenance Module - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Exit** button (on PDSIS maintenance module) (if applicable)	**single-click**
2	**Yes** button (if applicable)	**single-click**
3	**Exit** button (on **PDSIS Maintenance Module Main Menu**)	**single-click**

18.8.7 Shut Down the PDSIS Operator Interface (PDSIS OI)

The **PDSIS OI Main Screen** provides the Distribution Technician with a means of shutting down the **PDSIS Operator Interface** (**PDSIS OI**).

Table 18.8-8 presents (in a condensed format) the steps required to shut down the **PDSIS Operator Interface** (**PDSIS OI**). If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Execute the following menu path from the pull-down menu (on the **PDSIS OI Main Screen**):

Action → Shutdown

- The **PDSIS OI** is shut down.

Table 18.8-8. Shut Down the PDSIS Operator Interface (PDSIS OI) - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Action → Shutdown** (on **PDSIS OI Main Screen**)	**single-click**

18.8.8 Shut Down the PDSIS Server

On rare occasions it may be necessary to shut down the PDSIS Server.

The application is shut down from a UNIX command line prompt. Table 18.8-9 presents (in a condensed format) the steps required to shut down the PDSIS Server. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: A **PDSIS** user ID (e.g., **pdsis**, **pdsis_ts1**, **pdsis_ts2**) is used in this procedure.

1 Log in to the PDS Server host using the appropriate PDSIS user ID for the operating mode being used.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- PDSIS user IDs are **pdsis**, **pdsis_ts1**, and **pdsis_ts2**, which are used for PDSIS operations in the OPS, TS1, and TS2 modes respectively.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 To identify the PDSIS Server that is running, at the UNIX command line prompt enter:

ps -ef | grep java | grep <userID>

- For example:

  ps -ef | grep java | grep pdsis_ts2

- The following type of message is displayed:

  pdsis_ts 26947322 1 0 16:03:56 ? 1:52
  /usr/java/bin/../bin32/sgi/native_threads/java -classpath /data1/pdsis_ts2/lib/

3 At the UNIX command line prompt enter:

kill -15 <processID>

- For example:

  kill -15 26947322

  – The command would kill the process in the example in Step 2.

- The PDSIS Server process should be terminated.

4 To verify that the PDSIS Server is no longer running, at the UNIX command line prompt enter:

ps -ef | grep java | grep <userID>

- For example:

  ps -ef | grep java | grep pdsis_ts2

- If the process is still running (if the same message as that received in Step 2 is displayed), return to Step 3 and use **kill –9** (kill) instead of **kill -15** (terminate).

Table 18.8-9. Shut Down the PDSIS Server - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server) (using appropriate PDSIS user ID)	**single-click** or use procedure in Section 18.2.1
2	**ps -ef | grep java | grep <userID>**	**enter text, press Enter**
3	**kill -15 <processID>**	**enter text, press Enter**
4	**ps -ef | grep java | grep <userID>**	**enter text, press Enter**

18.9 Monitoring/Controlling Product Processing Using PDS

Distribution Technicians use the following tools to monitor and control PDS activities:

- **PDS Main OI Screen.**
- **OI Detail Screen.**
- **Job Monitor Main Window.**
- **PDS Quality Check** GUI.

Table 18.9-1, below, provides an Activity Checklist for monitoring/controlling product processing using PDS.

Table 18.9-1. Monitoring/Controlling Product Processing Using PDS - Activity Checklist (1 of 2)

Order	Role	Task	Section	Complete?
1	Distribution Technician	Monitor/Control Product Processing Using PDS	(P) 18.9.1	
2	Distribution Technician	Set Timer Intervals	(P) 18.9.2	
3	Distribution Technician	Specify Job Selection Criteria	(P) 18.9.3	
4	Distribution Technician	Use the OI Detail Screen	(P) 18.9.4	
5	Distribution Technician	Sort Units	(P) 18.9.5	
6	Distribution Technician	Select Multiple Units	(P) 18.9.6	
7	Distribution Technician	Activate a Job	(P) 18.9.7	
8	Distribution Technician	Compare the Number of Units in an Order and a Job	(P) 18.9.8	
9	Distribution Technician	Determine the Current Grouping Factor	(P) 18.9.9	

Table 18.9-1. Monitoring/Controlling Product Processing Using PDS - Activity Checklist (2 of 2)

Order	Role	Task	Section	Complete?
10	Distribution Technician	Stop a Job Using the Main OI Screen Display	(P) 18.9.10	
11	Distribution Technician	Terminate a Job Using the Job Monitor Main Window	(P) 18.9.11	
12	Distribution Technician	Respond to a Status of QC-Hold (Perform a QC Check or Verification)	(P) 18.9.12	
13	Distribution Technician	Complete a Job	(P) 18.9.13	
14	Distribution Technician	Enter Notes about a Job	(P) 18.9.14	
15	Distribution Technician	Promote a Job	(P) 18.9.15	
16	Distribution Technician	Cancel a Job	(P) 18.9.16	
17	Distribution Technician	Generate PDS Production Reports	(P) 18.9.17	
18	Distribution Technician	Select an Alternate Printer	(P) 18.9.18	
19	Distribution Technician	Use the PDS Cleanup Manager	(P) 18.9.19	
20	Distribution Technician	Use the PDSIS Cleanup Manager	(P) 18.9.20	

18.9.1 Monitor/Control Product Processing Using PDS

Monitoring/controlling product processing using PDS (PDSSA) involves the following activities (among others):

- Determining the status of a job and/or taking action with respect to a job (using the Main OI Screen).
- Determining the status of units associated with a particular job or taking action with respect to units associated with a particular job (using the OI Detail Screen).
- Activating a job.
- Stopping a job[suspending a job] using the Main OI Screen display.
- Terminating a job using the Job Monitor Main Window.
- Responding to a status of QC-Hold (performing a QC check or verification).
- Completing a job.
- Entering notes about a job.
- Promoting a job.
- Generating PDS production reports.

PDS activities are monitored and controlled using the **Main OI Screen**, the **OI Detail Screen**, the **Job Monitor Main Window** and the **PDS Quality Check** GUI.

The **Main OI Screen** displays the following items for each individual PDS job:

- Action Button [not labeled].
  - Allows access to a list of actions that can be taken with respect to the job.
- Job Stopped [not labeled].
  - "STOP" is displayed in the field if the job has been stopped.
- Job Key.
  - Unique label for the job composed of the order number, an underscore and a zero-padded unit number of the first unit of the job.
- To_Do Units.
  - Number of units left in the job in either a pending, active or status of QC-Hold state [waiting for a quality-control (QC) check].
- Pri.
  - Priority of the job from 1 to 9, with "1" the highest priority.
- Product Media.
  - The pds_description of the output specifications.
- Project Id.
  - An optional field that indicates whether there is a particular project associated with the job.
- Due Date.
  - Date that the order is due to the customer.
- Copy Flag.
  - An “*” is displayed if the total number of copies does not equal the total number of units. (Used if multiple copies are needed for a specific unit.)
- Product Code.
  - The pds_description of the product code.
- Note.
  - An “*” is displayed if there is a current note for the job.
- Job Status.
  - Status of the job.

The **OI Detail Screen** displays the following items for the selected individual PDS job:

- Job Key.
  - The dynamically generated identifier tying the units in the job together.
- Copies.
  - Number of copies the customer wants for each unit.
- Pri.
  - Priority code for the job.
- Product Media.
  - PDS's description of the output specifications.
- Due Date.

  - Date that the job needs to be delivered to the customer.
- Product Code.
  - PDS's description of the product code.

The **OI Detail Screen** displays the following items for each unit within the selected PDS job:

- "Select" button [not labeled].
  - Used for selecting or deselecting each individual unit to which an action (e.g., "Activate") will be applied.
- Unit # .
  - Unit number.
- Status.
  - PDS's description of the status.
- PPF Key.
  - Blank if the unit is in pending status; otherwise the PPF Key for the unit is displayed.
  - Ties to the .ppf file used during the product generation process.
  - Composed of the order number, an underscore and the zero-padded unit number.
- ECS Order ID.
  - ECS Order Id. (blank if there is no ECS Order ID in the PDT_PDSINFO table).
- Source Data Path.
  - Location of the source data needed to produce the customer's product.
  - Could be either a media storage identifier in the digital archive or a storage location on a mass media device or a location on a remote machine.

The **Job Monitor Main Window** displays the following types of information:

- Running Jobs.
  - **Job Key.**
  - **Type** [of product].
  - **Stage** [What the job is currently doing (if the information is available)].
- Assembly Disk Usage.
  - Graphical displays of the free space remaining on the PDS assembly and ftp staging disks.
  - Intended to give the operator advance warning when one (or more) of the disks is running low on available space.
- Rimage Pending Orders.
  - Displays how many orders are pending on the Rimage systems [Refers to how many CD images are *waiting* to be pulled over to the Rimage system; it does *not* refer to the number of jobs that are actually active on the Rimage itself. Useful when balancing the distribution of jobs among Rimage systems. Displays whether PDS's AutoRimage mode is enabled or disabled.]

The **PDS Quality Check** GUI displays the following types of information:

- Drives available for or in use performing verification of disks and tapes.

Table 18.9-2 presents (in a condensed format) the steps required to monitor and control product processing using PDS. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If any of the following PDS tools are not currently in operation, perform the corresponding procedure(s):

- **Main OI Screen** - **Start the PDS Operator Interface (PDSOI)** (Section 18.7.3).
- **Job Monitor Main Window** - **Start the PDS Job Monitor** (Section 18.7.5).
- **Production Server** - **Start the Rimage CD Production Software** (Section 18.7.6).
- **Data Publisher** - **Start the Rimage CD Production Software** (Section 18.7.6).
- **PDS Quality Check** GUI - **Start the PDS Quality Check GUI** (Section 18.7.7).

2 If applicable, set timer intervals.

- The timer interval determines how often the data displayed on the **Main OI Screen** are refreshed.
- For detailed instructions refer to the **Set Timer Intervals** procedure (Section 18.9.2).

3 Observe information displayed on the **Main OI Screen**.

- The following items are displayed on a **job line** for each individual PDS job:
  - Action Button [not labeled].
  - Job Stopped [not labeled].
  - **Job Key.**
  - **To_Do Units.**
  - **Pri.**
  - **Product Media.**
  - **Project Id.**
  - **Due Date.**
  - **Copy Flag.**
  - **Product Code.**
  - **Note.**
  - **Job Status.**
  - Each **job line** display is color-coded to draw attention to job status. The colors are interpreted as follows:
  - **Red** Either Error or Error-Partial status. (Error indicates that all units in the job are in error. Error Partial indicates that part of the job is in error and there are no actives or QC-holds.)
  - **Green** Either Active or Active-Partial status. (Active indicates that all units in the job are active. Active-Partial indicates that part of the job is active.)
  - **Yellow** Either QC-Hold or QC-Hold-Partial status. (QC-Hold indicates that all units in the job are in QC-hold. QC-Hold-Partial indicates that part of the job is in QC-hold and there are no actives.)

- **Grey** Pending status. (Pending indicates that all units in the job are pending.)

- If there are more records than can be displayed on the screen, use the scroll bar on the right hand side of the form to view the additional records.
- The **status line** at the bottom of the screen displays information about the form (for example, the status line might display "Record: 1/16" and "INSERT").
- The **message line** near the bottom of the screen (just above the **status line**) displays informational messages and error messages pertinent to what is happening on the form.
  - For example, an informational message might indicate "Working…".
  - Messages are displayed on the screen as long as they are pertinent.

4 If the list of jobs on the **Main OI Screen** needs to be filtered and/or sorted, go to the **Specify Job Selection Criteria** procedure (Section 18.9.3).

5 If more specific information is required or action should be taken with respect to units associated with a particular job, go to the **Use the OI Detail Screen** procedure (Section 18.9.4).

6 Observe information displayed on the **Main OI Screen** and **Job Monitor Main Window**.

- Refer to Step 3 for a description of features on the **Main OI Screen**.
- For each individual PDS job that is running the following items are displayed on a **running jobs** line on the **Job Monitor Main Window**:
  - **Job Key.**
  - **Type** [of product].
  - **Stage.**
- The following values are among those that may be displayed in the **Stage** field (based on data from the job log) on the **Job Monitor Main Window**:
  - **Unknown** - does not mean that there is anything wrong; it simply means that the job monitor was unable to determine what a particular job is currently doing.
  - **Initializing** - getting job parameters from the PPF file, setting up data structures, and doing whatever else is required before the job can actually start producing the output media.
  - **Retrieving Data From Source** - indicates that the job is assembling the data for the product. [The source varies depending on the type of product it is. The stage may take quite some time, particularly for orders coming off peak loads systems.]
  - **Making Browse Image** - (for satellite and other types of raster data that require small browse images on the CD insert label) indicates that PDS is subsampling the image data and creating the browse image. [Typically does not take a large amount of time, although for sizable multi-scene Landsat-7 data, it can be a fairly lengthy process.]

- **Waiting For Drive Selection** - currently waiting for the operator to respond to the Media Drive Selection window to select a tape drive or a CD writer. [The job has retrieved all data for the product. If a job is in this stage but no selection window is visible, it may be "hidden" behind another window. After locating the Media Drive Selection window go to Step 4 of the **Activate a Job** procedure (Section 18.9.7). If the Media Drive Selection window cannot be located, go to the **Respond to a "Waiting for Drive Selection" Message on the Job Monitor** procedure (Section 18.11.29).]
- **Writing Data To Tape Drive** - currently writing the product to the specifically named tape drive.
- **Making ISO9660 Image(s)** - generating "raw" CD image files that will be passed to the Rimage systems for CD generation. [May be a somewhat lengthy process, depending on the size of the job and the load on the system.]
- **Waiting For Rimage Status** - product has been submitted to the Rimage machine chosen by the operator and the job is waiting for the completion of the output CD(s). [May be a lengthy process, depending on product size and/or system load.]
- **Cleaning Up** - PDS is cleaning up the job after having generated the product media. [Generally involves removing the assembly directory from $PDSASSM, writing status and summary files, and removing the Rimage order files.]

- The following items are displayed in the **Assembly Disk Usage** section of the **Job Monitor Main Window**:
  - Assembly disk usage bars, which display (graphically) the free space remaining on the PDS assembly staging disks. [Provide advance warning when one (or more) disk(s) is (are) running low on available space. Disk bar changes color to yellow if the disk becomes unavailable for some reason. If disk space becomes low, perform the procedure for **Respond to Low Disk Space** (Section 18.11.31).]
- The **Toggle AutoRimage** button is for use with systems that have multiple Rimage units. [AutoRimage should be **disabled** at sites that have a single Rimage unit.]

7 If it becomes necessary to perform any of the following actions, go to the corresponding section/procedure:

- **Set Timer Intervals** (Section 18.9.2) (to set the amount of time between refresh events for the OI Main Screen and/or the amount of time between episodes of processing the status files from the product generation code).
- **Specify Job Selection Criteria** (Section 18.9.2) (to specify the selection and sorting criteria for jobs to be displayed on the OI Main Screen).
- **Use the OI Detail Screen** (Section 18.9.4) (to determine the status of units associated with a particular job or take action with respect to units associated with a particular job).
- **Activate a Job** (Section 18.9.7) (to activate a job).
- **Compare the Number of Units in an Order and a Job** (Section 18.9.8) (to compare the number of units in an order and a job).

- **Determine the Current Grouping Factor** (Section 18.9.9) (to determine the current grouping factor).
- **Stop a Job Using the Main OI Screen Display** (Section 18.9.10) (to suspend processing of a job).
- **Terminate a Job Using the Job Monitor Main Window** (Section 18.9.11) (to halt processing of a job, typically in preparation for returning it to a "Pending" status).
- **Respond to a Status of QC-Hold (Perform a QC Check or Verification)** (Section 18.9.12) (to perform a QC check or media verification).
- **Complete a Job** (Section 18.9.13) (to complete a job after a QC check).
- **Enter Notes about a Job** (Section 18.9.14) (to enter comments or notes about a job).
- **Promote a Job** (Section 18.9.15) (to process a job ahead of other jobs).
- **Cancel a Job** (Section 18.9.16) (not supported by the operator tools).
- **Generate PDS Production Reports** (Section 18.9.17) (to generate PDS reports).
- **Select an Alternate Printer** (Section 18.9.18) (to select an alternate printer for printing reports or jewel cases).
- **Troubleshooting PDS Problems** (Section 18.11) (to troubleshoot problems/failures affecting product processing).

8 If it is necessary to update the data on the **Main OI Screen** from the database without having to wait for the interval set on the timer, execute the following menu path from the pull-down menu:

Display → Refresh

- The data on the **Main OI Screen** is refreshed.

9 If it is necessary to requery the status of running jobs and display the data on the **Job Monitor Main Window**, **single-click** on the **Refresh Display** button.

- Current status of running jobs is displayed on the **Job Monitor Main Window**.
  - Every two minutes the PDS Job Monitor provides an automatic update to the information displayed in the running jobs listbox, assembly disk usage bars, and Rimage pending orders sections.

10 If it is necessary to cause the entire **Main OI Screen** to be redrawn without accessing the database for data, execute the following menu path from the pull-down menu:

Display → Repaint

- The **Main OI Screen** (including borders, buttons, and data) is redrawn.
  - The **Repaint** option is used in case the window becomes garbled.

11 If it is necessary to access help information concerning the **Main OI Screen**, execute the following menu path from the pull-down menu:

Help → On Form

- A web browser pops up in another window, positioned to the start of the document about the Operator Interface.

12 If it is necessary to access information concerning the last error encountered by the PDSOI, execute the following menu path from the pull-down menu on the **Main OI Screen**:

Help → Show Error

- A message is displayed on the **message line** of the **Main OI Screen** stating the last error encountered.
  - Frequently a "No errors encountered recently" message is displayed in response to the **Show Error** option.

13 If it is necessary to print a report that contains the data currently being displayed on the **Main OI Screen**, execute the following menu path from the pull-down menu:

Reports → Queue

- The report is printed on the designated report printer.

14 Repeat Steps 4 through 13 as necessary to monitor/control jobs.

15 If it becomes necessary to shut down the Job Monitor, **single-click** on the **Exit** button at the bottom of the **Job Monitor Main Window**.

- The Job Monitor Main Window is dismissed.

16 If it becomes necessary to shut down the operator interface, perform the **Shut Down the PDS Operator Interface** procedure (Section 18.8.3).

Table 18.9-2. Monitor/Control Product Processing Using PDS - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Start PDS tools (if necessary)	Use applicable procedure(s) in Sections 18.7.1, 18.7.3, 18.7.5, 18.7.6, and/or 18.7.\6
2	Set timer intervals (if applicable)	Use procedure in Section 18.9.2
3	Observe information displayed on the **Main OI Screen**	**read text**
4	Specify job selection criteria (if applicable)	Use procedure in Section 18.9.3
5	Use the **OI Detail Screen** (if applicable)	Use procedure in Section 18.9.4
6	Observe information displayed on the **Main OI Screen** and **Job Monitor Main Window**	**read text**
7	Perform the appropriate operational procedure (as needed)	Use applicable procedure(s) in Sections 18.9.2 through 18.9.18

Table 18.9-2. Monitor/Control Product Processing Using PDS - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
8	**Display** → **Refresh** (on the **Main OI Screen**) (as necessary)	**single-click**
9	**Refresh Display** button (on the **Job Monitor Main Window**) (as necessary)	**single-click**
10	**Display** → **Repaint** (on the **Main OI Screen**) (as necessary)	**single-click**
11	**Help** → **On Form** (on the **Main OI Screen**) (as necessary)	**single-click**
12	**Help** → **Show Error**(on the **Main OI Screen**) (as necessary)	**single-click**
13	**Reports** → **Queue**(on the **Main OI Screen**) (as necessary)	**single-click**
14	Repeat Steps 4 through 13 as necessary to monitor/control jobs	
15	**Exit** button (on the **Job Monitor Main Window**) (when applicable)	**single-click**
16	Shut down the operator interface (when applicable)	Use procedure in Section 18.8.3

18.9.2 Set Timer Intervals

The procedure to **Set Timer Intervals** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). The **Main OI Screen Display** menu provides the Distribution Technician with a means of setting timer intervals. There are two timers that the technician can set:

- Refresh Timer.
  - Amount of time (in minutes) between refresh events for the **OI Main Screen**.
- Status Timer.
  - Amount of time (in minutes) between episodes of processing the status files from the product generation code.

Timer changes do not affect the default values for the timers. The changed values are in effect until they are changed again or a shutdown occurs. The default values in the database are used each time the OI is started up.

Table 18.9-3 presents (in a condensed format) the steps required to set timer intervals. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Execute the following menu path from the pull-down menu (on the **Main OI Screen**):

Display → Timers

- The **Set Timer Intervals** dialogue box is displayed.

2 In the **Refresh Timer** field enter:

<minutes>

3 In the **Status Timer** field enter:

<minutes>

4 **Single-click** on the **Return** button.

5 Return to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

Table 18.9-3. Set Timer Intervals - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Display → Timers** (on **Main OI Screen**)	**single-click**
2	**<minutes>** (in **Refresh Timer** field)	**enter text, press Enter**
3	**<minutes>** (in **Status Timer** field)	**enter text, press Enter**
4	**Return** button	**single-click**
5	Return to the **Monitor/Control Product Processing Using PDS** procedure	Use procedure in Section 18.9.1

18.9.3 Specify Job Selection Criteria

The procedure to **Specify Job Selection Criteria** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section Section 18.9.1). The jobs to be displayed on the **Main OI Screen** can be selected and/or sorted using the **PDSOI Selection Criteria Screen**. The selection can be done on the basis of the following criteria, either individually or in combination:

- Priority.
- Product Media [type].
- Due Date.
- Product Code.

Jobs can be sorted on the following fields, either individually or in combination:

- Job Key.

- Priority.
- Job Status.
- Product Media.
- Project Id.
- Product Code.
- Due Date.

Table 18.9-4 presents (in a condensed format) the steps required to specify job selection criteria. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Execute the following menu path from the pull-down menu (on the **Main OI Screen**):

Display → Data/Sort

- The **PDSOI Selection Criteria Screen** is displayed.

2 **Single-click** on the toggle button(s) corresponding to the desired priority(ies) in the **Priority** list.

- Options are: **All**, **1**, **2**, **3**, **4**, **5**, **6**, **7**, **8**, **9**.
- Priority meanings might be assigned (in the database) as follows (for example):

1 - Emergency -		Eight-hour turn-around required.
2 - High Priority -		Less than 24-hour turn-around.
3 - Priority -		Turn around in less than five working days.
4 - 6 -	**Rush** -	Two-week turn-around.
7 - 9 -	**Standard Orders** -	Four- to six-week turn-around.

- One button or several buttons may be selected.
- Options may change.
- Single-clicking on a button changes its state from unselected to selected or vice versa.
- Buttons have a depressed or sunken appearance rather than a raised appearance when selected.

3 **Single-click** on the toggle button(s) corresponding to the desired product media type(s) in the **Product Media** list.

- Options are: **All, CD, 8H**, **D7**, **DVD**.
- Product media types might be defined (in the database) as follows (for example):

CD -	CDROM.
8H -	8mm tape.
D7 -	DLT.
DVD -	DVD.

- Options may change.
- One button or several buttons may be selected.

- Single-clicking on a button changes its state from unselected to selected or vice versa.
- Buttons have a depressed or sunken appearance rather than a raised appearance when selected.

4 **Single-click** on the toggle button(s) corresponding to the desired due date(s) in the **Due Date** list.
- Options are: **All**, **Past Due**, **Today**, **1 Week**.
- Options may change.
- One button or several buttons may be selected.
- Single-clicking on a button changes its state from unselected to selected or vice versa.
- Buttons have a depressed or sunken appearance rather than a raised appearance when selected.

5 **Single-click** on the toggle button(s) corresponding to the desired product code(s) in the **Product Code** list.
- Options are: **All** and all valid individual product codes.
- One button or several buttons may be selected.
- Single-clicking on a button changes its state from unselected to selected or vice versa.
- Buttons have a depressed or sunken appearance rather than a raised appearance when selected.

6 **Single-click** and **hold** the appropriate **Sort By** option button to display a list of numbers indicating the order in which the sort criteria should be evaluated, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.
- Options are: **Job Key, Priority, Job Status, Product Media, Project Id, Product Code, Due Date**.
- Selected sort order number is displayed on the selected **Sort By** option button when the mouse button is released.
- It is not possible to select a sort order number for a sorting category if the number has already been assigned to another category.
  - For example, if Job Status was assigned Number 1, Product Media cannot be assigned Number 1 as well. If jobs should be sorted by Product Media first, it is necessary to change the Job Status assignment to some (unused) number other than one (1) then one (1) can be assigned to Product Media.

7 Repeat Step 6 as necessary to assign sorting order to additional categories.
- It is possible to select more than one **Sort By** item.
- If more than one **Sort By** option is selected the jobs will be selected by the sort order for the selection assigned Number 1, then within that sort order they would be sorted by the category assigned Number 2, etc.
  - For example, if Job Status were assigned the first sort order (1) and Due Date were assigned the second sort order (2), the jobs would be sorted by Job Status, then within each status the jobs would be sorted by Due Date. So the jobs

containing the same status would be displayed together with the earliest due date for each status at the top of the list for that status.

8 **Single-click** on the appropriate button from the following selections:

- **Execute** - to query the database for the specified selections and dismiss the **PDSOI Selection Criteria Screen**.
  - A **Querying Database** notice is displayed temporarily in a blue box. The **message line** at the bottom of the screen displays "Working" while the **Querying Database** notice is being displayed. If there are status files waiting to be read, another blue box may be displayed indicating "Reading Status files. Please wait…"
  - If no selection criteria were selected, a **Selection Error Dialogue** is displayed in a purple box. (**Single-click** on the **OK** button to dismiss the error window.)
  - The **Main OI Screen** is displayed when the **Querying Database** notice quits (indicating that database has been queried and the results are being displayed).
- **Cancel** - to dismiss the **PDSOI Selection Criteria Screen** without specifying any selection or sorting criteria.
  - The **Main OI Screen** is displayed with the original selection/sorting criteria results.

9 Return to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

Table 18.9-4. Specify Job Selection Criteria - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Display** → **Data/Sort** (on **Main OI Screen**)	**single-click**
2	**<priority>** (in **Priority** list)	**single-click**
3	**<product media>** (in **Product Media** list)	**single-click**
4	**<due date>** (in **Due Date** list)	**single-click**
5	**<product code>** (in **Product Code** list)	**single-click**
6	**<sort order>** (on the applicable **Sort By** option button)	**single-click**
7	Repeat preceding step as necessary to assign sorting order	
8	**Execute** button	**single-click**
9	Return to the **Monitor/Control Product Processing Using PDS** procedure	Use procedure in Section 18.9.1

18.9.4 Use the OI Detail Screen

The procedure to **Use the OI Detail Screen** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). The **OI Detail Screen** provides the Distribution Technician with a means of accomplishing the following objectives:

- Obtaining specific information with respect to units associated with a particular job.
- Taking action with respect to units associated with a particular job.

Table 18.9-5 presents (in a condensed format) the steps required to use the **OI Detail Screen**. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: It is recommended that the operator not stay in the Detail window for long periods of time because the processing initiated by the Main screen timers does not occur while the Detail window is open. If the Detail window is left open for a long time, the amount of processing that might occur when the Detail window was closed and control returned to the Main screen could be extensive and might cause the Main screen to be inactive for quite a period of time.

1 **Single-click** on the action button at the beginning of the job line for the relevant job (on the **Main OI Screen**).
- The **Action List** box is displayed.
- Not all actions are available for every job.
  - The available actions depend on the job's current status and processing.

2 **Single-click** on (highlight) **Detail** in the **Action List** box.
- **Detail** is highlighted.

3 **Single-click** on the appropriate button from the following selections:
- **OK** - to bring up the **OI Detail Screen** and dismiss the **Action List** box.
  - The **OI Detail Screen** is displayed.
- **Cancel** - to dismiss the **Action List** box and return to the **Main OI Screen**.
  - The **Main OI Screen** is displayed.

4 Observe information displayed on the **OI Detail Screen**.
- The following items are displayed on the **OI Detail Screen** for the selected individual PDS job:
  - **Job Key.**
  - **Copies.**
  - **Pri.**
  - **Product Media.**

  - **Due Date.**
  - **Product Code.**
- The following items are displayed on the **OI Detail Screen** for each unit within the selected PDS job:
  - "Select" button.
  - **Unit # .**
  - **Status.**
  - **PPF Key.**
  - **ECS Order ID.**
  - **Source Data Path.**
- Each **unit line** display is color-coded to draw attention to unit status. The colors are interpreted as follows:
  - **Red** Error.
  - **Green** Active.
  - **Yellow** QC-Hold.
  - **Grey** Pending.
- There is a "Select" button [not labeled] at the beginning of each unit line.
  - Used for selecting or deselecting each individual unit.
  - It is possible to select multiple units to be affected by the same action (e.g., "Activate") at the same time.
- If there are more records than can be displayed on the screen, use the scroll bar on the right hand side of the form to view the additional records.
- If the entire entry is not visible in a field, click in the field and use the arrow keys on the keyboard to scroll to the end of the entry.
- The **status line** at the bottom of the screen displays information about the form (for example, the status line might display “Record: 1/4” and “INSERT").
- The **message line** near the bottom of the screen (just above the **status line**) displays informational messages and error messages pertinent to what is happening on the form.
- The following three "Action" buttons are located at the bottom of the screen:
  - **Complete** - completes all appropriate unit status changes (for the selected units) in the system. Units with current status either **QC-Hold** or **Error** are the only units that can be completed using the **Complete** button.
  - **Activate** - starts the data generation process (creates the .ppf file) for the selected units that are needed by product generation. Units with current status either **Pending** or **Error** are the only units that can be activated using the **Activate** button.
  - **Return** - causes any selected units to be deselected, closes the **OI Detail Screen**, and returns control to the **Main OI Screen**. If any timers went off while the **OI Detail Screen** was activated, the associated processing occurs upon selection of the **Return** button.

5 If the list of units on the **OI Detail Screen** needs to be sorted, perform the **Sort Units** procedure (Section 18.9.5).

6 If it is desirable to select a unit for the application of an action, **single-click** on the "Select" button at the beginning of the unit line for the relevant unit.

- To select multiple units for the application of the same action, perform the **Select Multiple Units** procedure (Section 18.9.6).

7 To deselect all currently selected units execute the following menu path from the pull-down menu:

Select → Clear All

- The "Select" buttons for all units go to the unselected state.

8 If it becomes necessary to activate unit(s), **single-click** on the **Activate** button near the bottom of the **OI Detail Screen**.

- Unit status before activation must be either **Pending** or **Error**.
- **Single-clicking** on the **Activate** button starts the data generation process (creates the .ppf file) for the selected unit(s) only.
- A pop-up window appears indicating that the activation is being performed.
- When the activation process has been completed, the database is queried, the **OI Detail Screen** is refreshed, all selected units are deselected and all active units are shown in green.
- If no units were selected for activation, a “No units were selected, no action taken” message is displayed in a purple box.
  - **Single-click** on the **OK** button to dismiss the error window.

9 If it becomes appropriate to complete unit(s) [e.g., the unit(s) has (have) passed the QC check], **single-click** on the **Complete** button near the bottom of the **OI Detail Screen**.

- Unit status before initiating a "complete" action must be either **QC-Hold** or **Error**.
- Clicking on the **Complete** button completes all appropriate unit status changes in the system for the selected unit(s) only.
- A pop-up window appears indicating that the "complete" action is being performed.
- When the "complete" action has finished, the database is queried, the **OI Detail Screen** is refreshed, all selected units are deselected and all completed units have been removed from the display (are no longer visible).
- If no units were selected for completion, a “No units were selected, no action taken” message is displayed in a purple box.
  - **Single-click** on the **OK** button to dismiss the error window.
  - When it is done, the database will be requeried causing the Detail Window to refresh and all selected units to be deselected, and completed units will no longer be visible.

10 If it becomes necessary to stop the job (that includes the units currently being displayed on the **OI Detail Screen**), select **Stop Job** from the pull-down menu.

- A confirmation dialogue box is displayed to inquire "Are you sure you want to stop this job?"

11 If **Stop Job** was selected from the pull-down menu, click on the appropriate button from the following selections:

- **Yes** - to stop the job and dismiss the confirmation dialogue box.
  - The system performs no further actions on the job except to process status files from the product generation code.
  - Any status files generated while the OI is shut down will not be processed until the OI is up and running again.
  - When the **Main OI Screen** is refreshed the next time, the field adjacent to the action button on the job line for the specified job displays the word **STOP**.
- **Cancel** - to dismiss the confirmation dialogue box without stopping the job.

12 If it is necessary to update the data on the **OI Detail Screen** from the database, execute the following menu path from the pull-down menu:

Display → Refresh

- The data in the database is requeried and redisplayed using the current detail window default sort preference. (The data on the **OI Detail Screen** is refreshed.)

13 If it is necessary to cause the entire **OI Detail Screen** to be redrawn without accessing the database for data, execute the following menu path from the pull-down menu:

Display → Repaint

- The **OI Detail Screen** (including borders, buttons, and data) is redrawn.
  - The **Repaint** option is used in case the window becomes garbled.

14 If it is necessary to access help information concerning the **OI Detail Screen**, execute the following menu path from the pull-down menu:

Help → On Form

- A web browser pops up in another window, positioned to the start of the document about the Operator Interface.

15 If it is necessary to access information concerning the last error encountered, execute the following menu path from the pull-down menu on the **OI Detail Screen**:

Help → Show Error

- A message is displayed on the **message line** of the **Main OI Screen** stating the last error encountered.
  - Frequently a “No errors encountered recently” message is displayed in response to the Show Error option.

16 Repeat Steps 4 through 15 as necessary to obtain additional information with respect to units associated with the selected job and/or take action with respect to units associated with the job.

17 To return to the **Main OI Screen single-click** on the **Return** button.

- **Single-clicking** on the **Return** button deselects any selected units, closes the **OI Detail Screen**, and returns control to the **Main OI Screen**.
  - If any timers went off while the **OI Detail Screen** was activated, the associated processing occurs upon selection of the **Return** button.
  - The **Main OI Screen** is refreshed, showing any new information and status changes.

18 Return to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

Table 18.9-5. Use the OI Detail Screen - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Action button (on **Main OI Screen**)	**single-click**
2	**Detail**	**single-click**
3	**OK** button	**single-click**
4	Observe information displayed on the **OI Detail Screen**	**read text**
5	Sort units (as necessary)	Use procedure in Section 18.9.5
6	"Select" button (or select multiple units) (as necessary)	**single-click** (or use procedure in Section 18.9.6) (as applicable)
7	**Select** → **Clear All** (as necessary)	**single-click**
8	**Activate** button (as necessary)	**single-click**
9	**Complete** button (as necessary)	**single-click**
10	**Stop Job** (as necessary)	**single-click**
11	**Yes** button (if applicable)	
12	**Display** → **Refresh** (on the **Main OI Screen**) (as necessary)	**single-click**
13	**Display** → **Repaint** (on the **Main OI Screen**) (as necessary)	**single-click**
14	**Help** → **On Form** (on the **Main OI Screen**) (as necessary)	**single-click**
15	**Help** → **Show Error**(on the **Main OI Screen**) (as necessary)	**single-click**
16	Repeat Steps 4 through 15 as necessary	
17	**Return** button (when appropriate)	**single-click**
18	Return to the **Monitor/Control Product Processing Using PDS** procedure	Use procedure in Section 18.9.1

18.9.5 Sort Units

The procedure to **Sort Units** is performed as part of the **Use the OI Detail Screen** procedure (Section 18.9.4). The units to be displayed on the **OI Detail Screen** can be sorted using the **Sort Dialogue Box**. The sorting can be done on the basis of the following criteria, either individually or in combination:

- Unit Nbr [number] (default sort preference that is used whenever the **OI Detail Screen** is opened).
- Unit Status.
- PPF Key.

Table 18.9-6 presents (in a condensed format) the steps required to sort units. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Execute the following menu path from the pull-down menu (on the **OI Detail Screen**):

Display → Sort

- The **Sort Dialogue Box** is displayed.

2 **Single-click** and **hold** the appropriate **Sort By** option button to display a list of numbers indicating the order in which the sort criteria should be evaluated, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.

- Options are: **Unit Nbr, Unit Status, PPF Key**.
- Selected sort order number is displayed on the selected **Sort By** option button when the mouse button is released.
- It is not possible to select a sort order number for a sorting category if the number has already been assigned to another category.

3 Repeat Step 2 as necessary to assign sorting order to additional categories.

- It is possible to select more than one **Sort By** item.
- If more than one **Sort By** option is selected the units will be selected by the sort order for the selection assigned Number 1, then within that sort order they would be sorted by the category assigned Number 2, etc.
  - For example, if Unit Status were assigned the first sort order (1) and Unit Nbr were assigned the second sort order (2), the jobs would be sorted by Unit Status, then within each status the jobs would be sorted by Unit Nbr. So the units containing the same status would be displayed together with the lowest unit number for each status at the top of the list for that status.

4 **Single-click** on the appropriate button from the following selections:

- **Execute** - to query the database for the specified selections and dismiss the **Sort Dialogue Box**.
  - A **Querying Database** notice is displayed temporarily in a blue box.
  - The **message line** at the bottom of the screen displays "Working" while the **Querying Database** notice is being displayed.
  - If there are status files waiting to be read, another blue box may be displayed indicating "Reading Status files. Please wait…"
  - If no selection criteria were selected, a **Selection Error Dialogue** is displayed in a purple box. (**Single-click** on the **OK** button to dismiss the error window.)
  - The **OI Detail Screen** is displayed when the **Querying Database** notice quits (indicating that database has been queried and the results are being displayed).
- **Cancel** - to dismiss the **Sort Dialogue Box** without specifying any sorting criteria.
  - The **OI Detail Screen** is displayed with the original sorting criteria results.

5 Return to the **Use the OI Detail Screen** procedure (Section 18.9.4).

Table 18.9-6. Sort Units - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Display** → **Sort** (on **OI Detail Screen**)	**single-click**
2	**<sort order>** (on the applicable **Sort By** option button)	**single-click**
3	Repeat preceding step as necessary to assign sorting order	
4	**Execute** button	**single-click**
5	Return to the **Use the OI Detail Screen** procedure	Use procedure in Section 18.9.4

18.9.6 Select Multiple Units

The procedure to **Select Multiple Units** is performed as part of the **Use the OI Detail Screen** procedure (Section 18.9.4).

Table 18.9-7 presents (in a condensed format) the steps required to select multiple units. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Execute the following menu path from the pull-down menu (on the **OI Detail Screen**):

Select → Range

- The **Range Dialogue Box** is displayed.

2 In the **Begin Unit** field enter:

<unit number>

- **<unit number>** represents the unit number of the first unit in the range of units to be selected.

3 In the **End Unit** field enter:

<unit number>

- **<unit number>** represents the unit number of the last unit in the range of units to be selected.

4 **Single-click** on the appropriate button from the following selections:

- **Select Units** - to query the database for the specified selections and dismiss the **Range Dialogue Box**.
  - The **OI Detail Screen** is displayed and the "Select" buttons for all units within the specified range go to the selected state.
  - Already selected units remain selected and units that are not within the specified range are ignored.
- **Return** - to dismiss the **Sort Dialogue Box** without specifying any sorting criteria.
  - The **OI Detail Screen** is displayed with the "Select" buttons in their original states.

5 Return to the **Use the OI Detail Screen** procedure (Section 18.9.4).

Table 18.9-7. Select Multiple Units - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Select → Range** (on **OI Detail Screen**)	**single-click**
2	**<unit number>** (in **Begin Unit** field)	**enter text, press Enter**
3	**<unit number>** (in **End Unit** field)	**enter text, press Enter**
4	**Select Units** button	**single-click**
5	Return to the **Use the OI Detail Screen** procedure	Use procedure in Section 18.9.4

18.9.7 Activate a Job

The procedure to **Activate a Job** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). The **Main OI Screen** provides the Distribution Technician with a means of activating jobs that are in a **Pending** status. The **Activate** option is available just once for each job. If it is necessary to reactivate the same job, the activation must be done at the detail level, which is accomplished using the **OI Detail Screen** as described in the **Use the OI Detail Screen** procedure (Section 18.9.4).

Table 18.9-8 presents (in a condensed format) the steps required to activate a job. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 On the PDS **Main OI Screen** observe the number of units in the **To_Do Units** column for the pending job to be activated.

- The number of units in the **To_Do Units** column can provide a rough approximation of the size of the job.

2 If the job to be activated is a large job, determine whether all units for the order are included in the pending job that is displayed on the PDS **Main OI Screen**.

- For detailed instructions refer to the **Compare the Number of Units in an Order and a Job** procedure (Section 18.9.8).

3 **Single-click** on the action button at the beginning of the job line for the relevant job (on the **Main OI Screen**).

- The **Action List** box is displayed.
- Not all actions are available for every job.
  - The available actions depend on the job's current status and processing.

4 **Single-click** on (highlight) **Activate** in the **Action List** box.

- **Activate** is highlighted.
- The **Activate** option is available if the job status is **Pending** only.
- Once selected, the **Activate** option is no longer available for the selected job.
  - Subsequent activation/reactivation must be done at the detail level, which is accomplished using the **OI Detail Screen** as described in the **Use the OI Detail Screen** procedure (Section 18.9.4).

5 **Single-click** on the appropriate button from the following selections:

- **OK -** to start the process of generating the data (in the form of a .ppf file) that the product generation code needs by using this machine's job limitation information and other data stored in the database.
  - A blue pop-up window is displayed with one of the following types of messages indicating that the activation is being performed:

    Activating Job <job key>.

    Activating next units <job key>.
  - When the activation process has been completed, the database is queried, the **Main OI Screen** is refreshed and after the job has retrieved all data for the product the **Media Drive Selection** window is displayed.
  - The **Media Drive Selection** window is not displayed for Rimage units if AutoRimage mode has been enabled.
  - AutoRimage may be enabled on systems that have multiple Rimage units only.
  - AutoRimage should be disabled at sites that have a single Rimage unit.
- **Cancel -** to dismiss the **Action List** box and return to the **Main OI Screen**.
  - The **Main OI Screen** is displayed.

6 If the job is a CD or DVD job, ensure that the input bins of the Rimage unit contain blank disks.

- Load the input bin(s) if necessary, ensuring that the disks are inserted right-side up (shiny side down).
  - For detailed instructions refer to the Rimage unit operating manual.

7 If the data are to be recorded on a tape, ensure that there is a blank tape in the drive to be used for recording the data.

- A list of the available drives is displayed in the **Media Drive Selection** window.

8 If the data are to be recorded on a tape, wait for the drive to come on line before responding to the **Media Drive Selection** window.

- Wait for light to stop flashing.

9 In the **Media Drive Selection** window **single-click** on (highlight) the drive (i.e., tape drive or Rimage unit) to be used for the job.

- For CD and DVD jobs it is possible to activate more jobs than can be accommodated by the number of currently available drives.
- Activating more jobs than can be accommodated by the number of currently available drives is not possible for 8MM or DLT jobs.

10 **Single-click** on the **OK** button.

- The **Media Drive Selection** window is dismissed.
- The process of writing data to the selected drive starts.

11 Return to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

Table 18.9-8. Activate a Job - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Observe the number of units in the **To_Do Units** column for the job (PDS **Main OI Screen**)	**read text**
2	Determine whether all units for the order are included in the pending job displayed on the PDS **Main OI Screen** (if the job is large)	Use procedure in Section 18.9.8
3	Action button (on **Main OI Screen**)	**single-click**
4	**Activate**	**single-click**
5	**OK** button	**single-click**
6	Insert blank disks in the input bins of the Rimage unit (if applicable)	**stack**
7	Insert a blank tape in the appropriate tape drive (if applicable)	**push in** or **push in and close door** (as applicable)
8	Wait for the drive to come on line (if applicable)	**wait**
9	**<drive>** (in **Media Drive Selection** window)	**single-click**
10	**OK** button	**single-click**
11	Return to the **Monitor/Control Product Processing Using PDS** procedure	Use procedure in Section 18.9.1

18.9.8 Compare the Number of Units in an Order and a Job

The **Compare the Number of Units in an Order and a Job** procedure may be performed as part of the **Activate a Job** procedure (Section 18.9.7). The purpose of comparing the number of units in an order and a job is to determine whether all units for a large order are included in a pending job that is displayed on the PDS **Main OI Screen**. The result is useful in deciding whether to activate the job or wait until the data for more or all units in the order become available.

The procedure for comparing the number of units in an order and a job involves a comparison between the number of units in the order on the **PDSIS OI Detail Screen** and the number of units specified on the **Main OI Screen**. It is possible for the number of units in the order on the **PDSIS OI Detail Screen** to be greater than the number of units specified on the **Main OI Screen**. If the number of units in the PDSIS order were greater than the number of units in the corresponding PDSSA job and the job was activated, only the units that were accessible to PDSSA would be copied to the specified medium. Depending on the circumstances (including DAAC policy) activating part of an order may be acceptable. However, for high-capacity media types such as DLT, activation of a partial job could be a very inefficient use of the media.

Discrepancies in the number of units in an order (as displayed on the **PDSIS OI Detail Screen**) and the number of units in the corresponding job (as displayed on the PDS **Main OI Screen**) are generally due to PDSIS data "grouping" (also known as "chunking"). There are two possible grouping factors but only one of them is in effect at a time.

The two grouping factors are as follows:

- Granule size.
- Group limits.

When the current grouping factor is "granule size," PDSIS makes a chunk of a large order available to PDSSA after a specified number of megabytes of data have been received from ECS. The granule size limit is specified in the group_data_size column of the pdsis_serverconfig_tbl database table. If the total size of an order is smaller than the granule size limit, granule-size grouping is irrelevant for that order.

If the current grouping factor is "group limits," PDSIS makes a chunk of an order available to PDSSA when a specified number of units has been received from ECS. The number of units is specified in the group_unit_size column of the pdsis_serverconfig_tbl database table. If the value is NULL, all units are made available to PDSSA only after all unit data have been staged by ECS. If the total number of units in an order is less than the group limit, group-limit grouping is irrelevant for that order.

The grouping factor in use is specified by the value in the grouping_config column of the pdsis_serverconfig_tbl database table. Valid grouping values for the pdsis_serverconfig_tbl are as follows:

- **S** - "granule size" grouping.
- **G** - "group limits" grouping.

To determine the current grouping factor use the **Determine the Current Grouping Factor** procedure (Section 18.9.9).

The grouping factor is relevant for orders that are larger than the value assigned to the current grouping factor only. For example, if **Grouping Config** equals "S" and **Group Data Size** is set to "35,000," an order for 600 megabytes of data would not be broken up into chunks.

The **Main OI Screen** provides the Distribution Technician with a means of determining the number of units in a job. The **PDSIS OI Detail Screen** provides the Distribution Technician with a means of determining the total number of units in the order.

Table 18.9-9 presents (in a condensed format) the steps required to compare the number of units in an order and a job. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Activate the **PDSIS OI Detail Screen** for the order to be filled.
- For detailed instructions refer to the **Use the PDSIS OI Detail Screen** procedure (Section 18.10.2).
- The **PDSIS OI Detail Screen** is displayed.

2 Scroll to the bottom of the **PDSIS OI Detail Screen** to find the last unit in the order.

3 Observe the number of units in the **To_Do Units** column for the corresponding job on the **Main OI Screen**.

4 Compare the number of units in the order on the **PDSIS OI Detail Screen** with the number of units specified in the **To_Do Units** column for the corresponding job on the **Main OI Screen**.
- If the number of units is equal, the job can be activated.
  - For detailed instructions refer to the **Activate a Job** procedure (Section 18.9.7).
- If the number of units is not equal, consider the effects on job processing before activating the job:
  - If the job is activated, only the units that are accessible to PDSSA (in the PDT_PDSINFO table) will be activated.
  - Activating a partial order may be acceptable, depending on the circumstances and DAAC policy.
  - For a high-capacity type of medium (e.g., DLT) activating a partial order would be an inefficient use of the media if all units in the order could be recorded on a single tape or disk.
  - Distribution of a partial order may be authorized by User Services when some granules are currently unavailable but the customer has an immediate need for the granules that are available.
  - Activating a partial order may be acceptable when multiple media are required to fill the order and there is a sufficient quantity of data available to fill one disk or tape.
  - Activating a partial order may lead to manual intervention to correct the information on the labels affixed to the media, especially if more tapes or disks are used than originally expected. [Alternatively, DAAC policy may allow distribution of media volumes even when the numbering is not consistent with the original numbering scheme (e.g., 1 of 2, 2 of 2, 3 of 2.]

5 If all units currently available to PDSSA should be activated immediately, activate the job.
- For detailed instructions refer to the **Activate a Job** procedure (Section 18.9.7).

6 If some of the units currently available to PDSSA should be activated immediately, activate the applicable units.

- For detailed instructions refer to the **Use the OI Detail Screen** procedure (Section 18.9.4).

7 If none of the units currently available to PDSSA should be activated immediately, wait until the appropriate number of units is available to PDSSA before continuing.

8 If it was necessary to wait until the appropriate number of units became available to PDSSA before continuing, return to Step 3.

Table 18.9-9. Compare the Number of Units in an Order and a Job - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**PDSIS OI Detail Screen** (for the order to be filled)	Use procedure in Section 18.10.2
2	Last unit in the order	**scroll down**
3	Number of units in the **To_Do Units** column (on **PDSIS OI Detail Screen**) for the corresponding job on the **Main OI Screen**	**read text**
4	Number of units in the order (on **PDSIS OI Detail Screen**) vs. number of units specified in the **To_Do Units** column for the corresponding job (on **Main OI Screen**)	**compare**
5	Activate job (If all units should be activated now)	Use procedure in Section 18.9.7
6	Activate units (if some units should be activated now)	Use procedure in Section 18.9.4
7	Wait until the appropriate number of units is available to PDSSA before continuing (if no units should be activated now)	**wait**
8	Return to Step 3 (if waiting for units was necessary)	

18.9.9 Determine the Current Grouping Factor

It may be necessary to determine the current grouping factor when comparing the number of units in an order and a job.

Table 18.9-10 presents (in a condensed format) the steps required to determine the current grouping factor. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Start the **PDSIS Maintenance Module**.

- For detailed instructions refer to the **Start the PDSIS Maintenance Module** procedure (Section 18.7.9).

2 **Single-click** on the **Server Config** button on the **PDSIS Maintenance Module Main Menu**.
- The **Server Config Maintenance (PDSISMTPST)** window is displayed.

3 **Single-click** on the **Execute Query** button on the **Server Config Maintenance** window.
- Server configuration is displayed in the **Server Config Maintenance** window.

4 Observe the value in the **Grouping Config** field of the **Server Config Maintenance** window.
- Valid grouping values are as follows:
  - **S** - "granule size" grouping.
  - **G** - "group limits" grouping.

5 Observe the value in the **Group Data Size** field of the **Server Config Maintenance** window.
- Value indicates the maximum size (in megabytes) of each chunk of data made available to PDSSA if **Grouping Config** is set to "S."
- For example, a value of "35000" would indicate a grouping factor of 35,000 megabytes (35 gigabytes).

6 Observe the value in the **Group Unit Size** field of the **Server Config Maintenance** window.
- Value indicates the maximum number of units in each chunk of data made available to PDSSA if **Grouping Config** is set to "G."
- For example, a value of "10" would indicate a grouping factor of 10 units.

7 To close the **Server Config Maintenance** window **single-click** on the **Exit** button at the bottom of the window.
- If the **Exit** button is not visible on the maintenance module form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- The **PDSIS Maintenance Module Main Menu** is displayed.

8 To shut down the **PDSIS Maintenance Module single-click** on the **Exit** button at the bottom of the **PDSIS Maintenance Module Main Menu** window.
- The **PDSIS Maintenance Module Main Menu** is dismissed.

9 Return to the procedure that recommended determining the current grouping factor.
- For example, the **Compare the Number of Units in an Order and a Job** procedure (Section 18.9.8)

Table 18.9-10. Determine the Current Grouping Factor - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Start the **PDSIS Maintenance Module**	Use procedure in Section 18.7.9
2	**Server Config** button (on **PDSIS Maintenance Module Main Menu**)	**single-click**
3	**Execute Query** button (on **Server Config Maintenance** window)	**single-click**
4	**<value>** (in **Grouping Config** field)	**read text**
5	**<value>** (in **Group Data Size** field)	**read text**
6	**<value>** (in **Group Unit Size** field)	**read text**
7	**Exit** button (on **Server Config Maintenance** window)	**single-click**
8	**Exit** button (on **PDSIS Maintenance Module Main Menu**)	**single-click**
9	Return to procedure that recommended determining the current grouping factor	

18.9.10 Stop a Job Using the Main OI Screen Display

The procedure to **Stop a Job Using the Main OI Screen Display** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). The **Main OI Screen** provides the Distribution Technician with means of stopping (suspending) jobs. Note that if a job has proceeded to the stage where the data are being written to the specified medium that process (writing to the medium) continues even after an attempt to stop the job.

Table 18.9-11 presents (in a condensed format) the steps required to stop a job using the **Main OI Screen** display. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Single-click** on the action button at the beginning of the job line for the relevant job on the **Main OI Screen**.

- The **Action List** box is displayed.
- Not all actions are available for every job.
  - The available actions depend on the job's current status and processing.

2 **Single-click** on (highlight) **Stop Job** in the **Action List** box.

- **Stop Job** is highlighted.

3 **Single-click** on the appropriate button from the following selections:

- **OK** - to start the process of stopping the job.
  - A confirmation dialogue box is displayed to inquire "Are you sure you want to stop this job?"
- **Cancel** - to dismiss the **Action List** box and return to the **Main OI Screen**.
  - The **Main OI Screen** is displayed. [End of procedure.]

4 If a confirmation dialogue box is being displayed, click on the appropriate button from the following selections:

- **Yes** - to stop the job and dismiss the confirmation dialogue box.
  - The system performs no further actions on the job except to process status files from the product generation code.
  - When the screen is refreshed the next time, the field adjacent to the action button on the job line for the specified job displays the word **STOP**.

NOTE: It may be useful to manually refresh the screen.

- **Cancel** - to dismiss the confirmation dialogue box without stopping the job.
  - When the activation process has been completed, the database is queried, the **Main OI Screen** is refreshed.

5 Return to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

Table 18.9-11. Stop a Job Using the Main OI Screen Display - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Action button (on **Main OI Screen**)	**single-click**
2	**Stop Job**	**single-click**
3	**OK** button	**single-click**
4	**Yes** button	**single-click**
5	Return to the **Monitor/Control Product Processing Using PDS** procedure	Use procedure in Section 18.9.1

18.9.11 Terminate a Job Using the Job Monitor Main Window

The procedure to **Terminate a Job Using the Job Monitor Main Window** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). The **Job Monitor Main Window** provides the Distribution Technician with means of terminating jobs.

Note that if a job has proceeded to the stage where the data are being written to the specified medium that process (writing to the medium) continues even after an attempt to terminate the job.

Table 18.9-12 presents (in a condensed format) the steps required to terminate a job using the **Job Monitor Main Window**. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Place** the mouse cursor on the relevant job in the running job list of the **Job Monitor Main Window**, **single-click** and **hold** the **right** mouse button, **move** the mouse cursor to **Terminate Job** (highlighting it), then **release** the mouse button.

- Pop-up menu appears with the options **View Job Log, View Job PPF, Force AutoRimage Completion** [appears only when the selected job is waiting for a completion message from a Rimage writer]**, Terminate Job.**
- Select **Terminate Job** from the pop-up menu.
  - A confirmation window is displayed.

2 **Single-click** on the appropriate button from the following selections:

- **Proceed** - to terminate the job and dismiss the confirmation window.
  - The confirmation window is dismissed.
- **Cancel** - to dismiss the confirmation window without terminating the job.
  - The confirmation window is dismissed.

3 Change the status of the job and its units to "Q" (Pending) in the **PDSINFO Jobs Table** and the **PDSINFO Work Table**.

- For detailed instructions refer to the **Change the Values of Job Parameters Using the PDS Maintenance Module** procedure (Section 18.11.2).

4 Return to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

Table 18.9-12. Terminate a Job Using the Job Monitor Main Window - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Terminate Job** (**Job Monitor Main Window**)	**right-click**
2	**Proceed** button	**single-click**
3	Change the status of the job and its units to "Q" (Pending) in the **PDSINFO Jobs Table** and the **PDSINFO Work Table**	Use procedure in Section 18.11.2
4	Return to the **Monitor/Control Product Processing Using PDS** procedure	Use procedure in Section 18.9.1

18.9.12 Respond to a Status of QC-Hold (Perform a QC Check or Verification)

The procedure to **Respond to a Status of QC-Hold (Perform a QC Check or Verification)** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). A status of **QC-Hold** on the **PDS Operator Interface (PDSOI)** indicates that a job requires a QC check or media verification. The **PDS Quality Check** GUI provides the Distribution Technician with a means of selecting a verification drive for checking a disk or tape. The **PDSIS OI Main Screen** provides a means of marking the job "shipped."

Table 18.9-13 presents (in a condensed format) the steps required to respond to a status of QC-Hold (perform a QC check or verification). If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Retrieve the product summary from the report printer.

2 Review the product summary to determine whether there were any problems in writing to the medium.
- The status of each file on the medium is indicated on the report by a "Y" or "N."
- If there were problems in writing to the medium, go to the **Reprocess a Job** procedure (Section 18.11.20).
- If a disk was created but no product summary was printed, go to the **Reprocess a Job** procedure (Section 18.11.20).

3 Remove the medium (tape or disk) from the unit in which the data were written.
- 8mm tapes are ejected from the drive when completed.
- When a DLT tape is finished, the **Operate Handle** light on the DLT drive turns green.
  - To extract the completed DLT tape from the drive, lift the handle on the front of the drive and pull the tape out of the drive.
- The access door to the Rimage unit may be opened whenever the media arm is not moving media.
- If the label on a disk was not printed, go to the **Reprint a Label Stamped on a Disk** procedure (Section 18.11.18).

4 If the medium is a tape, set the write-protect switch on the tape cartridge at the **Read-Only** (write-protected) position.

5 If the medium is a tape, retrieve the tape label from the label printer.
- If the tape label is not correct or damaged, go to the **Reprint PDS Documents and Labels** procedure (Section 18.11.19).

6 If the medium is a tape, affix the tape label in the appropriate place.

- Labels are typically affixed directly to the tape cartridge unless DAAC policy states otherwise (e.g., affix the label to the case for the tape).

7 If the medium is a disk, retrieve the corresponding jewel-case insert from the jewel-case insert printer.

- If the jewel-case insert is not correct or is damaged, go to the **Respond to a Jewel-Case Insert Printing Failure** procedure (Section 18.11.23).

8 If the medium is a disk, insert the jewel-case insert in a jewel case.

- If the DAAC is supplied with CD jewel cases and DVD jewel cases, ensure that each type of disk is placed in the appropriate type of jewel case (i.e., CDs in CD cases, DVDs in DVD cases).

9 Observe the **PDS Quality Check** GUI to identify an available drive for verifying writing to the medium (tape or disk).

- The color of the buttons on the **PDS Quality Check** GUI provides an indication as to the status of each drive.
  - Gray typically indicates "available."
  - Yellow typically indicates "in use."
  - Red typically indicates a problem.
- If there is no CD drive available for verification (e.g., if all CD drives are out of service), CDs can be verified by reading their contents using a verification DVD drive, a CD drive in a PC or a DVD drive in a PC.
  - Verify that there are data and metadata files for all units in the job and that the file sizes indicate the presence of data [e.g., file size of 0 (zero) indicates that there is no data in the file].
- If there is no DVD drive available for verification (e.g., if all verification DVD drives are out of service), DVDs can be verified by reading their contents using a DVD drive in a PC.

10 On the **PDS Quality Check** GUI in the data entry window associated with the selected verification drive enter:

<Media ID>

- Enter the “Media ID” for the medium to be loaded in the drive.
  - The Media ID is printed on the tape or disk label.
  - Rather than typing it is generally preferable to copy and paste as much text as possible; for example, by copying the job key portion of the Media ID from the PDSOI and pasting it in the data entry window on the **PDS Quality Check** GUI.

11 Load the medium (tape or disk) in the selected verification drive.

12 Wait for the drive to come on line before continuing.

- Generally the lights on the drive stop blinking when the drive comes on line.

13 On the **PDS Quality Check** GUI **single-click** on the button corresponding to the drive in which the medium was loaded.

- The following events occur when the reader in which the medium was loaded has completed the verification:
  - The drive opens (except DLT drives, which do not open automatically).
  - The button corresponding to the drive on the **PDS Quality Check** GUI changes color.
- Messages (i.e., error messages) may be displayed in the text window at the bottom of the **PDS Quality Check** GUI.

14 When the reader (drive) in which the medium was loaded has completed the verification, retrieve the corresponding verification report from the printer.

15 Remove the medium from the drive.

- Keep the medium and its verification report together.
- If verification reports for media are lost, it may be necessary to reverify the tape or disk.
- 8mm tapes are ejected from the drive when completed.
- When a DLT tape is finished, the **Operate Handle** light on the DLT drive turns green.
  - To extract the completed DLT tape from the drive, lift the handle on the front of the drive then pull the tape out of the drive.

16 Insert the medium in its case.

- If the DAAC is supplied with CD jewel cases and DVD jewel cases, ensure that each type of disk is placed in the appropriate type of jewel case (i.e., CDs in CD cases, DVDs in DVD cases).

17 Review the verification report for read errors.

- If the medium is a tape with read errors and the tape has just been verified for the first time, repeat the verification on a different drive (return to Step 3).
- If the medium is a tape with read errors and the errors have been verified for a second time, reprocess the job by performing the **Reprocess a Job** procedure (Section 18.11.20).
- If the verification report for a disk (CD or DVD) does not list any contents, turn the power switch for the affected CD or DVD drive **off** then **on** and retry the verification check in the same drive (return to Step 10).

- If the medium is a disk with read errors and the disk has just been verified for the first time, visually inspect the disk for obvious damage.
  - If the disk has obvious unrecoverable damage (such as a scratch), discard the disk and reprocess the job by performing the **Reprocess a Job** procedure (Section 18.11.20).
  - If the disk does not have obvious damage or has a recoverable problem (such as a fingerprint that can be wiped off), fix the problem and repeat the verification on a different drive (return to Step 3).
- If the medium is a disk with read errors and the errors have been verified for a second time, reprocess the job by performing the **Reprocess a Job** procedure (Section 18.11.20).

18 To review results of the verification using the **PDS Quality Check** GUI **Log Viewer**, execute the following menu path from the pull-down menu on the **PDS Quality Check** GUI:

File → View Log

- The **Log Viewer** window is displayed.
- The following types of information are displayed in the **Log Viewer** window:
  - **Time Stamp** – date and time of the verification.
  - **Result** - Pass or Fail.
  - **Media ID** – job key and number in the series of tapes or disks.
- To dismiss the **Log Viewer** either click on the **Exit** button at the bottom of the window or select **Close** from the pull-down menu at the upper left-hand corner of the window.

19 Place the medium (in its case), product summary, and verification report (indicating that the medium is good) together in an appropriate place.

20 Perform the **Complete a Job** procedure (Section 18.9.13).
- About five to fifteen minutes after the job has been marked complete on the **PDSOI**, its status on the **PDSIS OI** changes from "I" (In Progress) to "C" (Completed).
- About five to fifteen minutes after the job has been marked "C" on the **PDSIS OI** the shipping labels and packing lists are printed.

21 When the shipping label and packing list have been printed, retrieve the items and put them with the medium (in its case) in the appropriate area for pick-up by or delivery to the shipping (dissemination) area.
- Disposition of the paperwork depends on site policy.
  - For example, both shipping labels and one packing list may go to the shipping (dissemination) area while all remaining paperwork is recycled.

22 Verify that all items (i.e., disk/tape, shipping labels, packing list) to be sent to the shipping (dissemination) area are for the same order.

23 When the shipping labels and packing lists have been printed and the job status on the **PDSIS OI** has changed from "I" (In Progress) to "C" (Completed), **single-click** on the action button (on the **PDSIS OI Main Screen**) at the beginning of the job line for the job.

- The **Action List** box is displayed.

24 **Single-click** on (highlight) **Ship** in the **Action List** box.

- **Ship** is highlighted.

25 **Single-click** on the appropriate button from the following selections:

- **OK** - to mark the job "shipped."
- **Cancel** - to dismiss the **Action List** box and return to the **PDSIS OI Main Screen** without marking the job "shipped."
  - The **PDSIS OI Main Screen** is displayed.

26 Return to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

Table 18.9-13. Respond to a Status of QC-Hold (Perform a QC Check or Verification) - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Retrieve product summary from report printer	**pick up**
2	Determine whether there were any problems in writing to the medium (review product summary)	**read text**
3	Remove the medium (tape or disk) from the unit in which the data were written	**pull out** or **open door and pull out** (as applicable)
4	**Read-Only** position (tape cartridge write-protect switch) (if applicable)	**set switch**
5	Retrieve tape label from label printer (if applicable)	**pick up**
6	Affix tape label (if applicable)	**attach**
7	Retrieve jewel-case insert from jewel-case insert printer (if applicable)	**pick up**
8	Insert jewel-case insert in jewel case (if applicable)	**insert**
9	Identify an available drive for verifying writing to the medium (on **PDS Quality Check** GUI)	**observe**
10	**<Media ID>** (in the data entry window associated with the selected verification drive on the **PDS Quality Check** GUI)	**enter text**

Table 18.9-13. Respond to a Status of QC-Hold (Perform a QC Check or Verification) - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
11	Load medium in the selected verification drive	**push in** or **push in and close door** (as applicable)
12	Wait for the drive to come on line	**wait**
13	Applicable drive button (on **PDS Quality Check** GUI)	**single-click**
14	Retrieve verification report from report printer (when applicable)	**pick up**
15	Remove medium from verification drive	**pull out** or **open door and pull out** (as applicable)
16	Insert medium in its case	**insert**
17	Identify read errors (review the verification report)	**read text**
18	**File** → **View Log** (pull-down menu on the **PDS Quality Check** GUI) (if appropriate)	**single-click**
19	Place the medium (in its case), product summary, and verification report together in an appropriate place	**place**
20	Complete the job	Use procedure in Section 18.9.13
21	When the shipping label and packing list have been printed, retrieve the items and put them with the medium (in its case) in the appropriate area for pick-up by or delivery to the shipping function	**place**
22	Verify that all items (i.e., disk/tape, shipping labels, packing list) are for the same order	**read text**
23	Action button (**PDSIS OI Main Screen**)	**single-click**
24	**Ship**	**single-click**
25	**OK** button	**single-click**
26	Return to the **Monitor/Control Product Processing Using PDS** procedure	Use procedure in Section 18.9.1

18.9.13 Complete a Job

The procedure to **Complete a Job** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). The **Main OI Screen** provides the Distribution Technician with a means of completing jobs that are in a **QC-Hold** status once they have passed the QC check. This "Complete" action first checks the status of the units of the job. If any unit(s) of the job is (are) not in QC-Hold status, some unit(s) may not be ready for completion; consequently, the completion must be performed using the **OI Detail Screen** as described in the **Use the OI Detail Screen** procedure (Section 18.9.4).

Table 18.9-14 presents (in a condensed format) the steps required to complete a job. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Single-click** on the action button at the beginning of the job line for the relevant job (on the **Main OI Screen**).
- The **Action List** box is displayed.
- Not all actions are available for every job.
  - The available actions depend on the job's current status and processing.

2 **Single-click** on (highlight) **Complete** in the **Action List** box.
- **Complete** is highlighted.
- The **Complete** option is available if the job status is **QC-Hold** only.

3 **Single-click** on the appropriate button from the following selections:
- **OK** - to start the process of completing the units in the job and the job itself.
  - A blue pop-up window is displayed with the following type of message indicating that the job's units are being completed:

    Completing Job <job key>.

  - When the completion process has finished, the database is queried, the **Main OI Screen** is refreshed, showing any new information or status changes.
  - The job that was completed should no longer be displayed after the screen is refreshed because there are no units to be processed.
- **Cancel** - to dismiss the **Action List** box and return to the **Main OI Screen**.
  - The **Main OI Screen** is displayed.

4 Return to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

Table 18.9-14. Complete a Job - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Action button (on **Main OI Screen**)	**single-click**
2	**Complete**	**single-click**
3	**OK** button	**single-click**
4	Return to the **Monitor/Control Product Processing Using PDS** procedure	Use procedure in Section 18.9.1

18.9.14 Enter Notes about a Job

The procedure to **Enter Notes about a Job** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). The **Main OI Screen** provides the Distribution Technician with a means of entering comments or notes about jobs. If a note has been entered for a job, an "*" is displayed in the **Note** field of the **Main OI Screen**.

Table 18.9-15 presents (in a condensed format) the steps required to enter notes about a job. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Single-click** on the action button at the beginning of the job line for the relevant job (on the **Main OI Screen**).
- The **Action List** box is displayed.
- Not all actions are available for every job.
  - The available actions depend on the job's current status and processing.

2 **Single-click** on (highlight) **Notes** in the **Action List** box.
- **Notes** is highlighted.

3 **Single-click** on the appropriate button from the following selections:
- **OK** - to gain access to the **Job Notes** dialogue box.
  - The **Job Notes** dialogue box is displayed.
- **Cancel** - to dismiss the **Action List** box and return to the **Main OI Screen**.
  - The **Main OI Screen** is displayed.

4 In the **Job Notes** dialogue box enter:

<text>

- If notes had already been entered for the selected job, the notes are displayed in the **Job Notes** dialogue box and it is possible to add to or modify them.

5 **Single-click** on the **Return** button to dismiss the **Job Notes** dialogue box and return to the **Main OI Screen**.
- The **Main OI Screen** is displayed.
- When the **Main OI Screen** is refreshed next an "*" is displayed in the **Note** field on the job line for the specified job (on the **Main OI Screen**) indicating that there is a note concerning the job**.**

6 Return to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

Table 18.9-15. Enter Notes about a Job - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Action button (on **Main OI Screen**)	**single-click**
2	**Notes**	**single-click**
3	**OK** button	**single-click**
4	**<text>** (in **Job Notes** dialogue box)	**enter text**
5	**Return** button	**single-click**
6	Return to the **Monitor/Control Product Processing Using PDS** procedure	Use procedure in Section 18.9.1

18.9.15 Promote a Job

A job would most likely be promoted at the request of User Services. The only practical means the Distribution Technician has of promoting jobs is to activate the pending job ahead of any other pending jobs.

18.9.16 Cancel a Job

Jobs are not normally canceled using the PDSSA operator tools. Jobs (orders) can be "rejected" using PDSIS tools. (Refer to the **Reject a Unit/Order** procedure (Section 18.10.4).

18.9.17 Generate PDS Production Reports

The procedure to **Generate PDS Production Reports** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). The **Main OI Screen** provides the Distribution Technician with a means of generating PDS production reports.

Table 18.9-16 presents (in a condensed format) the steps required to generate PDS production reports. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 To print reports on a printer other than the currently designated report printer, select an alternate printer.

- For detailed instructions refer to the **Select an Alternate Printer** procedure (Section 18.9.18).

2 To generate a report that contains the data currently being displayed **Main OI Screen** execute the following menu path from the pull-down menu:

Reports → Queue

- The report is printed on the designated report printer.

- The report is fired off in the background and uses the printer definition for reports.
- The file generated for the report is stored in the $PDSROOT/summary directory. The file name is in the format PDSREQUE_<MachineID_ConsoleID>.<timestamp> (e.g., PDSREQUE_DIG06_ops.04OCT2003084244).
- The queue report contains the following types of data for each current job:
  - **Job Key.**
  - **Total Units.**
  - **Pri** [priority].
  - **Product Media.**
  - **Project ID.**
  - **Due Date.**
  - **Copy Flag.**
  - **Product Code.**
  - **Status.**

3 To generate a report of all orders that still need to be produced (broken down by various time frame ranges) execute the following menu path from the pull-down menu:

Reports → Lag

- The report is printed on the designated report printer.
- The report is fired off in the background and uses the printer definition for reports.
- The file generated for the report is stored in the $PDSROOT/summary directory. The file name is in the format PDSSARELAG_<MachineID_ConsoleID>.<timestamp> (e.g., PDSSARELAG_DIG06_ops.04OCT2003084506).
- The lagging order report contains the following types of groupings for lagging jobs:
  - 30 days old.
  - 20 days old.
  - 10 days old.
  - 9 days old or newer.
- The report contains the following types of data for each lagging job:
  - **Order Nbr.**
  - **Date Entered.**
  - **Date Due.**
  - **Total Units.**
  - **Prod Code.**
  - **Product Format.**

4 To generate an error report for a particular job first **single-click** in one of the fields on the job line for the relevant job.

5 To generate an error report for a particular job execute the following menu path from the pull-down menu:

Reports → Error

- The report is printed on the designated report printer.
- The report is fired off in the background.
- The file generated for the report is stored in the $PDSROOT/summary directory. The file name is in the format <job key>_error_rpt.txt (e.g., YEA0309170681_0001_error_rpt.txt).
- The report is generated from error statements extracted from the job log. [The file name for the job log (in the $PDSROOT/summary directory) is in the format <job key>.log (e.g., YEA0309170681_0001.log).]

6 To generate additional reports repeat Steps 1 through 5 as necessary.

7 When all desired reports have been generated, return to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

Table 18.9-16. Generate PDS Production Reports - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Select an alternate printer (on **Main OI Screen**) (if applicable)	Use procedure in Section 18.9.18
2	**<any field on the job line for the relevant job>** (on **Main OI Screen**) (if requesting an error report)	**single-click**
3	**Reports → <type of report>** (on **Main OI Screen**)	**single-click**
4	Repeat Steps 1 through 3 (as necessary)	
5	Return to the **Monitor/Control Product Processing Using PDS** procedure (when applicable)	Use procedure in Section 18.9.1

18.9.18 Select an Alternate Printer

The procedure to **Select an Alternate Printer** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). The **Main OI Screen** provides the Distribution Technician with a means of selecting an alternate printer.

Table 18.9-17 presents (in a condensed format) the steps required to select an alternate printer. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Single-click** on **Printers** on the menu bar of the **Main OI Screen**.
- The **Default Printers** dialogue box is displayed.
- The current selections for printers for reports and jewel-case inserts are displayed.

2 **Single-click** and **hold** the applicable option button (either **Report Printer** or **Jewel Case Printer**) to display a menu of printers, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.
- If the desired printer is not available on the list of printers, submit a request to the supervisor to have it added to the list.
- Selected printer is displayed on the option button when the mouse button is released.

3 If an alternate printer is to be designated for the other type of printer, repeat Step 2 for the other printer.

4 **Single-click** on the **Return** button.
- The **Main OI Screen** is displayed.

5 Return to the **Generate PDS Production Reports** procedure (Section 18.9.17) or the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1) as applicable.

Table 18.9-17. Select an Alternate Printer - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Printers** (on **Main OI Screen**)	**single-click**
2	**<printer>** (from either the **Report Printer** or the **Jewel Case Printer** option button as applicable)	**single-click**
3	Repeat Step 2 for the other printer (if applicable)	
4	**Return** button	**single-click**
5	Return to the **Generate PDS Production Reports** procedure or the **Monitor/Control Product Processing Using PDS** procedure as applicable	Use procedure in Section 18.9.17 or 18.9.1 as applicable

18.9.19 Use the PDS Cleanup Manager

The PDS Cleanup Manager is a GUI that is used for specifying a file cleanup strategy for the following types of PDSSA files:

- Summary files.
- Master list files.
- Log files.

- Operator Interface log files.
- Status files.
- Jewel-case insert files.
- Label files.
- Text files.
- TIFF (Tag Image File Format) files.

PDSIS files are not included in the PDS Cleanup Manager's cleanup strategy. The PDSIS Cleanup Manager is used for specifying a file cleanup strategy for PDSIS files.

The PDS Cleanup Manager generates or modifies a Bourne shell script (i.e., cleanup.sh) that implements the file cleanup strategy. In addition, the PDS Cleanup Manager may modify the crontab file to adjust the time intervals for deletion or archiving of files.

The large number of files generated by PDS activities would overwhelm the system if some of the files were not removed from the working directories on a fairly frequent basis. However, some files may be required for a limited period of time in order to troubleshoot a job if there is a problem with it or if it is returned from the customer.

The PDS Cleanup Manager is not used very often, especially if a manageable retention period has been established for PDSSA files.

Table 18.9-18 presents (in a condensed format) the steps required to use the PDS Cleanup Manager. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID at the UNIX command line prompt enter:

    echo $PDSROOT

3 At the UNIX command line prompt enter:

cd run

- Change to the "run" directory.

4 At the UNIX command line prompt enter:

pdscleanup

- The **PDS Cleanup Manager** GUI is displayed.

5 If any of the types of files in the "summary" directory or "label" directory are to be archived or deleted, in the **Summary Directory** or **Label Directory** section (as applicable) of the **PDS Cleanup Manager** GUI **single-click** on either the **Archive** or **Delete** radio button (as applicable) to the right of one of those types of file.

- When one of the radio buttons is selected, the button color changes from gray to red and the button gives the appearance of being depressed.

6 If any of the types of files in the "summary" directory or "label" directory are to be archived or deleted, in the text box adjacent to the button selected in the previous step enter:

<number of days>

- **<number of days>** represents the number of days after which files of that type are to be either archived or deleted.
- The following types of files are listed in the **Summary Directory** section of the **PDS Cleanup Manager** GUI:
  - **Summary files.**
  - **Masterlist files.**
  - **Log files.**
  - **OILog files.**
  - **Status files.**
  - **Insert files.**
- The following types of files are listed in the **Label Directory** section of the **PDS Cleanup Manager** GUI:
  - **Label files.**
  - **Text files.**
  - **TIFF files.**

7 Repeat Steps 5 and 6 for each additional type of file in the "summary" directory or "label" directory that is to be archived or deleted.

8 If files older than a particular number of days should be deleted, **single-click** on the **Delete any files older than** radio button.

- When the **Delete any files older than** button is selected, the button color changes from gray to red.

9 If files older than a particular number of days should be deleted, in the text box adjacent to the **Delete any files older than** radio button enter:

<number of days>

- **<number of days>** represents the number of days after which files older than that number of days are to be deleted.

10 In the **Run cleanup daily at** fields enter:

<cleanup run time>

- **<cleanup run time>** represents the time when the cleanup should run [in 12-hour (rather than 24-hour) format].
- For example, type **2:00** for either two o'clock in the morning or two o'clock in the afternoon.

11 **Single-click** on either the **AM** or **PM** radio button (as applicable).

- When one of the radio buttons is selected, the button color changes from gray to red and the button gives the appearance of being depressed.

12 **Single-click** on the appropriate button from the following selections:

- **Apply & Exit** - to set the cleanup parameters as specified on the **PDS Cleanup Manager** GUI.
  - A **This will modify the PDS cleanup script and/or crontab** dialogue box is displayed.
  - Go to Step 13.
- **Cancel** - to dismiss the **PDS Cleanup Manager** GUI without applying any new cleanup parameters.
  - The **PDS Cleanup Manager** GUI is dismissed.
  - End of procedure.

13 **Single-click** on the appropriate button from the following selections:

- **Proceed** - to set the cleanup parameters as specified on the **PDS Cleanup Manager** GUI.
  - The cleanup script is generated, incorporating the parameters specified on the **PDS Cleanup Manager** GUI.
  - The **PDS Cleanup Manager** GUI is dismissed.
- **Cancel** - to dismiss the **PDS Cleanup Manager** GUI without applying any new cleanup parameters.
  - The **PDS Cleanup Manager** GUI is dismissed.

Table 18.9-18. Use the PDS Cleanup Manager - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**cd**	**enter text, press Enter**
3	**cd run**	**enter text, press Enter**
4	**pdscleanup**	**enter text, press Enter**
5	Either the **Archive** or **Delete** radio button (if applicable)	**single-click**
6	**<number of days>** (in text box corresponding to the type of file) (if applicable)	**enter text**
7	Repeat Steps 5 and 6 (as necessary)	
8	**Delete any files older than** radio button (if applicable)	**single-click**
9	**<number of days>** (in text box for **Delete any files older than**) (if applicable)	**enter text**
10	**<cleanup run time>** (in **Run cleanup daily at** fields)	**enter text**
11	Either **AM** or **PM** radio button (as applicable)	**single-click**
12	**Apply & Exit** button	**single-click**
13	**Proceed** button	**single-click**

18.9.20 Use the PDSIS Cleanup Manager

The PDSIS Cleanup Manager is a GUI that is used for specifying a file cleanup strategy for the following types of PDSIS files:

- Product request ("ODL") files.
- Product result ("Prodres") files.
- Socket log files.

The PDSIS Cleanup Manager generates or modifies a Bourne shell script (i.e., pdsiscleanup.sh) that implements the file cleanup strategy. In addition, the PDSIS Cleanup Manager may modify the crontab file to adjust the time intervals for deletion or archiving of files.

The large number of files generated by PDSIS activities would overwhelm the system if some of the files were not removed from the working directories on a fairly frequent basis. However, some files may be required for a limited period of time in order to troubleshoot an order if there is a problem with it or if it is returned from the customer.

The PDSIS Cleanup Manager is not used very often, especially if a manageable retention period has been established for PDSIS files.

Table 18.9-19 presents (in a condensed format) the steps required to use the PDSIS Cleanup Manager. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: A **PDSIS** user ID (e.g., **pdsis**, **pdsis_ts1**, **pdsis_ts2**) is used in this procedure.

1 Log in to the PDS Server host using the appropriate PDSIS user ID for the operating mode being used.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- PDSIS user IDs are **pdsis**, **pdsis_ts1**, and **pdsis_ts2**, which are used for PDSIS operations in the OPS, TS1, and TS2 modes respectively.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd utilities

- Change to the PDSIS "utilities" directory (e.g., /data1/pdsis/utilities).

3 At the UNIX command line prompt enter:

EcPdIsPdsisCleanup &

- The **PDSIS Cleanup Manager** GUI is displayed.

4 If any of the types of files in the "in_msg" directory, "out_msg" directory, or "socket" directory are to be archived or deleted, in the **In_msg Directory**, **Out_msg Directory**, or **Socket Directory** section (as applicable) of the **PDSIS Cleanup Manager** GUI **single-click** on either the **Archive** or **Delete** radio button (as applicable) to the right of one of those types of file.

- When one of the radio buttons is selected, the button color changes from gray to red and the button gives the appearance of being depressed.

5 If any of the types of files in the "in_msg" directory, "out_msg" directory, or "socket" directory are to be archived or deleted, in the text box adjacent to the button selected in the previous step enter:

<number of days>

- **<number of days>** represents the number of days after which files of that type are to be either archived or deleted.
- The following type of file is listed in the **In_msg Directory** section of the **PDSIS Cleanup Manager** GUI:
  - **Odl files** (product request files).

- The following type of file is listed in the **Out_msg Directory** section of the **PDSIS Cleanup Manager** GUI:
  - **Prodres files** (product result files).
- The following type of file is listed in the **Socket Directory** section of the **PDSIS Cleanup Manager** GUI:
  - **Socket Log files.**

6 Repeat Steps 4 and 5 for each additional type of file in the "in_msg" directory, "out_msg" directory, or "socket" directory that is to be archived or deleted.

7 If files older than a particular number of days should be deleted, **single-click** on the **Delete any files older than** radio button.

- When the **Delete any files older than** button is selected, the button color changes from gray to red.

8 If files older than a particular number of days should be deleted, in the text box adjacent to the **Delete any files older than** radio button enter:

<number of days>

- **<number of days>** represents the number of days after which files older than that number of days are to be deleted.

9 In the **Run cleanup daily at** fields enter:

<cleanup run time>

- **<cleanup run time>** represents the time when the cleanup should run [in 12-hour (rather than 24-hour) format].
- For example, type **2:00** for either two o'clock in the morning or two o'clock in the afternoon.

10 **Single-click** on either the **AM** or **PM** radio button (as applicable).

- When one of the radio buttons is selected, the button color changes from gray to red and the button gives the appearance of being depressed.

11 **Single-click** on the appropriate button from the following selections:

- **Apply & Exit** - to set the cleanup parameters as specified on the **PDSIS Cleanup Manager** GUI.
  - A **This will modify the PDSIS cleanup script and/or crontab** dialogue box is displayed.
  - Go to Step 12.
- **Cancel** - to dismiss the **PDSIS Cleanup Manager** GUI without applying any new cleanup parameters.
  - The **PDSIS Cleanup Manager** GUI is dismissed.

– End of procedure.

12 **Single-click** on the appropriate button from the following selections:

- **Proceed** - to set the cleanup parameters as specified on the **PDSIS Cleanup Manager** GUI.
  - The cleanup script is generated, incorporating the parameters specified on the P**DSIS Cleanup Manager** GUI.
  - The **PDSIS Cleanup Manager** GUI is dismissed.
- **Cancel** - to dismiss the **PDSIS Cleanup Manager** GUI without applying any new cleanup parameters.
  - The **PDSIS Cleanup Manager** GUI is dismissed.

Table 18.9-19. Use the PDSIS Cleanup Manager - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server) (using appropriate PDSIS user ID)	**single-click** or use procedure in Section 18.2.1
2	**cd utilities**	**enter text, press Enter**
3	**EcPdIsPdsisCleanup &**	**enter text, press Enter**
4	Either the **Archive** or **Delete** radio button (if applicable)	**single-click**
5	**<number of days>** (in text box corresponding to the type of file) (if applicable)	**enter text**
6	Repeat Steps 4 and 5 (as necessary)	
7	**Delete any files older than** radio button (if applicable)	**single-click**
8	**<number of days>** (in text box for **Delete any files older than**) (if applicable)	**enter text**
9	**<cleanup run time>** (in **Run cleanup daily at** fields)	**enter text**
10	Either **AM** or **PM** radio button (as applicable)	**single-click**
11	**Apply & Exit** button	**single-click**
12	**Proceed** button	**single-click**

18.10 Monitoring/Controlling Order Processing Using the PDSIS OI

Distribution Technicians use the following tools to monitor and control PDSIS activities:

- **PDSIS OI Main Screen.**
- **PDSIS OI Detail Screen.**
- **PDSIS OI Error Screen.**

Table 18.10-1, below, provides an Activity Checklist for monitoring/controlling order processing using the PDSIS OI.

Table 18.10-1. Monitoring/Controlling Order Processing Using the PDSIS OI - Activity Checklist

Order	Role	Task	Section	Complete?
1	Distribution Technician	Monitor/Control Order Processing Using the PDSIS OI	(P) 18.10.1	
2	Distribution Technician	Use the PDSIS OI Detail Screen	(P) 18.10.2	
3	Distribution Technician	Mark a Job Shipped	(P) 18.10.3	
4	Distribution Technician	Reject a Unit/Order	(P) 18.10.4	
5	Distribution Technician	Generate PDSIS Reports	(P) 18.10.5	

18.10.1 Monitor/Control Order Processing Using the PDSIS OI

Monitoring/controlling order processing using the PDSIS OI involves the following activities (among others):

- Determining the status of an order and/or taking action with respect to an order (using the PDSIS OI Main Screen).
- Determining the status of units associated with a particular order or taking action with respect to units associated with a particular order (using the PDSIS OI Detail Screen).
- Marking a job "Shipped."
- Rejecting a unit/order.
- Generating PDSIS reports.

PDSIS activities are monitored and controlled using the **PDSIS OI Main Screen**, the **PDSIS OI Detail Screen** and the **PDSIS OI Error Screen**.

The **PDSIS OI Main Screen** displays the following items for each individual PDS order:

- Action Button [not labeled].
  - Allows access to a list of actions that can be taken with respect to the order.
- Order Nbr.
  - Unique PDS order number given to the customer request.
  - The software creates an order number each time the ECS VOGW sends an order.
- Ecs Ordid.
  - ECS order number for the customer request in the MSS database.
- Ecs Reqid.
  - ECS Request ID number for the customer request in the MSS database.
- Sta.
  - PDSIS status of the order.

- Status Date.
  - Last date any database status has changed on the order.
- Date Entered.
  - Date when the order was entered in the system.

The **PDSIS OI Detail Screen** displays the following items for the selected individual PDS order:

- Order Number.
  - Unique PDS order number given to the customer request.
- ECS Order ID.
  - ECS order number of the customer request in the MSS database.
- ECS Req ID.
  - ECS Request ID number of the customer request in the MSS database.
- Status.
  - PDSIS status of the order.

The **PDSIS OI Detail Screen** displays the following items for each unit within the selected PDS order:

- Action Button [not labeled].
  - Allows access to a list of actions that can be taken with respect to the job.
- Unit Number.
  - Unit number.
- Ordering ID.
  - Unique reference for the relevant granule in the ECS archive.
- Prod Code.
  - PDSIS's description of the product code.
  - It is loaded from customizable tables.
- Output Specs.
  - PDSSA's description of the output specifications selected by the customer.
- Subset Data.
  - Yes/No flag indicating whether the unit is a subsetted request (L7 floating scene).
- Size.
  - Size in MB of the granule.
  - May be an estimate in some cases.
- Status.
  - PDSIS status of the order.
- Status Date.
  - Last date any database status has changed on the unit.

The **PDSIS OI Error Screen** displays the following types of information:

- Action Button [not labeled].
  - Allows access to a list of actions that can be taken with respect to the item.
- Date/Time.
  - Time when the error occurred.

- Order Number.
  - Order number of the order in which the error occurred.
- Unit Number.
  - PDS unit number in which the error occurred.
- Error Source.
  - Source of the error.
- Error Message.
  - PDSIS coded error message.

Table 18.10-2 presents (in a condensed format) the steps required to monitor/control order processing using the PDSIS OI. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If the **PDSIS OI Main Screen** is not already in operation, start the PDSIS Operator Interface (PDSIS OI) (refer to Section 18.7.4).

- The **PDSIS OI Main Screen** is displayed.

2 Observe information displayed on the **PDSIS OI Main Screen**.

- The following items are displayed on an **order status line** for each individual PDS order:
  - Action Button [not labeled].
  - **Order Nbr.**
  - **Ecs Ordid.**
  - **Ecs Reqid.**
  - **Sta.**
  - **Status Date.**
  - **Date Entered.**
- Each **order status line** display is color-coded to draw attention to job status. The colors are interpreted as follows:
  - **Red** The error flag for the order is set at "Y" in the database.
  - **Green** In Progress status.
  - **Yellow** Completed status.
  - **Grey** Order Received status.
- If there are more records than can be displayed on the screen, use the scroll bar on the right hand side of the form to view the additional records.
- The **status line** at the bottom of the screen displays information about the form (for example, the status line might display “Record: 1/?” and “INSERT").
- The **message line** near the bottom of the screen (just above the **status line**) displays informational messages and error messages pertinent to what is happening on the form.
  - Messages are displayed on the screen as long as they are pertinent.

3 If more specific information is required or action should be taken with respect to units associated with a particular order, perform the **Use the PDSIS OI Detail Screen** procedure (Section 18.10.2).

4 If it becomes necessary to perform any of the following actions, go to the corresponding procedure:

- **Use the PDSIS OI Detail Screen** (Section 18.10.2) (to determine the status of units associated with a particular order or take action with respect to units associated with a particular order).
- **Mark a Job Shipped** (Section 18.10.3) (to mark a completed job shipped).
- **Reject a Unit/Order** (Section 18.10.4) (to change the status of a unit or order to "X" ("Reject"), effectively canceling the unit or order).
- **Generate PDSIS Reports** procedure (Section 18.10.5) (to generate PDSIS error, lagging order, rejected order, or shipped order reports).
- **Check/Clear Errors on PDSIS** procedure (Section 18.11.4) (to see the error(s) associated with a particular job).
- **Troubleshooting PDS Problems** (Section 18.11) (to troubleshoot problems/failures affecting order processing).

5 If it is necessary to update the data on the screen from the database without having to wait for the interval set on the timer, execute the following menu path from the pull-down menu:

Display → Refresh

- The data on the screen is refreshed.

6 If it is necessary to cause the entire screen to be redrawn without accessing the database for data, execute the following menu path from the pull-down menu:

Display → Repaint

- The screen (including borders, buttons, and data) is redrawn.
  - The **Repaint** option is used in case the window becomes garbled.

7 Repeat Steps 2 through 6 as necessary to monitor/control orders.

8 If it becomes necessary to shut down the PDSIS OI, perform the **Shut Down the PDSIS Operator Interface (PDSIS OI)** procedure (Section 18.8.7).

Table 18.10-2. Monitor/Control Order Processing Using the PDSIS OI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Start the PDSIS Operator Interface (PDSIS OI) (if necessary)	Use procedure in Section 18.7.4
2	Observe information displayed on the **PDSIS OI Main Screen**	**read text**
3	Use the **PDSIS OI Detail Screen** (if applicable)	Use procedure in Section 18.10.2
4	Perform the appropriate operational procedure (as needed)	Use applicable procedure(s) in Sections 18.10.2 through 18.10.4 or 18.11.4
5	**Display** → **Refresh** (on the **PDSIS OI Main Screen**) (as necessary)	**single-click**
6	**Display** → **Repaint** (on the **PDSIS OI Main Screen**) (as necessary)	**single-click**
7	Repeat Steps 2 through 6 as necessary to monitor/control jobs	
8	Shut down the operator interface (when applicable)	Use procedure in Section 18.8.7

18.10.2 Use the PDSIS OI Detail Screen

The procedure to **Use the PDSIS OI Detail Screen** is performed as part of the **Monitor/Control Order Processing Using the PDSIS OI** procedure (Section 18.10.1). The **PDSIS OI Detail Screen** provides the Distribution Technician with a means of accomplishing the following objectives:

- Obtaining specific information with respect to units associated with a particular order.
- Taking action with respect to units associated with a particular order.

Table 18.10-3 presents (in a condensed format) the steps required to use the **PDSIS OI Detail Screen**. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Single-click** on the action button at the beginning of the order status line (on the **PDSIS OI Main Screen**) for the relevant order.

- An **Action List** box is displayed.
- Not all actions are available for every order.
  - The available actions depend on the order's current status.

2 **Single-click** on (highlight) **Details** in the **Action List** box.

- **Details** is highlighted.

3 **Single-click** on the appropriate button from the following selections:

- **OK** - to bring up the **PDSIS OI Detail Screen** and dismiss the **Action List** box.
  - The **PDSIS OI Detail Screen** is displayed.
- **Cancel** - to dismiss the **Action List** box and return to the **Main OI Screen**.
  - The **PDSIS OI Main Screen** is displayed.

4 Observe information displayed on the **PDSIS OI Detail Screen**.

- The following items are displayed on the **PDSIS OI Detail Screen** for the selected individual order:
  - **Order Number.**
  - **ECS Order ID.**
  - **ECS Req ID.**
  - **Status.**
- The following items are displayed on the **PDSIS OI Detail Screen** for each unit within the selected PDS order:
  - Action Button [not labeled].
  - **Unit Number.**
  - **Ordering ID.**
  - **Prod Code.**
  - **Output Specs.**
  - **Subset Data.**
  - **Size.**
  - **Status.**
  - **Status Date.**
- Each **unit line** display is color-coded to draw attention to unit status. The colors are interpreted as follows:
  - **Red** The error flag for the unit is set at "Y" in the database.
  - **Green** In Progress status.
  - **Yellow** Completed status.
  - **Grey** Order Received status.
- There is an action button [not labeled] at the beginning of each unit line. The button allows access to a list of actions that can be taken with respect to the job:
  - **Errors** (displays an Error Window).
  - **Reject** (changes the status of the selected unit to Reject).
- If there are more records than can be displayed on the screen, use the scroll bar on the right hand side of the form to view the additional records.
- The **status line** at the bottom of the screen displays information about the form.
- The **message line** near the bottom of the screen (just above the **status line**) displays informational messages and error messages pertinent to what is happening on the form.

5 If it is desirable to see the error(s) associated with a particular unit, perform the **Check/Clear Errors on PDSIS** procedure (Section 18.11.4).

6 If it becomes necessary to reject unit(s), perform the **Reject a Unit/Order** procedure (Section 18.10.4).

7 If it is necessary to update the data on the screen from the database without having to wait for the interval set on the timer, execute the following menu path from the pull-down menu:

Display → Refresh

- The data on the screen is refreshed.

8 If it is necessary to cause the entire screen to be redrawn without accessing the database for data, execute the following menu path from the pull-down menu:

Display → Repaint

- The screen (including borders, buttons, and data) is redrawn.
  - The **Repaint** option is used in case the window becomes garbled.

9 Repeat Steps 4 through 8 as necessary to obtain additional information with respect to units associated with the selected order and/or take action with respect to units associated with the order.

10 To return to the **PDSIS OI Main Screen** execute the following menu path from the pull-down menu:

Action → Return

- The **PDSIS OI Detail Screen** is dismissed.
- The **PDSIS OI Main Screen** is displayed.

Table 18.10-3. Use the PDSIS OI Detail Screen - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Action button (on **PDSIS OI Main Screen**)	**single-click**
2	**Details**	**single-click**
3	**OK** button	**single-click**
4	Observe information displayed on the **PDSIS OI Detail Screen**	**read text**
5	Check/clear errors on PDSIS (if applicable)	Use procedure in Section 18.11.4
6	Reject a unit/order (if applicable)	Use procedure in Section 18.10.4
7	**Display → Refresh** (on the **PDSIS OI Detail Screen**) (as necessary)	**single-click**
8	**Display → Repaint** (on the **PDSIS OI Detail Screen**) (as necessary)	**single-click**

Table 18.10-3. Use the PDSIS OI Detail Screen - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
9	Repeat Steps 4 through 8 as necessary	
10	**Action** → **Return** (when applicable)	**single-click**

18.10.3 Mark a Job Shipped

The procedure to **Mark a Job Shipped** is performed as part of the **Monitor/Control Order Processing Using the PDSIS OI** procedure (Section 18.10.1). The **PDSIS OI Main Screen** provides the Distribution Technician with a means of marking a completed job shipped.

Table 18.10-4 presents (in a condensed format) the steps required to mark a job "shipped." If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Verify that the following conditions have been met:
- The **Sta** [status] of the job (as displayed on the **PDSIS OI Main Screen**) is **C** (completed).
- The packing lists for the job have been printed.
- The shipping labels for the job have been printed.

2 **Single-click** on the action button at the beginning of the relevant order status line (on the **PDSIS OI Main Screen**).
- The **Action List** box is displayed.

3 **Single-click** on (highlight) **Ship** in the **Action List** box.
- **Ship** is highlighted.

4 **Single-click** on the appropriate button from the following selections:
- **OK** - to mark the order shipped and dismiss the **Action List** box.
  - The **PDSIS OI Main Screen** is displayed.
  - The status of the order changes to shipped and the order is removed from (is no longer visible on) the **PDSIS OI Main Screen**.
- **Cancel** - to dismiss the **Action List** box without marking the order shipped.
  - The **PDSIS OI Error Screen** is displayed.

5 Return to the **Monitor/Control Order Processing Using the PDSIS OI** procedure (Section 18.10.1).

Table 18.10-4. Mark a Job Shipped - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Verify that the job is ready to be marked shipped	**read text**
2	Action button (on **PDSIS OI Main Screen**)	**single-click**
3	**Ship**	**single-click**
4	**OK** button	**single-click**
5	Return to the **Monitor/Control Order Processing Using the PDSIS OI** procedure	Use procedure in Section 18.10.1

18.10.4 Reject a Unit/Order

The procedure to **Reject a Unit/Order** is performed as part of either the **Monitor/Control Order Processing Using the PDSIS OI** procedure (Section 18.10.1) or the **Use the PDSIS OI Detail Screen** procedure (Section 18.10.2). Both the **PDSIS OI Main Screen** and the **PDSIS OI Detail Screen** provide the Distribution Technician with means of rejecting a unit/order.

CAUTION

Before rejecting a unit or order it is advisable to have in hand written authorization to do so.
Selecting "Reject" changes the status of the unit or order to a Reject (X) or cancelled state. Care is recommended because the reject function does not have a confirmation button. All units in process will be marked for rejection and no further processing will occur. The customer's completion report will reflect the specified unit as having a Reject status.

Table 18.10-5 presents (in a condensed format) the steps required to reject a unit/order. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Single-click** on the action button at the beginning of the relevant order status line or unit line (on the **PDSIS OI Main Screen** or **PDSIS OI Detail Screen** as applicable).
- The **Action List** box is displayed.

2 **Single-click** on (highlight) **Reject** in the **Action List** box.
- **Reject** is highlighted.

3 **Single-click** on the appropriate button from the following selections:

- **OK** - to reject the unit/order, dismiss the **Action List** box and return to the screen that was displayed before the action button was selected.
  - Either the **PDSIS OI Main Screen** or the **PDSIS OI Detail Screen** (as applicable) is displayed.
- **Cancel** - to dismiss the **Action List** box and return to the screen that was displayed before the action button was selected.
  - Either the **PDSIS OI Main Screen** or the **PDSIS OI Detail Screen** (as applicable) is displayed.

4 Return to the procedure being performed before the action button was selected.

- Either **Monitor/Control Order Processing Using the PDSIS OI** (Section 18.10.1) or **Use the PDSIS OI Detail Screen** (Section 18.10.2) (as applicable).

Table 18.10-5. Reject a Unit/Order - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Action button (on **PDSIS OI Main Screen** or **PDSIS OI Detail Screen** as applicable)	**single-click**
2	**Reject**	**single-click**
3	**OK** button	**single-click**
4	Return to the **Monitor/Control Order Processing Using the PDSIS OI** procedure or the **Use the PDSIS OI Detail Screen** procedure as applicable	Use procedure in Section 18.10.1 or 18.10.2 as applicable

18.10.5 Generate PDSIS Reports

The procedure to **Generate PDSIS Reports** is performed as part of the **Monitor/Control Order Processing Using the PDSIS OI** procedure (Section 18.10.1). The **PDSIS OI Main Screen** provides the Distribution Technician with means of generating PDSIS reports.

Table 18.10-6 presents (in a condensed format) the steps required to generate PDSIS reports. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 To select the type of report to be generated, execute the appropriate menu path from the pull-down menu on the **PDSIS OI Main Screen**.

Reports → <type of report>

- Options are: **Error Report**, **Orders Lagged**, **Orders Rejected**, or **Orders Shipped**.

- When a type of report has been selected, one of two types of **Report Parameters** form (aka **Runtime Parameter Form**) is displayed.

2 **Single-click** and **hold** on the **Destype** (destination type) option button, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.

- The selected report destination type is displayed on the **Destype** option button.
- Options are: **Screen**, **File**, **Printer**, **Mail**, and **Preview** (same visual effect as **Screen** but intended to be viewed as a prelude to printing).
- The default printer (if any) is displayed in the **Desname** field if **Printer** is selected as the **Destype**.

3 If a destination is needed for the selected **Destype** and the preferred destination is not already being displayed in the **Desname** field, in the **Desname** field enter:

<destination>

- The following kinds of destinations may be entered in the **Desname** field (as appropriate):
  - Printer name.
  - File path/name.
  - E-mail address.

4 If there is an **Orientation** option button on the **Report Parameters Form**, **single-click** and **hold** on the **Orientation** option button, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.

- The selected report orientation is displayed on the **Orientation** option button.
- Options are: **Default**, **Landscape**, and **Portrait.**

5 If there are date range fields on the **Report Parameters Form**, for the report, in the **Bdate** field enter:

<MM/DD/YYYY>

- **Bdate** is the beginning of the "status date" range.

6 If there are date range fields on the **Report Parameters Form**, for the report, in the **Sdate** field enter:

<MM/DD/YYYY>

- **Sdate** is the end of the "status date" range.

7 **Single-click** on the appropriate button from the following selections:

- **Run Report** - to generate the selected report and dismiss the **Report Parameters** form.
  - The selected report is generated and sent to the selected destination type (**Destype**).

- If either **Screen** or **Preview** was selected, the report is displayed in a window.
- If **File** was selected, a "**Print job**" dialogue box is displayed to verify the file path/name (as specified in the **Desname** field). **Single-click** on the **Save…** button to bring up a **Save File Dialog** box for further verification of the file path/name. **Single-click** on the **OK** button to save the file in the specified location. Please note that the file is not easily read using editing programs (e.g., **vi**) but if printed (e.g., **lp -d <printer name> <file name>**), it should be readable.
- If **Printer** was selected, the printer specified in the **Desname** field prints a hardcopy report.
- If **Mail** was selected, the report is sent to the e-mail address specified in the **Desname** field.

- **Cancel** - to dismiss the **Report Parameters** form without generating a report.

8 Review the report.

- An **PDSIS Current Errors Report** contains the following types of data for each error:
  - **Error ID.**
  - **Order Nbr.**
  - **Unit.**
  - **Error Co** [error code].
  - **Error Source.**
- A **PDSIS Lagging Order Report** contains the following types of groupings for lagging orders:
  - Orders 24 hrs to 48 hrs old.
  - Orders 48 hrs to 72 hrs old.
  - Orders 72 hrs old or older.
- A **PDSIS Lagging Order Report** contains the following types of data for each lagging order:
  - **Order Number.**
  - **ECS Ordid** [ECS Order ID].
  - **ECS Reqid** [ECS Request ID].
  - **Status.**
  - **Status Date.**
  - **Date Entered.**
  - **Error?**
  - **Media Type.**
  - **Units.**
  - **Volume.**
- A **PDSIS Rejected Order Report** or a **PDSIS Shipped Order Report** contains the following types of data for each affected order:
  - **Order Number.**
  - **ECS Ordid** [ECS Order ID].

- **ECS Reqid** [ECS Request ID].
- **Status Date.**
- **Date Entered.**
- **Media Type.**
- **Units.**
- **Volume (MB).**

- If either **Screen** or **Preview** was selected as the **Destype**, the following buttons are available on the report form:
  - **Prev** – when active (boldface letters), provides direct access to the previous page in the report.
  - **Next** – when active (boldface letters), provides direct access to the next page in the report.
  - **First** – when active (boldface letters), provides direct access to the first page in the report.
  - **Last** – when active (boldface letters), provides direct access to the last page in the report.
  - **Page:** – when active (boldface letters), provides direct access to the page specified in the adjacent text entry field.
  - **Print** – provides access to a **Print job** dialogue box. Click on the **Print** button in the dialogue box to send the document to the printer.
  - **Close** – dismisses the report window (to exit from the report).
  - **New** – opens an additional report window containing another copy of the report (so different pages of the report can be viewed at the same time).
- To dismiss the report window either **single-click** on the **Close** button or execute the following menu path from the pull-down menu:

  File → Quit

9 To generate additional reports repeat Steps 1 through 8 as necessary.

10 When all desired reports have been generated, return to the **Monitor/Control Order Processing Using the PDSIS OI** procedure (Section 18.10.1).

Table 18.10-6. Generate PDSIS Reports - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	**Reports → <type of report>** (on the **PDSIS OI Main Screen**)	**single-click**
2	**<type of destination>** (on the **Destype** option button)	**single-click**
3	**<destination>** (in **Desname** field) (if applicable)	**enter text**
4	**<orientation>** (on the **Orientation** option button) (if applicable)	**single-click**

Table 18.10-6. Generate PDSIS Reports - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
5	**<MM/DD/YYYY>** (in **Bdate** field) (if applicable)	**enter text**
6	**<MM/DD/YYYY>** (in **Sdate** field) (if applicable)	**enter text**
7	**Run Report** button	**single-click**
8	Review the report	**read text**
9	Repeat Steps 1 through 8 (as necessary)	
10	Return to the **Monitor/Control Order Processing Using the PDSIS OI** procedure (when applicable)	Use procedure in Section 18.10.1

18.11 Troubleshooting PDS Problems

Troubleshooting is a process of identifying the source of problems on the basis of observed trouble symptoms. Many problems with PDS can be traced to some part of the PDS itself. However, a common source of problems involves the reliance on messages or data from other subsystems. Like many other operational areas, PDS has interfaces with several ECS subsystems. Consequently, it is possible to trace some problems to an ECS subsystem, including (but not necessarily limited to) those in the following list:

- Data Management Subsystem (DMS).
- Data Server Subsystem (DSS).
- Science Data Server.
- Data Distribution.
- Storage Management.
- System Management Subsystem (MSS).
- Communications Subsystem (CSS).

The general process of troubleshooting involves the following activities:

- Review the trouble symptoms.
- Check the status of relevant hosts/servers (as necessary).
- Check log files (as necessary).
- Take action to correct the problem(s).

If a problem is suspected in one of the subsystems in the preceding list, refer to Section 18.6, **Troubleshooting DDIST Problems**.

If the problem cannot be identified and fixed without help within a reasonable period of time, the appropriate response is to call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 18.11-1, below, provides an Activity Checklist for troubleshooting PDS problems.

Table 18.11-1. Troubleshooting PDS Problems - Activity Checklist (1 of 2)

Order	Role	Task	Section	Complete?
1	Distribution Technician	Troubleshoot a PDS Failure	(P) 18.11.1	
2	Distribution Technician	Change the Values of Job Parameters Using the PDS Maintenance Module	(P) 18.11.2	
3	Distribution Technician	Change the Values of Order Parameters Using the PDSIS Maintenance Module	(P) 18.11.3	
4	Distribution Technician	Check/Clear Errors on PDSIS	(P) 18.11.4	
5	Distribution Technician	Check PDSSA or PDSIS Log Files	(P) 18.11.5	
6	Distribution Technician	Check/Restore Synchronization of the Rimage PC Time with PDS System Time	(P) 18.11.6	
7	Distribution Technician	Check/Restore the Rimage PC NFS Connection	(P) 18.11.7	
8	Distribution Technician	Clean Up the CD-R_Images Folder on the Rimage PC	(P) 18.11.8	
9	Distribution Technician	Clear an Error Displayed on the PDSIS OI Error Screen	(P) 18.11.9	
10	Distribution Technician	Determine Output Specifications Using the PDS Maintenance Module	(P) 18.11.10	
11	Distribution Technician	Determine Output Specifications Using the PDSIS Maintenance Module	(P) 18.11.11	
12	Distribution Technician	Determine Product Codes Using the PDS Maintenance Module	(P) 18.11.12	
13	Distribution Technician	Determine Product Codes Using the PDSIS Maintenance Module	(P) 18.11.13	
14	Distribution Technician	Determine the Status of PDS Tape/Disk Drives	(P) 18.11.14	
15	Distribution Technician	Determine Which Instance of PDSOI Was Used to Activate a Job	(P) 18.11.15	
16	Distribution Technician	Force AutoRimage Completion	(P) 18.11.16	
17	Distribution Technician	Reactivate Units	(P) 18.11.17	
18	Distribution Technician	Reprint a Label Stamped on a Disk	(P) 18.11.18	
19	Distribution Technician	Reprint PDS Documents and Labels	(P) 18.11.19	
20	Distribution Technician	Reprocess a Job	(P) 18.11.20	

Table 18.11-1. Troubleshooting PDS Problems - Activity Checklist (2 of 2)

Order	Role	Task	Section	Complete?
21	Distribution Technician	Reset an Order or a Unit	(P) 18.11.21	
22	Distribution Technician	Respond to a CD/DVD Job Error Indicated on PDSOI	(P) 18.11.22	
23	Distribution Technician	Respond to a Jewel-Case Insert Printing Failure	(P) 18.11.23	
24	Distribution Technician	Respond to a Job's Status Not Changing to QC-Hold Upon Successful Completion	(P) 18.11.24	
25	Distribution Technician	Respond to a Job on a Lag Report	(P) 18.11.25	
26	Distribution Technician	Respond to a Locked-Up Screen	(P) 18.11.26	
27	Distribution Technician	Respond to a Problem Starting PDSOI	(P) 18.11.27	
28	Distribution Technician	Respond to a Save Changes Dialogue Box When Exiting a Maintenance Module Window	(P) 18.11.28	
29	Distribution Technician	Respond to a "Waiting for Drive Selection" Message on the Job Monitor	(P) 18.11.29	
30	Distribution Technician	Respond to Duplicate Jobs on the PDSOI	(P) 18.11.30	
31	Distribution Technician	Respond to Low Disk Space	(P) 18.11.31	
32	Distribution Technician	Respond to No Printouts (Either Jewel-Case Inserts or Paper Reports)	(P) 18.11.32	
33	Distribution Technician	Respond to PDSOI's Failure to Update Status	(P) 18.11.33	
34	Distribution Technician	View a Job Log or Job Production Parameter File (PPF) Using UNIX Commands	(P) 18.11.34	
35	Distribution Technician	View a Job Log Using the PDS Job Monitor	(P) 18.11.35	
36	Distribution Technician	View a Job PPF Using the PDS Job Monitor	(P) 18.11.36	
37	Distribution Technician	View an Extended Error Message	(P) 18.11.37	

18.11.1 Troubleshoot a PDS Failure

1 If it is not possible to log in to the PDS Server or any other host, ask the Operations Controller/System Administrator to verify that the host is "up."
- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06,** and **n0dig06**.

2 If there is a general problem with the PDS GUIs (e.g., the PDS **Main OI Screen**, **PDSIS OI Main Screen**, **OI Detail Screen**, **Job Monitor Main Window**), refer to Table 18.11-2, General Problems.

3 If an error message or other problem associated with the **PDS Operator Interface (PDSOI)** is identified, refer to Table 18.11-3, PDS Operator Interface (PDSOI) Problems.

4 If an error message or other problem associated with the **Job Monitor** is identified, refer to Table 18.11-4, Job Monitor Problems.

5 If an error message or other problem associated with the **PDS Maintenance Module** is identified, refer to Table 18.11-5, PDS Maintenance Module Problems.

6 If an error message or other problem associated with the **PDSIS Operator Interface (PDSIS OI)** is identified, refer to Table 18.11-6, PDSIS Operator Interface (PDSIS OI) Problems.

7 If an error message or other problem associated with the **PDSIS Maintenance Module** is identified, refer to Table 18.11-7, PDSIS Maintenance Module Problems.

8 If some other type of problem is encountered, go to the appropriate procedure for identifying and/or correcting the problem as indicated in Table 18.11-1, Troubleshooting PDS Problems - Activity Checklist.

9 If the problem cannot be identified and fixed without help within a reasonable period of time, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 18.11-2. General Problems (1 of 2)

Symptom	Response
A selection has been made from an **Action List** window but the action is not invoked	**Single-click** on the **OK** button near the bottom of the **Action List** window to start the action or go to the appropriate screen.
Buttons are not visible at the bottom of the screen but they should be visible	1. **Move** the mouse to the outside edge of the form. (The cursor changes shape.) 2. **Single-click** and **hold** the mouse button and **move** the mouse to resize the screen until the buttons are visible.
Disk label needs to be reprinted	Perform the **Reprint a Label Stamped on a Disk** procedure (Section 18.11.18).
Jewel-case insert did not print	Perform the **Respond to a Jewel-Case Insert Printing Failure** procedure (Section 18.11.23).
Jewel-case insert needs to be reprinted	Perform the **Respond to a Jewel-Case Insert Printing Failure** procedure (Section 18.11.23).
Job needs to be reprocessed [e.g., product has stalled in the media production process or fails the media quality control (QC) check]	Perform the **Reprocess a Job** procedure (Section 18.11.20).
Lag report includes a job that is not displayed on the PDSOI	Perform the **Respond to a Job on a Lag Report** procedure (Section 18.11.25).
Media Drive Selection window does not appear in the workspace within a couple of minutes after a job/unit has been activated	Perform the **Respond to a "Waiting for Drive Selection" Message on the Job Monitor** procedure (Section 18.11.29).
No printouts	Perform the **Respond to No Printouts (Either Jewel-Case Inserts or Paper Reports)** procedure (Section 18.11.32).
Not all text is showing in a text box or the box appears to be too small	1. **Single-click** in the text box. 2. **Move** the cursor using the arrow keys. [The text scrolls in the box and hidden text becomes visible.]
Packing list for a completed order (i.e., an order with a status of "C") needs to be reprinted	Set the action flag to "S" using the PDSIS Maintenance Module as described in the **Change the Values of Order Parameters Using the PDSIS Maintenance Module** procedure (Section 18.11.3).
Rimage (CD or DVD) drive goes off line.	Verify that the blank media were placed in the Rimage input bins with the shiny side down.
Shipping label for a completed order (i.e., an order with a status of "C") needs to be reprinted	Set the action flag to "S" using the PDSIS Maintenance Module as described in the **Change the Values of Order Parameters Using the PDSIS Maintenance Module** procedure (Section 18.11.3).
Summary report is not printed but disk or tape is produced	Perform the **Respond to No Printouts (Either Jewel-Case Inserts or Paper Reports)** procedure (Section 18.11.32).
Tape label needs to be reprinted	Perform the **Reprint PDS Documents and Labels** procedure (Section 18.11.19).

Table 18.11-2. General Problems (2 of 2)

Symptom	Response
Units that were previously completed need to be reset/reactivated	Perform the **Reactivate Units** procedure (Section 18.11.17) or the **Reset an Order or a Unit** procedure (Section 18.11.21) (as applicable).

Table 18.11-3. PDS Operator Interface (PDSOI) Problems (1 of 3)

Symptom	Response
"Already activated" message is displayed in a purple box (error dialogue box).	1. **Single-click** on the **OK** button to dismiss the error window. 2. Perform the **Change the Values of Job Parameters Using the PDS Maintenance Module** procedure (Section 18.11.2) to determine the value of the **OI ID** field in the PDS Maintenance Module **PDSINFO Jobs Table**. [The message indicates that the job was already started by another PDSOI with a different OI ID (machine_id/console_id).] 3. Start another PDSOI using the OI ID specified in the **PDSINFO Jobs Table**. [Refer to the **Start the PDS Operator Interface (PDSOI)** procedure (Section 18.7.3).] 4. Process the job using the PDSOI started using the OI ID specified in the **PDSINFO Jobs Table**. [Refer to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).]
"Cannot activate because the selected field in the PWT_PDS_WORK_TBL contains an incorrect value" message is displayed in a purple box (error dialogue box).	1. **Single-click** on the **OK** button to dismiss the error window. 2. Perform the **Change the Values of Job Parameters Using the PDS Maintenance Module** procedure (Section 18.11.2) to set the value of the **Selected** field to **N** in the PDS Maintenance Module **PDSINFO Work Table**. [The message indicates that an attempt was made to activate the unit before and the **Selected** field in the PDS Maintenance Module **PDSINFO Work Table** did not get set correctly.]
"No job limit" message is displayed in a purple box (error dialogue box).	1. **Single-click** on the **OK** button to dismiss the error window. 2. Call the help desk and submit a trouble ticket in accordance with site Problem Management policy. [The PDS Maintenance Module **Machine Parameters Maintenance Form (PDSMTMPX)** is used to set the job limits for the particular **Product Code**.]

Table 18.11-3. PDS Operator Interface (PDSOI) Problems (2 of 3)

Symptom	Response
"No job" message is displayed in a purple box (error dialogue box).	1. **Single-click** on the **OK** button to dismiss the error window. 2. Record (make a note of) the job_key displayed in the purple box. 3. Perform the **Change the Values of Job Parameters Using the PDS Maintenance Module** procedure (Section 18.11.2) to query the **PDSINFO Jobs Table** and the **PDSINFO Work Table** to determine whether there is a job with the specified job_key in the system. [If a unit was rejected after it was already in process, it is possible that the job no longer exists when the status file is written.] 4. If there is no such job currently in the system, **single-click** in or open a UNIX (terminal) window. 5. If there is no such job currently in the system, enter: **mv <filename>.status tmp.<filename>.status** then press the **Return/Enter** key. [<**filename>** represents the body of the file name for the status file for the job; it includes the PDSOI ID and the PPF_KEY. The status file must either be moved or removed (deleted) or no other status files can be processed. For example: **mv PDS1_drg_0110011130207_0001.status tmp.PDS1_drg_0110011130207_0001.status** An alternative: **rm PDS1_drg_0110011130207_0001.status**]
"No units were selected, no action taken" message is displayed in a purple box (error dialogue box).	1. **Single-click** on the **OK** button to dismiss the error window. 2. Perform Steps 6 through 9 (as applicable) of the **Use the OI Detail Screen** procedure (Section 18.9.4). [The message indicates that no units were selected from the **OI Detail Screen** for activation or completion before clicking on the corresponding **Activate** or **Complete** button.]
"Stopped" job is not identified as stopped on the **Main OI Screen**	Select **Display → Refresh** from the pull-down menu on the **Main OI Screen** to force querying of the database. [The stop does not appear until the next time the database is queried.]
"You must select at least one selection criteria" message is displayed in a purple box (error dialogue box).	1. **Single-click** on the **OK** button to dismiss the error window. 2. Perform Steps 5 through 12 of the **Start the PDS Operator Interface (PDSOI)** procedure (Section 18.7.3). [The message indicates that no selection criteria were selected from the **PDSOI Start-Up Selection Screen**.}
"You must select at least one sort criteria" [sic] message is displayed in a purple box (error dialogue box).	1. **Single-click** on the **OK** button to dismiss the error window. 2. Perform Steps 9 through 12 of the **Start the PDS Operator Interface (PDSOI)** procedure (Section 18.7.3). [The message indicates that no sorting criteria were selected from the **PDSOI Start-Up Selection Screen**.]
Duplicate jobs are displayed on the PDSOI	Perform the **Respond to Duplicate Jobs on the PDSOI** procedure (Section 18.11.30).

Table 18.11-3. PDS Operator Interface (PDSOI) Problems (3 of 3)

Symptom	Response
No status updates on PDSOI	Perform the **Respond to PDSOI's Failure to Update Status** procedure (Section 18.11.33).
Problem starting PDSOI	Perform the **Respond to a Problem Starting PDSOI** procedure (Section 18.11.27).
Red job status line associated with a CD or DVD job on the PDSOI (indicating an error condition)	Perform the **Respond to a CD/DVD Job Error Indicated on PDSOI** procedure (Section 18.11.22).
Screen (PDSOI) has locked up	Perform the **Respond to a Locked-Up Screen** procedure (Section 18.11.26).

Table 18.11-4. Job Monitor Problems

Symptom	Response
CD or DVD job has produced optical media and is waiting needlessly (and AutoRimage is enabled)	Perform the **Force AutoRimage Completion** procedure (Section 18.11.17).
Disk space is low (as displayed on the **Job Monitor Main Window**)	Perform the **Respond to Low Disk Space** procedure (Section 18.11.31).
Log file needs to be checked for error messages	Perform either the **View a Job Log Using the PDS Job Monitor** procedure (Section 18.11.35) or the **View a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** procedure (Section 18.11.34).
PPF file needs to be checked for job-related data	Perform either the **View a Job PPF Using the PDS Job Monitor** procedure (Section 18.11.36) or the **View a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** procedure (Section 18.11.34).
"Waiting for Drive Selection" message is displayed	1. If the **Media Drive Selection** window is visible in the workspace, go to Step 6 of the **Activate a Job** procedure (Section 18.9.7). 2. If the **Media Drive Selection** window does not appear in the workspace within a couple of minutes, perform the **Respond to a "Waiting for Drive Selection" Message on the Job Monitor** procedure (Section 18.11.29).
"Waiting For *Rimage* Status" message is displayed for an excessive period of time	1. Wait a reasonable period of time for the message to disappear. [The wait may be lengthy depending on product size and/or system load.] 2. If the Rimage status is not provided (if the message does not disappear) within a reasonable period of time, go to the **Reprocess a Job** procedure (Section 18.11.20).

Table 18.11-5. PDS Maintenance Module Problems

Symptom	Response
Dialogue box is displayed inquiring as to whether changes should be saved before exiting a maintenance module window	Perform the **Respond to a Save Changes Dialogue Box When Exiting a Maintenance Module Window** procedure (Section 18.11.28).
No **Exit** button on a Maintenance Screen (**PDS Maintenance Module** or **PDSIS Maintenance Module**)	**Single-click** on the **Cancel Query** button. [The buttons change and the **Exit** button becomes visible.]
Output specification is unknown/needed	Perform the **Determine Output Specifications Using the PDS Maintenance Module** procedure (Section 18.11.10).
Product code is unknown/needed	Perform the **Determine Product Codes Using the PDS Maintenance Module** procedure (Section 18.11.12).
Value of a job parameter is missing, incorrect, or needs to be modified	Perform the **Change the Values of Job Parameters Using the PDS Maintenance Module** procedure (Section 18.11.2).

Table 18.11-6. PDSIS Operator Interface (PDSIS OI) Problems

Symptom	Response
Red order status line on the **PDSIS OI Main Screen** (an error flag for the order is set at "Y" in the database)	Perform the **Check/Clear Errors on PDSIS** procedure (Section 18.11.4).

Table 18.11-7. PDSIS Maintenance Module Problems

Symptom	Response
Output specification is unknown/needed	Perform the **Determine Output Specifications Using the PDSIS Maintenance Module** procedure (Section 18.11.11).
Product code is unknown/needed	Perform the **Determine Product Codes Using the PDSIS Maintenance Module** procedure (Section 18.11.13).
Value of an order parameter is missing, incorrect, or needs to be modified	Perform the **Change the Values of Order Parameters Using the PDSIS Maintenance Module** procedure (Section 18.11.3).

18.11.2 Change the Values of Job Parameters Using the PDS Maintenance Module

The PDS Maintenance Module provides the Distribution Technician with a means of changing the values assigned to job parameters, especially the following types of parameters:

- Status of an order (job).
  - May be changed (for example) to "Pending" so the job will rerun (e.g., if there was a problem with the previous run of the job).
- Media type assigned to an order (job) or unit within an order.
  - Typically changed in response to a request from the user that has been forwarded by User Services.
- Output specification assigned to change the output specifications for a unit.
  - Typically have to be changed if the media type is changed.
- Number of copies in an order (job).
  - May be changed in response to a request from the user that has been forwarded by User Services.
  - Usually involves in-house orders.
- Directory path for pulling data for an order (job).
  - May be necessary if (for example) a problem occurs with the disk on which the normal directory resides.
- E-Mail address for ftp notification of order (job) completion.
  - Typically changed in response to a request from the user that has been forwarded by User Services.

In order to maintain consistency between PDSIS packing lists and PDSSA media generation, changes to the values assigned to order/job parameters may need to be made using both the PDSIS and PDSSA maintenance modules.

- Changes that affect both PDSIS and PDSSA should be made in PDSIS first, then PDSSA.
- Some changes affect PDSIS only.
  - For example, PDSSA does not contain customer shipping address information, so no shipping-address changes are necessary in PDSSA.
  - No changes are needed in PDSSA if order processing in PDSIS has not made any data for an order available to PDSSA yet.

The PDS **Maintenance Module Main Menu** has the following buttons available for selection:

- Lookups.
- Product Code Descriptions.
- Product Media Descriptions.
- Status Code Descriptions.
- Printers.
- PPF Definitions.
- Jewel Cases.

- Machine Parameter/Job Limits.
- PDSINFO Jobs Table.
- PDSINFO Work Table.
- Query Only PDSINFO.
- Mass Update PDSINFO.
- Restage a Job.
- Exit.

Along the top of the PDS **Maintenance Module Main Menu** are the following features:

- Name of the Oracle Form (e.g., PDSMNMSM).
- Current version of the PDS in use (e.g., 2.3).
- Database instance that is being running against (e.g., PRODUCTION).
- Current date (e.g., 2000/01/19).

At the bottom of the PDS **Maintenance Module Main Menu** are the following features:

- The **status line** displays information about the form (e.g., “Record: 1/1” and “INSERT").
- The **message line** (just above the **status line**) displays informational messages and error messages pertinent to what is happening on the form (e.g., "Working…").
  - Messages are displayed on the screen as long as they are pertinent.

CAUTION

Before changing product media type, number of copies, or customer's e-mail address it is advisable to have in hand written authorization to do so.

Table 18.11-8 presents (in a condensed format) the steps required to change the values of job parameters using the PDS Maintenance Module. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: In order to maintain consistency between PDSIS packing lists and PDSSA media generation, changes to the values assigned to order/job parameters may need to be made using both the PDSIS and PDSSA maintenance modules. Changes that affect both PDSIS and PDSSA should be made in PDSIS first, then PDSSA. However, there are changes that affect PDSIS only. For example, PDSSA does not contain customer shipping address information, so no shipping-address changes are necessary in PDSSA. Furthermore, no changes are needed in PDSSA if order processing in PDSIS has not made any data for an order available to PDSSA yet.

1 Perform the **Start the PDS Maintenance Module** procedure (Section 18.7.8).
- The **PDS Maintenance Module Main Menu** is displayed.

NOTE: If parameter values (except Input Directory or Email Address) are to be changed for a job or all units within a job, continue with Step 2. If parameters are to be changed for specific units only associated with a job, go to Step 12. Output Specs, Input Directory, or Email Address parameter values can be changed on the **PDSINFO Work Table** only (go to Step 12).

2 **Single-click** on the **PDSINFO Jobs Table** button on the PDS **Maintenance Module Main Menu**.
- The **PDSINFO Jobs Table Maintenance Form (PDSMTPJT)** or **PDSINFO Jobs Table** is displayed.

3 **Single-click** and **drag** (to highlight the text) in the **Job Key** field for the appropriate job on the **Main OI Screen**.
- **Job Key** text is highlighted on the **Main OI Screen**.

4 **Single-click** in the **Job Key** field on the **PDSINFO Jobs Table** with the **center** mouse button.
- **Job Key** is pasted in the **Job Key** field on the **PDSINFO Jobs Table**.

5 **Single-click** on the **Execute Query** button near the bottom of the **PDSINFO Jobs Table**.
- The database is queried for data concerning the job represented by the **Job Key** and the relevant data are displayed on the **PDSINFO Jobs Table**.

6 In the appropriate field of the **PDSINFO Jobs Table** enter:

<value>

- Clicking on the **List** button on the **PDSINFO Jobs Table** causes a list of valid values for the field to be displayed in a dialogue box if the value of certain parameters is being changed.
- Lists are available for at least the following parameters:
  - **Status.**
  - **Product Media.**
- Valid **Status** values for the **PDSINFO Jobs Table** are as follows:
  - **Q** - Pending.
  - **I** - Active.
  - **IP** - Active Partial.
  - **F** - QC-Hold.
  - **FP** - QC-Hold Partial.
  - **G** - Error.

  - **GP** - Error Partial.
  - **C** - Completed.
- Valid **Product Media** values for the **PDSINFO Jobs Table** are as follows:
  - **CD** - compact disk.
  - **8H** - 8-mm tape.
  - **D7** - DLT.
  - **DVD** - DVD.
  - **FT** - ftp.
- Valid **Copies** value is the desired number of copies of the unit.

7 Repeat Step 6 to modify values in other fields of the **PDSINFO Jobs Table**.

8 **Single-click** on the **Save** button on the **PDSINFO Jobs Table**.
- The record is saved in the database with the new value entered in the appropriate field.
- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

9 **Single-click** on the **Exit** button at the bottom of the **PDSINFO Jobs Table**.
- If the **Exit** button is not visible on the form, **single-click** on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the PDS **Maintenance Module Main Menu** is displayed.

10 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, **single-click** on the appropriate button from the following selections:
- **Yes** - to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** is displayed.
- **No** - to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** is displayed.

11 **Single-click** on the **PDSINFO Work Table** button on the PDS **Maintenance Module Main Menu**.
- The **PDSINFO Table Maintenance Form (PDSMTPDT)** or **PDSINFO Work Table** is displayed.

12 **Single-click** and **drag** (to highlight the text) in the **Job Key** field for the appropriate job on the **Main OI Screen**.

- **Job Key** text is highlighted on the **Main OI Screen**.

13 **Single-click** in the **Job Key** field on the **PDSINFO Work Table** with the **center** mouse button.

- **Job Key** is pasted in the **Job Key** field on the **PDSINFO Work Table**.

14 **Single-click** on the **Execute Query** button near the bottom of the **PDSINFO Work Table**.

- The database is queried for data concerning the job represented by the **Job Key** and the relevant data are displayed on the **PDSINFO Work Table**.

15 If the values of any of the following parameters were changed in the **PDSINFO Jobs Table** (Steps 2 through 10), determine whether the values have changed in the **PDSINFO Work Table**:

- **Status.**
- **Product Media.**
- **Copies.**

16 If the values of any of the preceding parameters were changed in the **PDSINFO Jobs Table** and the changed values are not displayed in the **PDSINFO Work Table**, continue with Step 17; otherwise, go to Step 23.

17 If the data displayed on the **PDSINFO Work Table** do not refer to the appropriate record, **single-click** on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display the appropriate record.

- The current record is listed in the **Unit Nbr** field.

18 In the appropriate field of the **PDSINFO Work Table** enter:

<value>

- Clicking on the **List** button on the **PDSINFO Work Table** causes a list of valid values for the field to be displayed in a dialogue box if the value of certain parameters is being changed.
- Lists are available for at least the following parameters:
  - **Status.**
  - **Product Media.**
- Valid **Status** values for the **PDSINFO Work Table** are as follows:
  - **Q** - Pending.
  - **I** - Active.
  - **F** - QC-Hold.

  - **G** - Error.
  - **C** - Completed.
- Valid **Output Specifications** for a particular media type can be determined by performing the **Determine Output Specifications Using the PDS Maintenance Module** procedure (Section 18.11.10); however, representative **Output Specs** values are as follows:
  - **CDRMS** - compact disk.
  - **8MHAU** - 8-mm tape.
  - **DLUCS** - DLT.
  - **DVD** - DVD.
  - **FTP** - ftp.
- Valid **Product Media** values for the **PDSINFO Work Table** are as follows:
  - **CD** - compact disk.
  - **8H** - 8-mm tape.
  - **D7** - DLT.
  - **DVD** - DVD.
  - **FT** - ftp.
- Valid **Copies** value is the number of copies of the unit desired by the requester.
- Valid **Input Directory** value is the correct directory path for pulling data for the order (job).
- Valid **Email Address** value is the correct e-mail address for ftp notification of order (job) completion.

19 Repeat Step 18 to modify values in other fields of the **PDSINFO Work Table**.

20 **Single-click** on the **Save** button on the **PDSINFO Work Table**.
- The record is saved in the database with the new value entered in the appropriate field.
- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

21 Repeat Steps 17 through 20 for all additional records that need to be modified for the job.

22 **Single-click** on the **Exit** button at the bottom of the **PDSINFO Work Table**.
- If the **Exit** button is not visible on the form, **single-click** on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the PDS **Maintenance Module Main Menu** is displayed.

23 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, **single-click** on the appropriate button from the following selections:

- **Yes** - to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** is displayed.
- **No** - to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** is displayed.

24 **Single-click** on the **Exit** button at the bottom of the PDS **Maintenance Module Main Menu** window.

- The PDS **Maintenance Module Main Menu** is dismissed.
- The PDS maintenance module has been shut down.

25 Return to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1) or the **Reprocess a Job** procedure (Section 18.11.20) as applicable.

Table 18.11-8. Change the Values of Job Parameters Using the PDS Maintenance Module - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Start the PDS Maintenance Module	Use procedure in Section 18.7.8
2	**PDSINFO Jobs Table** button	**single-click**
3	Copy **<Job Key>** (in the **Job Key** field on the **Main OI Screen**)	**single-click** and **drag**
4	Paste **<Job Key>** (in the **Job Key** field on the **PDSINFO Jobs Table**)	**center-click**
5	**Execute Query** button	**single-click**
6	**<value>** (in appropriate field of the **PDSINFO Jobs Table**)	**enter text**
7	Repeat the preceding step to modify values in other fields (if applicable)	
8	**Save** button	**single-click**
9	**Exit** button	**single-click**
10	**Yes** button (if applicable)	**single-click**
11	**PDSINFO Work Table** button	**single-click**
12	Copy **<Job Key>** (in the **Job Key** field on the **Main OI Screen**)	**single-click** and **drag**
13	Paste **<Job Key>** (in the **Job Key** field on the **PDSINFO Work Table**)	**center-click**
14	**Execute Query** button	**single-click**

Table 18.11-8. Change the Values of Job Parameters Using the PDS Maintenance Module - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
15	Determine whether the values changed in the **PDSINFO Jobs Table** have changed in the **PDSINFO Work Table**	**read text**
16	next/previous record buttons (**> >> < <<**) as necessary to display additional records (if applicable)	**single-click**
17	**<value>** (in appropriate field of the **PDSINFO Work Table**) (if applicable)	**enter text**
18	Repeat the preceding step to modify values in other fields of the **PDSINFO Work Table**	
19	**Save** button (if applicable)	**single-click**
20	Repeat Steps 16 through 19 for all additional records that need to be modified for the job (if applicable)	
21	**Exit** button	**single-click**
22	**Yes** button (if applicable)	**single-click**
23	**Exit** button	**single-click**
24	Return to the **Monitor/Control Product Processing Using PDS** procedure or the **Reprocess a Job** procedure as applicable	Use procedure in Section 18.9.1 or 18.11.20 as applicable

18.11.3 Change the Values of Order Parameters Using the PDSIS Maintenance Module

The PDSIS Maintenance Module provides the Distribution Technician with a means of changing the values assigned to order parameters, especially the following types of parameters:

- Status of an order or unit.
  - May be changed (for example) to "ODL Order Received" so the order processing will restart (e.g., if the order is hung up in PDSIS).
- Action to be sent to an order or unit.
  - Used for stimulating the order or unit to perform functions consistent with the current status.
- Error flag for an order or unit.
  - Reset the error flag for the order/unit.
- Output specification for a unit.
  - Must be changed if a different media type is requested.
- Number of copies of a unit.
  - May be changed in response to a request from the user that has been forwarded by User Services.

  - Usually involves in-house orders.
- Directory (location) for PDSSA to pull data for a unit.
  - May be necessary if (for example) a problem occurs with the disk on which the normal directory resides.
- E-Mail address for ftp notification of order completion.
  - Typically changed in response to a request from the user that has been forwarded by User Services.

In addition the PDSIS Maintenance Module provides the Distribution Technician with a means of determining the values assigned to various output specifications.

In order to maintain consistency between PDSIS packing lists and PDSSA media generation, changes to the values assigned to order/job parameters may need to be made using both the PDSIS and PDSSA maintenance modules.

- Changes that affect both PDSIS and PDSSA should be made in PDSIS first, then PDSSA.
- Some changes affect PDSIS only.
  - For example, PDSSA does not contain customer shipping address information, so no shipping-address changes are necessary in PDSSA.
  - No changes are needed in PDSSA if order processing in PDSIS has not made any data for an order available to PDSSA yet.

The **PDSIS Maintenance Module Main Menu** has the following buttons available for selection:

- PDSIS Orders.
- PDSIS Units.
- PDSIS Address.
- Server Config.
- ODL Lookup.
- Outspec Info.
- Prod Code Info.
- Lookups.
- Exit.

Along the top of the **PDSIS Maintenance Module Main Menu** are the following features:

- Name of the Oracle Form (e.g., PDSISMTMNU).
- Current version of the PDS in use (e.g., 1.0).
- "PDSIS".
- Current date (e.g., 03-APR-2001).

At the bottom of the **PDSIS Maintenance Module Main Menu** are the following features:

- The **status line** displays information about the form (e.g., “Record: 1/1” and “INSERT").
- The **message line** (just above the **status line**) displays informational messages and error messages pertinent to what is happening on the form (e.g., "Working…").
  - Messages are displayed on the screen as long as they are pertinent.

CAUTION

Before changing output specs or number of copies it is advisable to have in hand written authorization to do so.

Table 18.11-9 presents (in a condensed format) the steps required to change the values of order parameters using the PDSIS Maintenance Module. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: In order to maintain consistency between PDSIS packing lists and PDSSA media generation, changes to the values assigned to order/job parameters may need to be made using both the PDSIS and PDSSA maintenance modules. Changes that affect both PDSIS and PDSSA should be made in PDSIS first, then PDSSA. However, there are changes that affect PDSIS only. For example, PDSSA does not contain customer shipping address information, so no shipping-address changes are necessary in PDSSA. Furthermore, no changes are needed in PDSSA if order processing in PDSIS has not made any data for an order available to PDSSA yet.

1 Perform the **Start the PDSIS Maintenance Module** procedure (Section 18.7.9).

- The **PDSIS Maintenance Module Main Menu** is displayed.

NOTE: If parameter values (except Output Specs) are to be changed for an order or all units within an order, continue with Step 2. If parameters are to be changed for specific units only associated with an order, go to Step 10. Output Specs or Directory parameter values can be changed on the **PDSIS Units Maintenance Form** only (go to Step 10). E-mail address parameter values can be changed on the **PDSIS Address Maintenance Form** only (go to Step 22).

2 **Single-click** on the **PDSIS Orders** button on the **PDSIS Maintenance Module Main Menu**.

- The **PDSIS Orders Maintenance Form (PDSISMTPOT)** is displayed.

3 **Single-click** and **drag** (to highlight the text) in the **Order Nbr** field for the appropriate order on the **PDSIS OI Main Screen**.

- **Order Nbr** text is highlighted on the **PDSIS OI Main Screen**.

4 **Single-click** in the **Order Nbr** field on the **PDSIS Orders Maintenance Form** with the **center** mouse button.

- **Order Nbr** is pasted in the **Order Nbr** field on the **PDSIS Orders Maintenance Form**.

5 **Single-click** on the **Execute Query** button near the bottom of the **PDSIS Orders Maintenance Form**.

- The database is queried for data concerning the order represented by the **Order Nbr** and the relevant data are displayed on the **PDSIS Orders Maintenance Form**.

6 In the appropriate field of the **PDSIS Orders Maintenance Form** enter:

<value>

- Valid **Status** field values for the **PDSIS Orders Maintenance Form** are as follows:
  - **O** - ODL Order Received (initial status in PDSIS).
  - **I** - In Progress.
  - **C** - Completed.
  - **S** - Shipped.
  - **X** - Rejected.
- Valid **Action** field values for the **PDSIS Orders Maintenance Form** are as follows:
  - **A** - activate (activate entire order).
  - **S** - print shipping labels and packing lists.
  - **M** - mail the distribution notice to the customer (unless dorran is listed in the Special Action field of the PDSIS Orders Maintenance Form, in which case the DORRAN billing and accounting system (EDC only) is notified of the order status).
  - **D** - delete all order data in all tables associated with the specified order.
  - **X** - reject (reject the entire order).
- Valid **Error Flag** field values for the **PDSIS Orders Maintenance Form** are as follows:
  - **Y** - Yes, an error condition exists.
  - **N** - No error condition exists.

7 **Single-click** on the **Save** button on the **PDSIS Orders Maintenance Form**.

- The record is saved in the database with the new value entered in the appropriate field.
- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

8 **Single-click** on the **Exit** button at the bottom of the **PDSIS Orders Maintenance Form**.

- If the **Exit** button is not visible on the form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.

- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the **PDSIS Maintenance Module Main Menu** is displayed.

9 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, **single-click** on the appropriate button from the following selections:

- **Yes -** to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** is displayed.
- **No -** to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** is displayed.

10 **Single-click** on the **PDSIS Units** button on the **PDSIS Maintenance Module Main Menu**.

- The **PDSIS Units Maintenance Form (PDSISMTPUT)** is displayed.

11 **Single-click** and **drag** (to highlight the text) in the **Order Nbr** field for the appropriate order on the **PDSIS OI Main Screen**.

- **Order Nbr** text is highlighted on the **PDSIS OI Main Screen**.

12 **Single-click** in the **Order Nbr** field on the **PDSIS Units Maintenance Form** with the **center** mouse button.

- **Order Nbr** is pasted in the **Order Nbr** field on the **PDSIS Units Maintenance Form**.

13 **Single-click** on the **Execute Query** button near the bottom of the **PDSIS Units Maintenance Form**.

- The database is queried for data concerning the order represented by the **Order Nbr** and the relevant data are displayed on the **PDSIS Units Maintenance Form**.

14 If the values of any of the following parameters were changed in the **PDSIS Orders Maintenance Form** (Steps 2 through 9), determine whether the values have changed in the **PDSIS Units Maintenance Form**:

- **Status.**
- **Action.**
- **Error Flag.**

15 If the values of any of the preceding parameters were changed in the **PDSIS Orders Maintenance Form** and the changed values are not displayed in the **PDSIS Units Maintenance Form**, continue with Step 16; otherwise, go to Step 20.

16 If the data displayed on the **PDSIS Units Maintenance Form** do not refer to the appropriate record **single-click** on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display additional records (units) for the order.

- The current record is listed in the **Unit Nbr** field.

17 In the appropriate field of the **PDSIS Units Maintenance Form** enter:

<value>

- Valid **Status** values for the **PDSIS Units Maintenance Form** are as follows:
  - **O** - ODL Order Received (initial status in PDSIS).
  - **D** - ECS Data Requested.
  - **R** - ECS Data Received.
  - **P** - PDS Products Requested.
  - **C** - PDS Completed.
  - **S** - Shipped.
  - **X** - Rejected.
- Valid **Action** values for the **PDSIS Units Maintenance Form** are as follows:
  - **A** - activate (activate the unit).
  - **E** - request ECS data.
  - **P** - request PDS data.
  - **C** - clean/delete the directory associated with the unit.
  - **X** - reject (reject the unit).
- Valid **Error Flag** values for the **PDSIS Units Maintenance Form** are as follows:
  - **Y** - Yes, an error condition exists.
  - **N** - No error condition exists.
- Valid **Output Specs** for a particular media type can be determined by performing the **Determine Output Specifications Using the PDSIS Maintenance Module** procedure (Section 18.11.11); however, representative **Output Specs** values are as follows:
  - **CDRMS** - compact disk.
  - **8MHAU** - 8-mm tape.
  - **DLUCS** - DLT.
  - **DVD** - DVD.
  - **FTP** - ftp.
- Valid **Copies** value is the desired number of copies of the unit.
- Valid **Directory** where the data are staged.

18 **Single-click** on the **Save** button on the **PDSIS Units Maintenance Form**.

- The record is saved in the database with the new value entered in the appropriate field.
- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

19 Repeat Steps 16 through 18 for all additional records that need to be modified for the order.

20 **Single-click** on the **Exit** button at the bottom of the **PDSIS Units Maintenance Form**.

- If the **Exit** button is not visible on the form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the **PDSIS Maintenance Module Main Menu** is displayed.

21 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, **single-click** on the appropriate button from the following selections:

- **Yes** - to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** is displayed.
- **No** - to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** is displayed.

22 **Single-click** on the **PDSIS Address** button on the **PDSIS Maintenance Module Main Menu**.

- The **PDSIS Address Maintenance Form (PDSISMTADD)** is displayed.

23 **Single-click** and **drag** (to highlight the text) in the **Order Nbr** field for the appropriate order on the **PDSIS OI Main Screen**.

- **Order Nbr** text is highlighted on the **PDSIS OI Main Screen**.

24 **Single-click** in the **Order Nbr** field on the **Address Maintenance Form** with the **center** mouse button.

- **Order Nbr** is pasted in the **Order Nbr** field on the **Address Maintenance Form**.

25 **Single-click** on the **Execute Query** button near the bottom of the **PDSIS Address Maintenance Form**.

- The database is queried for data concerning the order represented by the **Order Nbr** and the relevant data are displayed on the **PDSIS Address Maintenance Form**.

26 If the data displayed on the **PDSIS Address Maintenance Form** do not refer to the appropriate record (e.g., as indicated in the **Address Type** field) **single-click** on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display the appropriate record.

- The following codes specify the **Address Type**:
  - **C** -contact.
  - **B** - billing.
  - **S** - shipping.

27 In the **Email** field of the **PDSIS Address Maintenance Form** enter:

<e-mail address>

28 **Single-click** on the **Save** button on the **PDSIS Address Maintenance Form**.

- The record is saved in the database with the new value entered in the appropriate field.
- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

29 Repeat Steps 26 through 28 for all additional records that need to be modified for the order.

30 **Single-click** on the **Exit** button at the bottom of the **PDSIS Address Maintenance Form**.

- If the **Exit** button is not visible on the form, **single-click** on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the **PDSIS Maintenance Module Main Menu** is displayed.

31 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, **single-click** on the appropriate button from the following selections:

- **Yes** - to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** is displayed.

- **No** - to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** is displayed.

32 To shut down the **PDSIS Maintenance Module single-click** on the **Exit** button at the bottom of the **PDSIS Maintenance Module Main Menu** window.
- The **PDSIS Maintenance Module Main Menu** is dismissed.

33 Return to the **Monitor/Control Order Processing Using the PDSIS OI** procedure (Section 18.10.1).

Table 18.11-9. Change the Values of Order Parameters Using the PDSIS Maintenance Module - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Start the PDSIS Maintenance Module	Use procedure in Section 18.7.9
2	**PDSIS Orders** button	**single-click**
3	Copy **<Order Nbr>** (in the **Order Nbr** field on the **PDSIS OI Main Screen**)	**single-click** and **drag**
4	Paste **<Order Nbr>** (in the **Order Nbr** field on the **PDSIS Orders Maintenance Form**)	**center-click**
5	**Execute Query** button	**single-click**
6	**<value>** (in appropriate field of the **PDSIS Orders Maintenance Form**)	**enter text**
7	**Save** button	**single-click**
8	**Exit** button	**single-click**
9	**Yes** button (if applicable)	**single-click**
10	**PDSIS Units** button	**single-click**
11	Copy **<Order Nbr>** (in the **Order Nbr** field on the **PDSIS OI Main Screen**)	**single-click** and **drag**
12	Paste **<Order Nbr>** (in the **Order Nbr** field on the **PDSIS Units Maintenance Form**)	**center-click**
13	**Execute Query** button	**single-click**
14	Determine whether the values changed in the **PDSIS Orders Maintenance Form** have changed in the **PDSIS Units Maintenance Form**	**read text**
15	next/previous record buttons (**> >> < <<**) as necessary to display additional records (if applicable)	**single-click**
16	**<value>** (in appropriate field of the **PDSIS Units Maintenance Form**) (if applicable)	**enter text**
17	**Save** button (if applicable)	**single-click**

Table 18.11-9. Change the Values of Order Parameters Using the PDSIS Maintenance Module - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
18	Repeat Steps 15 through 17 for all additional records that need to be modified for the order (if applicable)	
19	**Exit** button	**single-click**
20	**Yes** button (if applicable)	**single-click**
21	**PDSIS Address** button	**single-click**
22	Copy **<Order Nbr>** (in the **Order Nbr** field on the **PDSIS OI Main Screen**)	**single-click** and **drag**
23	Paste **<Order Nbr>** (in the **Order Nbr** field on the **PDSIS Address Maintenance Form**)	**center-click**
24	**Execute Query** button	**single-click**
25	next/previous record buttons (**> >> < <<**) as necessary to display additional records (if applicable)	**single-click**
26	**<e-mail address>** (in **Email** field of the **PDSIS Address Maintenance Form**)	**enter text**
27	**Save** button (if applicable)	**single-click**
28	Repeat Steps 25 through 27 for all additional records that need to be modified for the order (if applicable)	
29	**Exit** button	**single-click**
30	**Yes** button (if applicable)	**single-click**
31	**Exit** button	**single-click**
32	Return to the **Monitor/Control Order Processing Using the PDSIS OI** procedure	Use procedure in Section 18.10.1

18.11.4 Check/Clear Errors on PDSIS

The procedure to **Check/Clear Errors on PDSIS** is performed as part of either the **Monitor/Control Order Processing Using the PDSIS OI** procedure (Section 18.10.1) or the **Use the PDSIS OI Detail Screen** procedure (Section 18.10.2). Both the **PDSIS OI Main Screen** and the **PDSIS OI Detail Screen** provide the Distribution Technician with means of checking and/or clearing errors associated with PDS orders.

Table 18.11-10 presents (in a condensed format) the steps required to check/clear errors on PDSIS. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Single-click** on the action button at the beginning of the relevant order status line or unit line (on the **PDSIS OI Main Screen** or **PDSIS OI Detail Screen** as applicable).
- The **Action List** box is displayed.

2 **Single-click** on **Errors** in the **Action List** box.
- **Errors** is highlighted.

3 **Single-click** on the appropriate button from the following selections:
- **OK** - to display the **PDSIS OI Error Screen**.
  - The **PDSIS OI Error Screen** is displayed.
- **Cancel** - to dismiss the **Action List** box and return to the screen that was displayed before the action button was selected.
  - Either the **PDSIS OI Main Screen** or the **PDSIS OI Detail Screen** (as applicable) is displayed.

4 Observe information displayed on the **PDSIS OI Error Screen**.
- The following items are displayed on the **PDSIS OI Error Screen**:
  - Action Button [not labeled].
  - **Date/Time.**
  - **Order Number.**
  - **Unit Number.**
  - **Error Source.**
  - **Error Message.**
- If the entire entry is not visible in a field, **single-click** in the field and use the arrow keys on the keyboard to scroll to the end of the entry.

5 If it is desirable to see an extended error message associated with a particular unit, perform the **View an Extended Error Message** procedure (Section 18.11.37).

6 If it is desirable to clear an error displayed on the **PDSIS OI Error Screen**, perform the **Clear an Error Displayed on the PDSIS OI Error Screen** procedure (Section 18.11.9).

7 Repeat Steps 4 through 6 as necessary.

8 **Single-click** on the **Return** button to return to the procedure being performed before the action button was selected.
- Either **Monitor/Control Order Processing Using the PDSIS OI** (Section 18.10.1) or **Use the PDSIS OI Detail Screen** (Section 18.10.2) (as applicable).
- The **PDSIS OI Error Screen** is dismissed.
- Either the **PDSIS OI Main Screen** or the **PDSIS OI Detail Screen** is displayed (as applicable).

Table 18.11-10. Check/Clear Errors on PDSIS - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Action button (on **PDSIS OI Main Screen** or **PDSIS OI Detail Screen** as applicable)	**single-click**
2	**Errors**	**single-click**
3	**OK** button	**single-click**
4	Review error information displayed on the **PDSIS OI Error Screen**	**read text**
5	View an extended error message (if applicable)	Use procedure in Section 18.11.37
6	Clear an error (if applicable)	Use procedure in Section 18.11.9
7	Repeat Steps 4 through 6 as necessary	
8	**Return** button	**single-click**
9	Either monitor/control order processing using the PDSIS OI or use the PDSIS OI Detail Screen (as applicable)	Use procedure in Section 18.10.1 or 18.10.2 (as applicable)

18.11.5 Check PDSSA or PDSIS Log Files

PDSIS maintains the following kinds of daily logs for PDSIS troubleshooting purposes:

- Error log.
  - May give slightly more information on the nature of a problem than the PDSIS Error screen.
  - Provides a history of daily problems.
- Debug log.
  - Provides a record of all pertinent server information as the cron runs every five minutes.
  - Nominal/successful processing is logged in the debug log file; consequently, debug logs can grow large.
  - Problems may be logged below the level of a declared error in the debug log file. (May provide the operator with indications as to the health of the PDSIS server:)
- Socket log.
  - Provides a record of socket activity, including connection information, product request data, and product result data.

PDSSA maintains the following kinds of logs:

- Operator Interface log (oilog).
  - Describes the events that occur with respect to the jobs that are being processed through the operator interface (PDSOI).

  - Among the entries in the Operator Interface log are items related to the activation of jobs, eventual status of jobs processed by the production modules (as reported in job status files), and errors detected by the operator interface.
- Job log.
  - Describes the events that occur during the processing of an individual job.
  - Procedures available for checking a job log include the **View a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** procedure (Section 18.11.34) and the **View a Job Log Using the PDS Job Monitor** procedure (Section 18.11.35).

Table 18.11-11 presents (in a condensed format) the steps required to check PDSSA or PDSIS log files. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).
- PDS Server host has the following PDSSA log files:
  - Operator Interface log (e.g., DIG06_ops_05022002102727.oilog).
  - Job log (e.g., YEA0203190048_0001.log).
- PDS Server host has the following PDSIS log files:
  - Debug log (e.g., debug.log).
  - Error log (e.g., error.log).
  - Socket log (e.g., 1045668430144.log).

2 At the UNIX command line prompt enter:

cd <path>

- Change directory to the directory containing the PDSSA or PDSIS log files.
- **<path>** represents the full directory path to the directory containing the log files.
- **/usr/local/pds_<mode>/summary** is the typical directory path for PDSSA logs (i.e., Operator Interface logs and job logs).
- **/usr/local/pdsis_<mode>/logs/debug** is the typical directory path for PDSIS debug logs.
- The **pdsis_<mode>** refers to one of the following subdirectories:
  - pdsis (for OPS-mode operations).
  - pdsis_ts1 (for TS1-mode operations).
  - pdsis_ts2 (for TS2-mode operations).
- **/usr/local/pdsis_<mode>/logs/errors** is the typical directory path for PDSIS error logs.

- **/usr/local/pdsis_<mode>/logs/socket** is the typical directory path for PDSIS socket logs.

3 At the UNIX command line prompt enter:

pg <file name>

- **<file name>** refers to the PDSSA or PDSIS log file to be reviewed (e.g., DIG06_ops_05022002102727.oilog, YEA0203190048_0001.log, error log, debug.log, 1045668430144.log).
- The first page of the log file is displayed.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view, more**) can be used to review the log file.

4 Review the log file to identify problems that have occurred.

5 Respond to problems as follows:

- PDSIS- or PDSSA-related problems.
  - Perform the appropriate procedure(s) from the list near the beginning of the Troubleshooting PDS Problems section (Table 18.11-1).
- Communication problems.
  - Notify the Operations Controller/System Administrator of suspected communication problems.
- Database problems.
  - Verify that relevant database servers are running.
  - Check for lack of (or corruption of) data in the database using either a database browser or isql commands.
  - Notify the Database Administrator of suspected database problems.
- Lack of disk space.
  - Remove unnecessary files.
  - Notify the Operations Controller/System Administrator of recurring disk space problems.

Table 18.11-11. Check PDSSA or PDSIS Log Files - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**cd <path>**	**enter text, press Enter**
3	**pg <file name>**	**enter text, press Enter**
4	Identify problems indicated in the log file	**read text**
5	Respond to problems as necessary	Use applicable procedure(s)

18.11.6 Check/Restore Synchronization of the Rimage PC Time with PDS System Time

The time on the Rimage PC must be set to within five (5) minutes of the time on the PDS Server host (e.g., x0dig06). If the time is not properly synchronized, CD and DVD jobs cannot proceed to a QC-Hold status.

Table 18.11-12 presents (in a condensed format) the steps required to check/restore synchronization of the Rimage PC time with PDS system time. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the PDS Server host.
- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt on the PDS Server host enter:

date

- The date and time (as known to the PDS Server host) are displayed as follows:

  Thu Jun 20 15:42:15 EDT 2002

- If the date or time values shown on the PDS Server host appear to be incorrect, notify the System Administrator.

3 On the Rimage PC **double-click** on the time displayed on the Windows task bar.
- A **Date/Time Properties** window is displayed.
- The current date and time (as known to the Rimage PC) are displayed.
- An alternative method of displaying the **Date/Time Properties** window is to select **Start** → **Settings** → **Control Panel** from the Windows task bar, then **double-click** on the **Date/Time** icon.

4 If the date and time displayed on the Rimage PC are the same as those displayed on the PDS Server host, **single-click** on the **Cancel** button in the **Date/Time Properties** window on the Rimage PC.
- End of procedure.

NOTE: If the date or time zone displayed on the Rimage PC is not the same as that displayed on the PDS Server host, change the date/time zone on the Rimage PC before changing the time. No specific steps for doing so are provided in this procedure because they are not likely to be needed.

5 If the time displayed on the Rimage PC is not the same as that displayed on the PDS Server host, on the Rimage PC (in the **Date/Time Properties** window) enter:

<hour/minute/second>

- **<hour/minute/second>** represent the correct value(s) (as displayed on the PDS Server host) for the hour, minute and/or second in the digital time display.
- The clock stops when a new time value is entered.
- The new time values are displayed but not applied yet.

6 If the time displayed on the Rimage PC was not the same as that displayed on the PDS Server host, on the Rimage PC (in the **Date/Time Properties** window) **single-click** on the appropriate button from the following selections:

- **OK** - to restart the Rimage PC clock with the new time values and dismiss the **Date/Time Properties** window.
  - Rimage PC time is reset.
  - The **Date/Time Properties** window is dismissed.
- **Cancel** - to restart the Rimage PC clock with the old time values and dismiss the **Date/Time Properties** window.
  - Rimage PC time is not reset.
  - The **Date/Time Properties** window is dismissed.
- **Apply** - to restart the Rimage PC clock with the new time values without dismissing the **Date/Time Properties** window.
  - Rimage PC time is reset.
  - The **Date/Time Properties** window is still displayed.

7 Return to the procedure that recommended checking/restoring synchronization of the Rimage PC time with PDS system time.

- For example, the **Respond to No Printouts (Either Jewel-Case Inserts or Paper Reports)** procedure (Section 18.11.32).

Table 18.11-12. Check/Restore Synchronization of the Rimage PC Time with PDS System Time - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**date**	**enter text, press Enter**
3	**<time>** (on Windows task bar of Rimage PC)	**double-click**
4	**Cancel** button (in **Date/Time Properties** window on Rimage PC) (if applicable)	**single-click**
5	**<hour/minute/second>** (in **Date/Time Properties** window on Rimage PC) (as necessary)	**single-click**

Table 18.11-12. Check/Restore Synchronization of the Rimage PC Time with PDS System Time - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
6	**OK** button (in **Date/Time Properties** window on Rimage PC)	**single-click**
7	Return to the procedure that recommended checking/restoring synchronization of the Rimage PC time with PDS system time	

18.11.7 Check/Restore the Rimage PC NFS Connection

A Network File System (NFS) mount is needed in order for the Rimage software to see the job control directory (e.g., /pdssa/rimage_jobcontrol) on the PDS system. When the Windows NT system for the Rimage PC is set up, the PDS job control directory on the PDS Server host (e.g., x0dig06) is typically mapped to the PC's Z: drive.

Table 18.11-13 presents (in a condensed format) the steps required to check/restore the Rimage PC NFS connection. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 On the Rimage PC select **Start → Programs → Windows NT Explorer** from the Windows task bar.
- An **Exploring – [C:]** window is displayed.

2 In the left (**All Folders**) frame, scroll down to determine whether there is a network drive Z: to which rimage_jobcontrol is assigned.
- If no drive associated with the rimage_jobcontrol directory, there is a problem with the NFS connection.
  - Go to Step 5.

3 If there is a network drive Z: to which rimage_jobcontrol is assigned, **single-click** on the icon for the drive.
- Folders (subdirectories) and files in the rimage_jobcontrol directory should be displayed in the right (**Contents of…**) frame of the **Exploring – [C:]** window.
- If no folders (subdirectories) or files are displayed in the **Exploring – [C:]** window, there is a problem with the NFS connection.

4 If there is no problem with the NFS connection, go to Step 15.

5 If there is a problem with the NFS connection, shut down the Rimage CD production software.

- For detailed instructions refer to the **Shut Down the Rimage CD Production Software** procedure (Section 18.8.4).
- Shutting down the Rimage CD production software is a preparatory step for rebooting the computer.
  - When logging back on to the computer as a user with NFS privileges, the NFS connection should be restored.

6 To start the process of rebooting the computer select **Start** → **Shut Down** from the Windows task bar.

- A **Shut Down Windows** window is displayed.

7 **Single-click** on the appropriate radio button from the following selections (which are alternate endings to the question, **Are you sure you want to:**):

- **Shut down the computer?** - to indicate an intention to shut down the computer for the purpose of turning it off.
- **Restart the computer?** - to indicate an intention to shut down the computer and immediately restart it.
  - This is the optimum choice for rebooting the computer (the goal in this procedure) although **Shut down the computer?** is an acceptable choice as well.
- **Close all programs and log on as a different user?** - to indicate an intention to close all programs and log on as a different user.

8 **Single-click** on the appropriate button from the following selections:

- **Yes** - to implement the choice indicated in the preceding step.
  - The **Shut Down Windows** window is dismissed.
  - If **Shut down the computer?** was selected in the preceding step, eventually a **Shutdown Computer** window (containing the text "It is now safe to turn off your computer" and a **Restart** button) is displayed. (**Single-clicking** on the **Restart** button causes the screen to go black, then a variety of text is displayed on the screen as the computer checks its configuration and loads and starts the operating system, and eventually a **Begin Logon** window (containing the text "Press Ctrl + Alt + Delete to log on") is displayed.)
  - If **Restart the computer?** was selected in the preceding step, the screen goes black, then a variety of text is displayed on the screen as the computer checks its configuration and loads and starts the operating system, and eventually a **Begin Logon** window (containing the text "Press Ctrl + Alt + Delete to log on") is displayed.
  - If **Close all programs and log on as a different user?** was selected in the preceding step, eventually a **Begin Logon** window (containing the text "Press Ctrl + Alt + Delete to log on") is displayed.

- **No** - to dismiss the **Shut Down Windows** window without shutting down the computer.
  - The **Shut Down Windows** window is dismissed.
  - The Windows desktop is displayed.

9 If the **Begin Logon** window contains the text "Press Ctrl + Alt + Delete to log on," simultaneously press the **Ctrl**, **Alt**, and **Delete** keys on the keyboard.
- The **Begin Logon** window is dismissed.
- An **Acceptance of … Computer Policy** window (containing policy text and an **OK** button) is displayed.

10 If an **Acceptance of … Computer Policy** window is displayed, **single-click** on the **OK** button.
- The **Acceptance of … Computer Policy** window is dismissed.
- A **Logon Information** window is displayed.
  - The **Logon Information** window contains the text "Enter a user name and password that is valid for this system" and fields for **Username**, **Password**, and **Domain**.

11 Ensure that the entries in the **Username** and **Domain** fields of the **Logon Information** window are correct.
- Enter the appropriate information in the fields if necessary.
- The user name entered in the **Username** field must have NFS access privileges.

12 In the **Password** field of the **Logon Information** window enter:

<password>
- If the **Return/Enter** key on the keyboard is pressed after the password has been typed, go to Step 14.

13 **Single-click** on the appropriate button from the following selections:
- **OK** - to start log-on to Windows.
  - The **Logon Information** window is dismissed.
  - Scripts run in log-on windows and eventually the Windows desktop is displayed.
- **Cancel** - to dismiss the **Logon Information** window without starting the log-on to Windows.
  - The **Logon Information** window is dismissed.
  - The **Begin Logon** window is displayed.
  - Return to Step 9.
- **Shut Down** - to dismiss the **Logon Information** window and select choices for computer shutdown.
  - The **Logon Information** window is dismissed.
  - A **Shutdown Computer** window is displayed.

– Return to Step 7.

14 Return to Step 1 to recheck the Rimage PC NFS connection.

15 If the Rimage CD production software was shut down, restart the Rimage CD production software.

- For detailed instructions refer to the **Start the Rimage CD Production Software** procedure (Section 18.7.6).

16 Return to the procedure that recommended checking/restoring the Rimage PC NFS connection.

- For example, **Respond to No Printouts (Either Jewel-Case Inserts or Paper Reports)** (Section 18.11.32).

Table 18.11-13. Check/Restore the Rimage PC NFS Connection - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Start** → **Programs** → **Windows NT Explorer** (Windows task bar on Rimage PC)	**single-click**
2	Determine whether there is a network drive Z: to which rimage_jobcontrol is assigned	**read text**
3	Icon for the drive (network drive Z:) (if available)	**single-click**
4	Go to Step 15 (if no problem with NFS connection)	
5	Shut down the Rimage CD production software (if problem with NFS connection)	Use procedure in Section 18.8.4
6	**Start** → **Shut Down** (Windows task bar)	**single-click**
7	**Restart the computer?** (**Shut Down Windows** window)	**single-click**
8	**Yes** (**Shut Down Windows** window)	**single-click**
9	**Ctrl**, **Alt**, **Delete** keys (if **Begin Logon** window contains text "Press Ctrl + Alt + Delete to log on")	**press Ctrl**, **Alt**, **Delete simultaneously**
10	**OK** button (if an **Acceptance of … Computer Policy** window is displayed)	**single-click**
11	**<Username> <Domain>** (**Logon Information** window) (if necessary)	**enter text**
12	**<password>** (**Logon Information** window)	**enter text, press Enter**
13	Return to Step 1 (recheck the Rimage PC NFS connection)	
14	Restart the Rimage CD production software (if necessary)	Use procedure in Section 18.7.6
15	Return to the procedure that recommended checking/restoring the Rimage PC NFS connection	

18.11.8 Clean Up the CD-R_Images Folder on the Rimage PC

From time to time the CD-R_Images folder on one of the Rimage PC hard drives (e.g., the E: drive) needs cleaning to remove files that result from ftp errors, disk space issues, or problems producing an output.

Table 18.11-14 presents (in a condensed format) the steps required to clean up the CD-R_Images folder (directory) on the Rimage PC. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Double-click** on the **My Computer** icon (on the Rimage PC).
- A window is displayed containing icons for the accessible drives.
- Unneeded files should be deleted from the CD-R_Images folder before attempting to delete them through the Rimage Production Server Production Order Editor.

2 **Double-click** on the icon for the appropriate drive (e.g., the **E:** drive).
- A window is displayed containing icons for the folders (directories) and files on the specified drive.

3 **Double-click** on the icon for the **CD-R_Images** folder.
- A window is displayed containing icons for the files in the **CD-R_Images** folder.

4 **Hold** the **Ctrl** key and **single-click** on the icons (highlighting them) for all unneeded files to be deleted from the **CD-R_Images** folder.
- All unneeded files in the **CD-R_Images** folder are highlighted.

5 **Single-click** on one of the highlighted icons with the **right** mouse button.
- Pop-up menu appears.

6 **Single-click** on **Delete** from the pop-up menu.
- A **Confirm File Delete** dialogue box is displayed containing the message "Are you sure you want to send '<file name>' to the Recycle Bin?".

7 **Single-click** on the appropriate button from the following selections:
- **Yes** - to send the selected files to the recycle bin and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The selected files are transferred to the recycle bin (folder).
- **No** - to dismiss the dialogue box without sending the selected files to the recycle bin.
  - The dialogue box is dismissed.

8 **Single-click** on the **X** in the box at the upper right-hand corner of the **CD-R_Images** folder window.

- The **CD-R_Images** folder window is dismissed.

9 Execute the following menu path from the pull-down menu in the **Production Server** window on the PC:

File → Production Order Editor

- The **pofile** window is displayed.

10 **Hold** the **Ctrl** key and **single-click** on the icons (highlighting them) for all unneeded files to be deleted.

- All unneeded files are highlighted.

11 **Single-click** on one of the highlighted icons with the **right** mouse button.

- Pop-up menu appears.

12 **Single-click** on **Delete** from the pop-up menu.

- A **Confirm File Delete** dialogue box is displayed containing the message "Are you sure you want to send '<file name>' to the Recycle Bin?".

13 **Single-click** on the appropriate button from the following selections:

- **Yes** - to send the selected files to the recycle bin and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The selected files are transferred to the recycle bin (folder).
- **No** - to dismiss the dialogue box without sending the selected files to the recycle bin.
  - The dialogue box is dismissed.

14 **Single-click** on the **Recycle Bin** icon on the PC desktop with the **right** mouse button.

- Pop-up menu appears.

15 **Single-click** on **Empty Recycle Bin** from the pop-up menu.

- A **Confirm Multiple File Delete** dialogue box is displayed containing the message "Are you sure you want to delete these *n* items?".

16 **Single-click** on the appropriate button from the following selections:

- **Yes** - to delete the selected files and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The selected files are deleted.
- **No** - to dismiss the dialogue box without deleting the selected files.
  - The dialogue box is dismissed.

17 **Single-click** on the **X** in the box at the upper right-hand corner of the **pofile** window.
- The **pofile** window is dismissed.

18 **Single-click** on the **X** in the box at the upper right-hand corner of the hard drive (e.g., **E:** drive) window.
- The drive window is dismissed.

19 **Single-click** on the **X** in the box at the upper right-hand corner of the **My Computer** window.
- The **My Computer** window is dismissed.

Table 18.11-14. Clean Up the CD-R_Images Folder on the Rimage PC - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**My Computer** icon (on the Rimage PC)	**double-click**
2	**E** drive icon	**double-click**
3	**CD-R_Images** folder icon	**double-click**
4	**<file>** icons (in the **CD-R_Images** folder)	**hold** the **Ctrl** key and **single-click**
5	**<file>** icon (in the **CD-R_Images** folder)	**right-click**
6	**Delete** (from the pop-up menu)	**single-click**
7	**Yes** button	**single-click**
8	**X** (upper right-hand corner of the **CD-R_Images** folder window)	**single-click**
9	**File → Production Order Editor**	**single-click**
10	**<file>** icons	**hold** the **Ctrl** key and **single-click**
11	**<file>** icon	**right-click**
12	**Delete** (from the pop-up menu)	**single-click**
13	**Yes** button	**single-click**
14	**Recycle Bin** icon (on the Rimage PC desktop)	**right-click**
15	**Empty Recycle Bin** (from the pop-up menu)	**single-click**
16	**Yes** button	**single-click**
17	**X** (**pofile** window)	**single-click**
18	**X** (**E** drive window)	**single-click**
19	**X** (**My Computer** window)	**single-click**

18.11.9 Clear an Error Displayed on the PDSIS OI Error Screen

The procedure to **Clear an Error Displayed on the PDSIS OI Error Screen** is performed as part of the procedure to **Check/Clear Errors on PDSIS** (Section 18.11.4).

Table 18.11-15 presents (in a condensed format) the steps required to clear an error displayed on the **PDSIS OI Error Screen**. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: It is generally good practice to ensure that the condition that caused an error has been corrected before clearing the error on the GUI (operator interface); otherwise, the error may recur.

1 **Single-click** on the action button at the beginning of the relevant error status line (on the **PDSIS OI Error Screen**).
- The **Action List** box is displayed.

2 **Single-click** on **Clear Error** in the **Action List** box.
- **Clear Error** is highlighted.

3 **Single-click** on the appropriate button from the following selections:
- **OK** - to clear the error and dismiss the **Action List** box.
  - The **PDSIS OI Error Screen** is displayed.
  - The status of the order/unit changes to its pre-error state and condition.
  - The error is removed (logged) and is no longer visible on the **PDSIS OI Error Screen**.
  - The order/unit restarts from its pre-error state.
  - The same error or a different error may occur if the root cause of the error has not been corrected.
- **Cancel** - to dismiss the **Action List** box without clearing the error and return to the **PDSIS OI Error Screen**.
  - The **PDSIS OI Error Screen** is displayed.

4 Return to the **Check/Clear Errors on PDSIS** procedure (Section 18.11.4).

Table 18.11-15. Clear an Error Displayed on the PDSIS OI Error Screen - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Action button (on **PDSIS OI Error Screen**)	**single-click**
2	**Clear Error**	**single-click**
3	**OK** button	**single-click**
4	Return to the **Check/Clear Errors on PDSIS** procedure	Use procedure in Section 18.11.4

18.11.10 Determine Output Specifications Using the PDS Maintenance Module

It may be necessary to determine product output specifications when performing other procedures associated with PDS processing; e.g., responding to a job on a Lag Report or changing the values of job or order parameters.

Table 18.11-16 presents (in a condensed format) the steps required to determine output specifications using the PDS Maintenance Module. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Perform the **Start the PDS Maintenance Module** procedure (Section 18.7.8).
- The PDS **Maintenance Module Main Menu** is displayed.

2 **Single-click** on the **Product Media Descriptions** button on the PDS **Maintenance Module Main Menu**.
- The **Product Media Descriptions Maintenance Form (PDSMTPMD)** is displayed.

3 **Single-click** on the **Execute Query** button on the **Product Media Descriptions Maintenance Form**.
- Product codes are displayed on the **Product Media Descriptions Maintenance Form**.
- The following types of data are displayed on the **Product Media Descriptions Maintenance Form**:
  - **Output Spec** - output specification of the product ordered.
  - **Description** - a longer (more understandable) description of what the output specification is.
  - **PDS Description** - Grouping of output specifications.

4 Observe the data displayed on the **Product Media Descriptions Maintenance Form** to determine whether the relevant output specification has appropriate values.
- The entries displayed on the **Product Media Descriptions Maintenance Form** are the values in the OUT_OTSPTBLV_TBL database table.

5 If the relevant output specification does not have the appropriate value on the **Product Media Descriptions Maintenance Form**, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

6 To close the **Product Media Descriptions Maintenance Form single-click** on the **Exit** button at the bottom of the window.
- If the **Exit** button is not visible on the maintenance module form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.

- The PDS **Maintenance Module Main Menu** is displayed.

7 To shut down the PDS **Maintenance Module single-click** on the **Exit** button at the bottom of the PDS **Maintenance Module Main Menu** window.
- The PDS **Maintenance Module Main Menu** is dismissed.

Table 18.11-16. Determine Output Specifications Using the PDS Maintenance Module - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Start the PDS Maintenance Module	Use procedure in Section 18.7.8
2	**Product Media Descriptions** button	**single-click**
3	**Execute Query** button	**single-click**
4	Determine whether the relevant output specification has the appropriate value	**read text**
5	Submit a trouble ticket (if applicable)	Use procedure in Chapter 8
6	**Exit** button (**Product Media Descriptions Maintenance Form**) (when applicable)	**single-click**
7	**Exit** button (PDS **Maintenance Module Main Menu**) (when applicable)	**single-click**

18.11.11 Determine Output Specifications Using the PDSIS Maintenance Module

It may be necessary to determine product output specifications when performing other procedures associated with PDS processing; e.g., responding to a job on a Lag Report or changing the values of job or order parameters.

Table 18.11-17 presents (in a condensed format) the steps required to determine output specifications using the PDSIS Maintenance Module. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Perform the **Start the PDSIS Maintenance Module** procedure (Section 18.7.9).
- The **PDSIS Maintenance Module Main Menu** is displayed.

2 **Single-click** on the **Outspec Info** button on the **PDSIS Maintenance Module Main Menu**.
- The **PDSIS Output Specifications Window (PDSISMTLOT)** is displayed.

3 **Single-click** on the **Execute Query** button on the **PDSIS Output Specifications Window**.
- Output specifications are displayed on the **PDSIS Output Specifications Window**.

- The following types of data are displayed on the **PDSIS Output Specifications Window**:
  - **Output Specs** - output specifications.
  - **Prod Media** - product medium on which the data are to be recorded.
  - **Media Type** - type of input medium (ET = Electronic Transfer).
  - **Input Media** - format of the incoming data.
  - **Product Density** - density of the product (primarily used for tape density).
  - **Tape Blocking** - tape blocking factor.
  - **Compress Type** - compression type (default is NONE).
  - **Media Size** - storage size of the product medium in megabytes.
  - **Size Check** - whether or not PDSIS issues errors for units that are too large to fit on the specified medium (Y = Yes, PDSIS checks; N = No, PDSIS does not check).

4 Observe the data displayed on the **PDSIS Output Specifications Window** to determine the relevant output specification(s).

5 To close the **PDSIS Output Specifications Window single-click** on the **Exit** button at the bottom of the window.
- If the **Exit** button is not visible on the maintenance module form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- The **PDSIS Maintenance Module Main Menu** is displayed.

6 To shut down the **PDSIS Maintenance Module single-click** on the **Exit** button at the bottom of the **PDSIS Maintenance Module Main Menu** window.
- The **PDSIS Maintenance Module Main Menu** is dismissed.

Table 18.11-17. Determine Output Specifications Using the PDSIS Maintenance Module - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Start the PDSIS Maintenance Module	Use procedure in Section 18.7.9
2	**Outspec Info** button	**single-click**
3	**Execute Query** button	**single-click**
4	Identify the relevant output specification(s)	**read text**
5	**Exit** button (**PDSIS Output Specifications Window**) (when applicable)	**single-click**
6	**Exit** button (**PDSIS Maintenance Module Main Menu**) (when applicable)	**single-click**

18.11.12 Determine Product Codes Using the PDS Maintenance Module

It may be necessary to determine product codes when troubleshooting problems with PDS processing; e.g., responding to a job on a Lag Report.

Table 18.11-18 presents (in a condensed format) the steps required to determine product codes using the PDS Maintenance Module. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Perform the **Start the PDS Maintenance Module** procedure (Section 18.7.8).
- The PDS **Maintenance Module Main Menu** is displayed.

2 **Single-click** on the **Product Code Descriptions** button on the PDS **Maintenance Module Main Menu**.
- The **Product Code Descriptions Maintenance Form (PDSMTPCD)** is displayed.

3 **Single-click** on the **Execute Query** button on the **Product Code Descriptions Maintenance Form**.
- Product codes are displayed on the **Product Code Descriptions Maintenance Form**.
- The following types of data are displayed on the **Product Code Descriptions Maintenance Form**:
  - **Prod Code** - product code used to describe what is being ordered.
  - **Description** - a longer (more understandable) description of what the product code is.
  - **PDS Description** - Grouping of product codes.

4 Observe the data displayed on the **Product Code Descriptions Maintenance Form** to determine whether the relevant product code has the appropriate value.
- The entries displayed on the **Product Code Descriptions Maintenance Form** are the values in the PVT_PRCDTBL_TBL database table.

5 If the relevant product code does not have appropriate values on the **Product Code Descriptions Maintenance Form**, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

6 To close the **Product Code Descriptions Maintenance Form single-click** on the **Exit** button at the bottom of the window.
- If the **Exit** button is not visible on the maintenance module form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- The PDS **Maintenance Module Main Menu** is displayed.

7 To shut down the PDS **Maintenance Module single-click** on the **Exit** button at the bottom of the PDS **Maintenance Module Main Menu** window.
- The PDS Maintenance Module Main Menu is dismissed.

Table 18.11-18. Determine Product Codes Using the PDS Maintenance Module - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Start the PDS Maintenance Module	Use procedure in Section 18.7.8
2	**Product Code Descriptions** button	**single-click**
3	**Execute Query** button	**single-click**
4	Determine whether the relevant product code has the appropriate value	**read text**
5	Submit a trouble ticket (if applicable)	Use procedure in chapter 8
6	**Exit** button (**Product Code Descriptions Maintenance Form**) (when applicable)	**single-click**
7	**Exit** button (PDS **Maintenance Module Main Menu**) (when applicable)	**single-click**

18.11.13 Determine Product Codes Using the PDSIS Maintenance Module

It may be necessary to determine product codes when troubleshooting problems with PDS processing; e.g., responding to a job on a Lag Report.

Table 18.11-19 presents (in a condensed format) the steps required to determine product codes using the PDSIS Maintenance Module. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Perform the **Start the PDSIS Maintenance Module** procedure (Section 18.7.9).
- The **PDSIS Maintenance Module Main Menu** is displayed.

2 **Single-click** on the **Prod Code Info** button on the **PDSIS Maintenance Module Main Menu**.
- The **PDSIS Product Code Info Window (PDSISMTLPT)** is displayed.

3 **Single-click** on the **Execute Query** button on the **PDSIS Product Code Info Window**.
- Product codes are displayed on the **PDSIS Product Code Info Window**.
- The following types of data are displayed on the **PDSIS Product Code Info Window**:
  - **Prod Code** - product code.
  - **Product Format** - product format of the output data (e.g., GENERIC).

- **PDS Project** - PDS Project (e.g., LP DAAC, LaRC, MODIS).
- **Order Node** - first three characters of an order number for an order of this type.
- **Default Size** - default size of a granule in megabytes (used if the ECS query returns a NULL size).
- **Receive Email** - indicates whether (Y or N) PDSIS sends an e-mail for the particular product code on initial receipt of an order.

4 Observe the data displayed on the **PDSIS Product Code Info Window** to determine the relevant product code.

5 To close the **PDSIS Product Code Info Window single-click** on the **Exit** button at the bottom of the window.

- If the **Exit** button is not visible on the maintenance module form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- The **PDSIS Maintenance Module Main Menu** is displayed.

6 To shut down the **PDSIS Maintenance Module single-click** on the **Exit** button at the bottom of the **PDSIS Maintenance Module Main Menu** window.

- The PDSIS Maintenance Module Main Menu is dismissed.

Table 18.11-19. Determine Product Codes Using the PDSIS Maintenance Module - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Start the PDSIS Maintenance Module	Use procedure in Section 18.7.9
2	**Prod Code Info** button	**single-click**
3	**Execute Query** button	**single-click**
4	Identify the relevant product code	**read text**
5	**Exit** button (**PDSIS Product Code Info Window**) (when applicable)	**single-click**
6	**Exit** button (**PDSIS Maintenance Module Main Menu**) (when applicable)	**single-click**

18.11.14 Determine the Status of PDS Tape/Disk Drives

The purpose of the procedure is to determine the current status of PDS tape and/or disk drives.

Table 18.11-20 presents (in a condensed format) the steps required to determine the status of PDS tape/disk drives. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

tpstat

- The following type of response is displayed:

DRIVE NAME	DRIVE TYPE	HOST	USER	DEVICE
dlt1	dlt7000	x0dig06	----	/dev/rmt/tps42d4nrnsv.7000c
dlt2	dlt7000	x0dig06	----	/dev/rmt/tps42d5nrnsv.7000c
drive1	8mm	x0dig06	----	/dev/rmt/tps2d5nrnsv.8500
drive2	8mm	x0dig06	----	/dev/rmt/tps3d2nrnsv.8500
dvdrimage1	dvdr	x0dig06	----	/pdssa/rimage_jobcontrol
cdrimage1	cdr	x0dig06	----	/pdssa/rimage_jobcontrol

- **tpstat** shows each of the drives connected to the PDS Server host and the owner of each drive.

3 To determine the current status of one of the devices connected to the PDS Server, at the UNIX command line prompt enter:

mt –f <device> status

- **<device>** is a device identifier such as those specified as a result of running the tpstat command.
- The following type of response is displayed:

  Controller: SCSI
  Device: EXABYTE: EXB-85058HE-00000112
  Status: 0x20262
  Drive type: 8mm(8500) cartridge
  Media : READY, writable, at BOT

  – The example shows the report from an 8mm drive that is ready, will accept commands to write to tape (is not write-protected or read-only), and is positioned at the beginning of the tape.

4 To determine other commands available for manual tape control (in addition to **status**), at the UNIX command line prompt enter:

mt –f <device> help

- Some other commands include (but are not limited to) the following commands:
  – **erase.**

- **offline.**
- **rewind.**
- **unload.**

Table 18.11-20. Determine the Status of PDS Tape/Disk Drives - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**tpstat**	**enter text, press Enter**
3	**mt –f <device> status** (if applicable)	**enter text, press Enter**
4	**mt –f <device> help** (if applicable)	**enter text, press Enter**

18.11.15 Determine Which Instance of PDSOI Was Used to Activate a Job

The purpose of the procedure for determining which instance of PDSOI was used to activate a job is to identify the instance of the PDSOI that can be used for completing the job. The instance is important because each activated job's status file name starts with the OI ID (which identifies the PDSOI instance). Only an instance of the PDSOI with that OI ID can change the job's status to "QC-Hold" after the production module has sent the job's status file to the "status" subdirectory. So typically the procedure for determining which instance of PDSOI was used to activate a job is performed while trying to determine why a PDS job does not change to a QC-Hold status although production was successful.

There are at least two sources of information for determining which instance of PDSOI was used to activate a job:

- Name of the status file for the job.
- Contents of the PPF for the job.

Table 18.11-21 presents (in a condensed format) the steps required to determine which instance of PDSOI was used to activate a job. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID enter:

    echo $PDSROOT

3 At the UNIX command line prompt enter:

cd status

- Change to the "status" directory.

4 At the UNIX command line prompt enter:

ls

- A list of the subdirectories and files in the current directory is displayed.

5 Observe the entries in the list of subdirectories and files in the current directory to identify the status file for the job.

- The file has the format <MachineID>_<ConsoleID>_<JobKey>.status
- For example:

  DIG06_ops_YEA0203190048_0001.status

  - **DIG06** is the Machine ID.
  - **ops** is the Console ID.
  - **YEA0203190048_0001** is the Job Key.

6 If there is a status file for the job (and if applicable), return to the appropriate step of the **Respond to a Job's Status Not Changing to QC-Hold Upon Successful Completion** procedure (Section 18.11.24).

7 If the current directory is the status directory, continue with Step 8; otherwise, go to Step 10.

8 If there is no status file for the job in the status directory, at the UNIX command line prompt enter:

cd ../summary

- Change to the "summary" directory.

9 Return to Step 4.

10 If there is no status file for the job in either the status directory or the summary directory, at the UNIX command line prompt enter:

pg <filename>

- **<filename>** refers to the PPF to be reviewed (e.g., YEA0203190048_0001.ppf).
  - The order ID (e.g., YEA0203190048) portion of the filename is listed on the product summary that was printed for the job.
- The PPF is displayed.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view, more**) can be used to review the log file.

11 Observe the entries in the PPF to determine the OI ID of the PDSOI instance that initiated the job.

- The PPF contains the following type of entry identifying the OI ID of the PDSOI instance that initiated the job:

  OI_ID S 1 DIG06_ops

  - In the example the OI ID is **DIG06_ops**.

12 If applicable, return to the appropriate step of the **Respond to a Job's Status Not Changing to QC-Hold Upon Successful Completion** procedure (Section 18.11.24).

Table 18.11-21. Determine Which Instance of PDSOI Was Used to Activate a Job - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**cd**	**enter text, press Enter**
3	**cd status**	**enter text, press Enter**
4	**ls**	**enter text, press Enter**
5	Identify the status file for the job	**read text**
6	Return to the appropriate step of the **Respond to a Job's Status Not Changing to QC-Hold Upon Successful Completion** procedure (if there is a status file for the job and if applicable),	Use procedure in Section 18.11.24
7	If the current directory is the status directory, continue with Step 8; otherwise, go to Step 10	
8	**cd ../summary**	**enter text, press Enter**
9	Return to Step 4	
10	**pg <PPF file name>** (if no status file for the job in either status directory or summary directory)	**enter text, press Enter**
11	Determine the OI ID of the PDSOI instance that initiated the job (in PPF)	**read text**

Table 18.11-21. Determine Which Instance of PDSOI Was Used to Activate a Job - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
12	Return to the appropriate step of the **Respond to a Job's Status Not Changing to QC-Hold Upon Successful Completion** procedure (if applicable)	Use procedure in Section 18.11.24

18.11.16 Force AutoRimage Completion

The PDS Job Monitor provides the Distribution Technician with a means of forcing AutoRimage completion. It results in a signal being sent to the job telling it to stop waiting needlessly and complete processing in a normal fashion. This is useful when a number of jobs are queued for a Rimage, but the waiting job has produced the media and is waiting needlessly.

Table 18.11-22 presents (in a condensed format) the steps required to force AutoRimage completion. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If the **Job Monitor Main Window** is not already in operation, start the PDS Job Monitor (refer to Section 18.7.5).
- The **Job Monitor Main Window** is displayed.

2 **Place** the mouse cursor on the relevant job in the running job list of the **Job Monitor Main Window**, **single-click** and **hold** the **right** mouse button, **move** the mouse cursor to **Force AutoRimage Completion** (highlighting it), then **release** the mouse button.
- Pop-up menu appears with the options **View Job Log, View Job PPF, Force AutoRimage Completion** [appears only when the selected job is waiting for a completion message from a Rimage writer]**, Terminate Job.**
- Select **View Job PPF** from the pop-up menu.
  - A confirmation prompt is displayed.

3 **Single-click** on the appropriate button from the following selections:
- **Yes** - to force AutoRimage completion and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The Rimage unit stops waiting and completes processing of the medium.
- **No** - to dismiss the dialogue box without forcing AutoRimage completion.
  - The dialogue box is dismissed.

Table 18.11-22. Force AutoRimage Completion - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Start the PDS Job Monitor (if necessary)	Use procedure in Section 18.7.5
2	**Force AutoRimage Completion** (**Job Monitor Main Window**)	**right-click**
3	**Yes** button	**single-click**

18.11.17 Reactivate Units

The problem is that units of a job were completed and later need to be redone.

Both the **Main OI Screen** and the PDS **Maintenance Module Main Menu** are involved in reactivating units.

Table 18.11-23 presents (in a condensed format) the steps required to reactivate units. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 In the **PDSINFO Work Table** reset the **Status** field value for all affected units to **Q** (pending).

- For detailed instructions refer to the **Change the Values of Job Parameters Using the PDS Maintenance Module** procedure (Section 18.11.2).
- The job key is either available on the **Main OI Screen** or can be derived from the order number on the **PDSIS OI Main Screen**.
  - The job key is derived from the order number by adding an underscore and the zero padded unit number of the first unit of the job (typically 0001); for example, job key YEA0203060028_0001 is composed of order number YEA0203060028, an underscore, and unit number 0001.

2 In the **PDSINFO Jobs Table** reset the **Status** field value for the job to **Q** (pending).

- For detailed instructions refer to the **Change the Values of Job Parameters Using the PDS Maintenance Module** procedure (Section 18.11.2).

3 Reactivate the job using the **Main OI Screen**.

- For detailed instructions refer to the **Activate a Job** procedure (Section 18.9.7).
- The units may not be displayed immediately on the PDSOI; however, they should appear on the **Main OI Screen** within 15 to 30 minutes.

Table 18.11-23. Reactivate Units - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Reset the **Status** field value (in **PDSINFO Work Table**) for all affected units to **Q**	Use procedure in Section 18.11.2
2	Reset the **Status** field value (in **PDSINFO Jobs Table**) for the job to **Q**	Use procedure in Section 18.11.2
3	Reactivate the job	Use procedure in Section 18.9.7

18.11.18 Reprint a Label Stamped on a Disk

The problem is that the Rimage unit failed to print a legible label on a CD or DVD.

Table 18.11-24 presents (in a condensed format) the steps required to reprint a label stamped on a disk. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Clean any ink from the disk with a cloth and alcohol-based cleaner.
- The surface may need to be cleaned twice to eliminate all ink smears.

2 **Double-click** on the **Label Editor** icon on the Windows desktop (on the Rimage PC).
- A **Label Editor** window is displayed.

3 Execute the following menu path from the pull-down menu in the **Label Editor** window on the PC:

File → Open

- An **Open** window is displayed containing a list of files.
- The folder/directory should contain a template for each product type.
  - The template for the appropriate product type should be selected as the basis for creating an appropriate file for the use during the restamping.

4 Select the appropriate drive (e.g., C:) in the **Open** window.
- The appropriate drive may vary with system set-up.
- If necessary, **single-click** and **hold** the option button to display a list of drives/folders, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.

5 **Single-click** on the icon for **reprint.lab** in the list of files in the **Open** window.
- The selected file is selected (highlighted).

- If there is no icon labeled “reprint.lab,” **single-click** on a label icon for a similar type of job.

6 **Single-click** on the **Open** button.
- The **Open** window is dismissed.
- The selected file is opened and displayed in the **Label Editor** window.

7 Edit the file in the **Label Editor** window.
- Use the jewel-case insert for the disk as a guide to the appropriate data to be entered.

8 Execute the following menu path from the pull-down menu in the **Label Editor** window on the PC:

File → Save As

- A **Save As** window is displayed.

9 In the **File Name** field enter:

reprint.lab

- Save the template with the name **reprint.lab** (do not change the name).

10 **Single-click** on the **Save** button.
- The **Save As** window is dismissed.
- The file is saved with the specified file name.
- The file is displayed in the **Label Editor** window.

11 Execute the following menu path from the pull-down menu in the **Label Editor** window on the PC:

File → Exit

12 **Double-click** on the **CD-R Workstation** icon on the Windows desktop.
- A window similar to the **Production Server** window is displayed.

13 **Single-click** on the **Start** button on the **CD-R Workstation** toolbar.

14 **Single-click** on the **Add** button on the **CD-R Workstation** toolbar.
- The **Add Job Wizard - Select Job Option** window is displayed.

15 **Single-click** on the button corresponding to **Print Labels Only** on the **Add Job Wizard**.

16 **Single-click** on the **Next** button on the **Add Job Wizard**.

17 **Single-click** on the **Next** button again on the **Add Job Wizard**.

18 Ensure that **Rimage Label (No Merge Fields)** is selected in the **Label Type** field on the **Add Job Wizard**.

- If necessary, **single-click** and **hold** the **Label Type** option button to display a list of label types, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.

19 **Single-click** on the **Next** button again on the **Add Job Wizard**.

20 **Single-click** on the **Browse** button adjacent to the **Enter the Label File Name** field on the **Add Job Wizard**.

- A window containing a list of file icons is displayed.

21 **Double-click** on the icon for **reprint.lab** (the file name of the label template created and saved in Steps 5 through 8).

- An alternative is to **single-click** on the icon for the file name of the label template then **single-click** on the **Open** button.

22 Place the disk that needs the label in the appropriate Rimage input bin.

- If a CD is to be labeled, it should be placed in the CD input bin.
- If a DVD is to be labeled, it should be placed in the DVD input bin.
- The disk needing to be re-labeled may be placed on top of blank disks.

23 **Single-click** on the **Finish** button on the **Add Job Wizard**.

- The robot picks and labels the disk and places it in the output bin.

24 When the label has been reprinted, execute the following menu path from the **CD-R Workstation** pull-down menu:

File → Exit

Table 18.11-24. Reprint a Label Stamped on a Disk - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Clean ink from the disk with a cloth and alcohol-based cleaner (as necessary)	**Wipe**
2	**Label Editor** icon (on the Rimage PC)	**double-click**
3	**File → Open**	**single-click**
4	**<drive>** (e.g., C:) (in **Open** window)	**single-click**
5	**reprint.lab** icon (in **Open** window)	**single-click**
6	**Open** button	**single-click**

Table 18.11-24. Reprint a Label Stamped on a Disk - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
7	Edit the file (in **Label Editor** window)	**enter text**
8	**File** → **Save As** (in **Label Editor** window)	**single-click**
9	**reprint.lab** (in **File Name** field)	**enter text**
10	**Save** button	**single-click**
11	**File** → **Exit** (in **Label Editor** window)	**single-click**
12	**CD-R Workstation** icon (on the Rimage PC)	**double-click**
13	**Start** button (on **CD-R Workstation**)	**single-click**
14	**Add** button (on **CD-R Workstation**)	**single-click**
15	**Print Labels Only** (on **Add Job Wizard**)	**single-click**
16	**Next** (on **Add Job Wizard**)	**single-click**
17	**Next** (on **Add Job Wizard**)	**single-click**
18	**Rimage Label (No Merge Fields)** (in **Label Type** field on the **Add Job Wizard**)	**single-click**
19	**Next** (on **Add Job Wizard**)	**single-click**
20	**Browse** button (adjacent to the **Enter the Label File Name** field)	**single-click**
21	**reprint.lab** icon (label template)	**double-click**
22	Place the disk that needs the label in the appropriate Rimage input bin	**place**
23	**Finish** button (on the **Add Job Wizard**)	**single-click**
24	**File** → **Exit** (on **CD-R Workstation**) (when applicable)	**single-click**

18.11.19 Reprint PDS Documents and Labels

The problem may be that PDSSA or PDSIS has failed to print one of the following items or one of the following items has been damaged, lost, or misprinted:

- Summary report.
- Tape label.
- Packing list.
- Shipping label.

Packing lists and shipping labels can be reprinted in another way as well as by using the method described in the procedure for reprinting PDS documents and labels. The process involves the use of the **PDSIS Orders Maintenance Form** to set the **Action Code** for the relevant order to "S", which provides a stimulus for PDSIS to print packing lists and shipping labels. (Both types of documents are printed in response to an "S" action code.) For detailed instructions refer to the **Change the Values of Order Parameters Using the PDSIS Maintenance Module** procedure (Section 18.11.3).

To reprint a jewel-case insert go to the **Respond to a Jewel-Case Insert Printing Failure** procedure (Section 18.11.23).

Verification [i.e., quality control (QC) check] report files are not saved; consequently, if a verification report is needed, rerun the verification by performing the **Respond to a Status of QC-Hold (Performing a QC Check or Verification)** procedure (Section 18.9.12).

The Distribution Technician must have ensured that the printer input is loaded with blank paper, labels, or inserts (as applicable) and that there are no obvious printer faults (e.g., paper jam).

Table 18.11-25 presents (in a condensed format) the steps required to reprint PDS documents and labels. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: If a packing list or shipping label is needed, consider using the **Change the Values of Order Parameters Using the PDSIS Maintenance Module** procedure (Section 18.11.3) unless access to the **PDSIS Maintenance Module** is not currently feasible. As previously mentioned, the process involves the use of the **PDSIS Orders Maintenance Form** to set the **Action Code** for the relevant order to "S", which provides a stimulus for PDSIS to print both packing lists and shipping labels.

If use of the **PDSIS Maintenance Module** is not an option, use the procedure that follows.

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- Use the appropriate PDSSA log-in (i.e., pds, pds_st, or pds_it) for printing the following types of documents:
  - Summary report.
  - Tape label.
- Use the appropriate PDSIS log-in (i.e., pdsis, pdsis_ts1, or pdsis_ts2) for printing the following types of documents:
  - Packing list.
  - Shipping label.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd

- The alias **cd** changes the current directory to the PDS root directory.
  - To identify the PDS root directory at the command line prompt enter:

    echo $PDSROOT
- Typical PDS root directories for PDS user IDs are as follows:
  - /usr/local/pds (linked to /data1/pds) (for PDSSA user "pds").
  - /usr/local/pds_st (linked to /data1/pds_st) (for PDSSA user "pds_st").
  - /usr/local/pds_it (linked to /data1/pds_it) (for PDSSA user "pds_it").
  - /usr/local/pdsis (linked to /data1/pdsis) (for PDSIS user "pdsis").
  - /usr/local/pdsis_ts1 (linked to /data1/pdsis_ts1) (for PDSSA user "pdsis_ts1").
  - /usr/local/pdsis_ts2 (linked to /data1/pdsis_ts2) (for PDSSA user "pdsis_ts2").

3 At the UNIX command line prompt enter:

<path>

- Change to the appropriate subdirectory:
  - **label** (to reprint a tape label); for example, /usr/local/pds/label or /data1/pds/label.
  - **summary** (to reprint a summary report); for example, /usr/local/pds/summary or /data1/pds/summary.
  - **logs/labels** (to reprint a packing list or shipping label); for example, /usr/local/pdsis/logs/labels or /data1/pdsis/logs/labels.
- Actual subdirectories may vary from site to site.

4 At the UNIX command line prompt enter:

lp -d <printerID> <filename>

- An alternative is to enter:

  lpr -P <printerID> <filename>
- The document prints on the specified printer.
- **<printerID>** is the name of the appropriate printer. For example, …
  - **x0dih05** prints summary reports and packing lists.
  - **x0dil09** prints tape labels.
  - **x0dil10** prints shipping labels.
  - Actual printer names vary from site to site.
- **<filename>** is the name of the document or label file to be printed.
- **<filename>** is composed of the order number (as displayed on the **PDSIS OI Main Screen**) or job key (as displayed on the **Main OI Screen**) and a file-name extension that indicates the type of document. For example, …
  - **TS20112020001_0001_1.lbl** is a tape label for job TS20112020001_0001.
  - **TS20112130001_0001.sum** is the summary report for job TS20112130001_0001.

- **TS20112130001.lbl** is the shipping label for order TS20112130001.
- **TS20112130001.note** is the packing list for order TS20112130001 (actually, it's the text of the e-mail distribution notice).

Table 18.11-25. Reprint PDS Documents and Labels - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**cd**	**enter text, press Enter**
3	**cd <path>**	**enter text, press Enter**
4	**lp -d <printerID> <filename>**	**enter text, press Enter**

18.11.20 Reprocess a Job

In general jobs are reprocessed in response to one of the following problems:

- Processing of an order will not complete.
- An error occurs during processing.
- The medium does not pass verification.

If a job is in an error status, it may be possible to reprocess the job by activating the units associated with the job. If the job is not in an error status or if it has failed the QC check (and is in QC-Hold status), it will probably be necessary to perform the following actions:

- Remove (delete) the associated PPF, status file, and image files.
- Reset the unit and job status to Pending.
- Reactivate the job.

Table 18.11-26 presents (in a condensed format) the steps required to reprocess a job. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If the job requiring reprocessing is an 8mm job, check the job log to determine whether there was an I/O (input/output) error.

- For detailed instructions refer to either the **View a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** procedure for (Section 18.11.34) or the **View a Job Log Using the PDS Job Monitor** procedure (Section 18.11.35).

2 If the job requiring reprocessing is an 8mm job and the job log indicated an I/O (input/output) error, turn the power switch for the affected 8mm drive **off** then **on**.

3 If the job is in an **Error** status (as indicated by the job line turning red on the **Main OI Screen**), reactivate units in the job.

- For detailed instructions refer to the **Use the OI Detail Screen** procedure (Section 18.9.4).
- All units that require reprocessing must be selected before activating.
  - Unit status before activation must be either **Pending** or **Error**.
- If multiple media are involved in processing the job, PDS starts numbering the media volumes being produced with one and numbering consecutively even though the volume numbers do not coincide with the original production.
  - This may or not be acceptable at a particular site. Refer to DAAC policy.

4 If units in a job should not be reactivated as described in the preceding step, go to Step 6.

5 If a job (or units in a job) has (have) been reactivated, go to Step 16.

6 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

7 At the UNIX command line prompt enter:

cd

- The alias **cd** changes the current directory to the PDS root directory.
  - To identify the PDS root directory at the command line prompt enter:

    echo $PDSROOT

8 At the command line prompt enter:

ls

- A list of subdirectories and files in the PDS root directory is displayed.

9 At the UNIX command line prompt enter:

rm <job key>.ppf

- Remove the PPF for the job.
- **<job key>.ppf** refers to the PPF for the job.
  - For example:

    YEA0203190048_0001.ppf

  - The job key is a unique label for the job composed of the order number, an underscore and a zero-padded unit number of the first unit of the job.

10 At the UNIX command line prompt enter:

rm <machine ID>_<console ID>_<job key>.status

- Remove the status file for the job.
- **<machine ID>_<console ID>_<job key>.status** refers to the applicable status file.

11 At the UNIX command line prompt enter:

cd /pdssa/assemble

- Change to the "assemble" directory.

12 At the command line prompt enter:

ls

- A list of subdirectories and files in the "assemble" directory is displayed.

13 At the command line prompt enter:

rm -r <job key>

- Remove data directory associated with the job (and identified by the job key).

14 At the command line prompt enter:

rm <job key>.image

- Remove image data associated with the job from the directory.
- **<job key>.image** refers to the applicable image file.

15 Change the status of the job and its units to **Q** (Pending) and reactivate the units/job.

- For detailed instructions refer to the **Reactivate Units** procedure (Section 18.11.17).

16 Monitor job processing.

- For detailed instructions refer to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

Table 18.11-26. Reprocess a Job - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Determine whether there was an I/O error (review job log) (if 8mm job)	Use procedure in Section 18.11.34 or Section 18.11.35
2	**off** then **on** (power switch for affected 8mm drive) (if I/O error)	**press switch**
3	Reactivate units in the job (if job is in **Error** status)	Use procedure in Section 18.9.4
4	Go to Step 6 (if units should not be reactivated)	

Table 18.11-26. Reprocess a Job - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
5	Go to Step 16 [if job (or units in job) has (have) been reactivated]	
6	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
7	**cd**	**enter text, press Enter**
8	**ls**	**enter text, press Enter**
9	**rm <job key>.ppf**	**enter text, press Enter**
10	**rm <machine ID>_<console ID>_<job key>.status**	**enter text, press Enter**
11	**cd /pdssa/assemble**	**enter text, press Enter**
12	**ls**	**enter text, press Enter**
13	**rm -r <job key>**	**enter text, press Enter**
14	**rm <job key>.image**	**enter text, press Enter**
15	Change the status of the job and its units to **Q** (Pending) and reactivate the units/job	Use procedure in Section 18.11.17
16	Monitor job processing	Use procedure in Section 18.9.1

18.11.21 Reset an Order or a Unit

The problem is that an order or a unit within an order needs to be reset.

Table 18.11-27 presents (in a condensed format) the steps required to reset an order or a unit. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: A **PDSIS** user ID (e.g., **pdsis**, **pdsis_ts1**, **pdsis_ts2**) is used in this procedure.

1 Log in to the PDS Server host using the appropriate PDSIS user ID for the operating mode being used.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- PDSIS user IDs are **pdsis**, **pdsis_ts1**, and **pdsis_ts2**, which are used for PDSIS operations in the OPS, TS1, and TS2 modes respectively.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd /usr/local/pdsis_<mode>/utilities

- Change directory to the directory containing the PDSIS ResetOrder script (e.g., EcPdPDSISResetOrder).
- **pdsis_<mode>** refers to one of the following subdirectories:
  - pdsis (for OPS-mode operations).
  - pdsis_ts1 (for TS1-mode operations).
  - pdsis_ts2 (for TS2-mode operations).

3 At the UNIX command line prompt enter:

EcPdPDSISResetOrder <MODE> <Order ID> [<Unit ID>] &

- <**MODE**> is one of the following values:
  - **pdsis.**
  - **pdsis_ts1.**
  - **pdsis_ts2.**
- **<Order ID>** is the applicable PDSIS order ID (e.g., 0000302190001).
- **<Unit ID>** is the applicable PDSIS unit ID (e.g., 1).
  - **<Unit ID>** is specified when a particular unit within an order (rather than the whole order) is to be reset.
- The PDSIS Reset Order process starts.

4 Repeat Step 3 as necessary to reset additional order(s)/unit(s).

Table 18.11-27. Reset an Order or a Unit - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server) (using appropriate PDSIS user ID)	**single-click** or use procedure in Section 18.2.1
2	**cd /usr/local/pdsis_<mode>/utilities**	**enter text, press Enter**
3	**EcPdPDSISResetOrder <MODE> <Order ID> [<Unit ID>] &**	**enter text, press Enter**
4	Repeat Step 3 (as necessary)	

18.11.22 Respond to a CD/DVD Job Error Indicated on PDSOI

The problem is that an error with a CD or DVD job is indicated on PDSOI.

Table 18.11-28 presents (in a condensed format) the steps required to respond to a CD/DVD job error indicated on PDSOI. If you are already familiar with the procedures, you may prefer to use

the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the PDS Server host.
- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the command line prompt enter:

cd /pdssa/rimage_jobcontrol

- Change to the Rimage job control directory.

3 At the command line prompt enter:

more pwrtool.log

- The content of the PowerTools log is displayed.
- Although this procedure has been written for the **more** command, any UNIX editor or visualizing command (e.g., **pg, vi**, **view**) can be used to review the log file.

4 Examine the content of the PowerTools log for the following types of entries:
- File already exists.
- File not found.

5 If one of the preceding types of problems is found in the PowerTools log, perform the **Clean Up the CD-R_Images Folder on the Rimage PC** procedure (Section 18.11.8).

Table 18.11-28. Respond to a CD/DVD Job Error Indicated on PDSOI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**cd /pdssa/rimage_jobcontrol**	**enter text, press Enter**
3	**more pwrtool.log**	**enter text, press Enter**
4	Examine the PowerTools log for error messages	**read text**
5	Clean up the CD-R_Images folder on the Rimage PC (if applicable)	Use procedure in Section 18.11.8

18.11.23 Respond to a Jewel-Case Insert Printing Failure

The problem is that a jewel-case insert has failed to print and the following circumstances exist:

- Data have been written to the medium.
- Status has changed to QC-Hold.
- Summary sheet has printed.
- There are no obvious printer faults (e.g., paper supply empty, paper jam).
- Jewel-case insert has not printed.

Table 18.11-29 presents (in a condensed format) the steps required to respond to a jewel-case insert printing failure. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: Do not change the status of units that have no inserts to "Complete."

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the command line prompt enter:

cd

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID at the command line prompt enter:

    echo $PDSROOT

3 At the command line prompt enter:

cd summary

- Change to the “summary” directory.

4 At the command line prompt enter:

ls

- A list of the subdirectories and files in the “summary” directory is displayed.

5 Observe the entries in the list of subdirectories and files in the “summary” directory to identify the status file for the job.

- The file has the format <Machine ID>_<Console ID>_<Job Key>.status

- For example:

  DIG6-IT_pds_TS20112130001_0001.status

  - **DIG6-IT** is the Machine ID.
  - **pds** is the Console ID.
  - **TS20112130001_0001** is the Job Key.

6 If reprinting all jewel-case inserts for a multiple CD/DVD job, at the command line prompt enter:

mv <status file name> ../status

- For example:

  mv DIG6-IT_pds_TS20112130001_0001.status ../status

- **<status file name>** refers to the status file for the job.

NOTE: The units in the status file cannot have been completed or subsequent reading of the status file will return an error.

7 If the printer still does not provide output or if reprinting an individual jewel-case insert, at the command line prompt enter:

lp -d <printer ID> <insert file name>

- **<printer ID>** refers to the jewel-case insert printer to be tested.
- **<insert file name>** refers to the name of a jewel-case insert file to be printed on the printer to be tested.
- For example:

  lp -d x0dit09 PDSGENDAAC_TS20112130001_0001_1.1

  - **x0dit09** is the printer being tested.
  - **PDSGENDAAC_TS20112130001_0001_1.1** is a jewel-case insert for Job Key TS20112130001_0001.
  - The jewel-case insert file should be printed on x0dit09 (the jewel-case insert printer).
  - When jewel-case inserts are reprinted using the **lp** command, the bar code is not printed on the insert.
  - Check the local DAAC policy to determine whether jewel-case inserts without bar codes are acceptable.

8 If the specified file did not print on the printer, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

9 Return to Step 7 if it is necessary to print jewel-case inserts for additional disks associated with the job.

Table 18.11-29. Respond to a Jewel-Case Insert Printing Failure - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**cd**	**enter text, press Enter**
3	**cd summary**	**enter text, press Enter**
4	**ls**	**enter text, press Enter**
5	Identify the status file for the job	**read text**
6	**mv <status file name> ../status** (if reprinting all jewel-case inserts for a multiple CD/DVD job)	**enter text, press Enter**
7	**lp -d <printer ID> <insert file name>** (if applicable)	**enter text, press Enter**
8	Submit a trouble ticket (if applicable)	Use procedure in Chapter 8
9	Return to Step 7 (if necessary)	

18.11.24 Respond to a Job's Status Not Changing to QC-Hold Upon Successful Completion

The problem is that a PDS job does not change to a QC-Hold status although production was successful. The possible causes include the following items:

- At least two instances of PDSOI with the same OI ID are currently active.
- The instance of PDSOI with the OI ID that activated the job is not currently active.
- The time on the Rimage PC is not set to within five minutes of the time on the PDS Server host (CD or DVD job only).

Table 18.11-30 presents (in a condensed format) the steps required to respond to a job's status not changing to QC-Hold upon successful completion. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Review the contents of the job log to verify that production of the affected job was in fact successful.

- For detailed instructions refer to either the **View a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** procedure for (Section 18.11.34) or the **View a Job Log Using the PDS Job Monitor** procedure (Section 18.11.35).
- If job production was successful, the following types of entries should be observed at the end of the job log:

  volcount = 1
  volsize = 520279040.000000

ENTERING STAGE: Cleaning Up
request id is x0dph10-45 (standard input)
Job complete

- If the types of entries shown in the example (i.e., volcount, volsize, "ENTERING STAGE: Cleaning Up", request id, and "Job complete") are not present at the end of the job log, job production was not successful.

2 If job production was not successful, go to the procedure to **Reprocess a Job**.

- For detailed instructions refer to the **Reprocess a Job** procedure (Section 18.11.20).

3 If the affected job is a CD or DVD job, check the synchronization of the Rimage PC time with PDS system time.

- The time on the Rimage PC must be set to within five (5) minutes of the time on the PDS Server host (e.g., x0dig06).
  - If the time is not properly synchronized, CD and DVD jobs cannot proceed to a QC-Hold status.
- For detailed instructions refer to the **Check/Restore Synchronization of the Rimage PC Time with PDS System Time** procedure (Section 18.11.6).

4 If the affected job is not a CD or DVD job or if checking/restoring synchronization of the Rimage PC time with PDS system time is not effective, determine which instance of PDSOI was used to activate the job.

- For detailed instructions refer to the **Determine Which Instance of PDSOI Was Used to Activate a Job** procedure (Section 18.11.15).

5 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

6 At the UNIX command line prompt enter:

ps -ef | grep PDSMTOIX

- The command searches the current processes on the host for the string "**PDSMTOIX**" and displays the results of the search.
  - **PDSMTOIX** is the name of the Oracle Form for the PDSOI.
- The following type of response is displayed:

  pds 4174557 1 0 10:13:25 pts/5 0:03 f45runm PDSMTOIX pdssa/xxx
  pds 4167754 4161497 0 10:17:03 pts/9 0:00 grep PDSMTOIX

  - The example shown indicates that there is only one instance of PDSOI currently running and it is user "pds" who is running it.

- The entry that ends in "grep PDSMTOIX" is the process that was searching for PDSMTOIX.

- The following example is another type of response:

  pds 4179615 4161497 0 11:00:43 pts/9 0:00 grep PDSMTOIX
  pds 4174557 1 0 10:13:25 pts/5 0:03 f45runm PDSMTOIX pdssa/xxx
  pds 4180400 1 0 10:58:11 pts/10 0:03 f45runm PDSMTOIX pdssa/xxx

  - The second example indicates that there are two instances of PDSOI currently running and user "pds" is running both, although through different connections (i.e., pts/5 and pts/10). (It is possible that there are different individuals running the two instances of PDSOI with the same user ID.)
  - If both instances of PDSOI were launched using the same OI ID (i.e., Machine ID and Console ID), there is a significant chance of causing confusion when writing to the Operator Interface log (oilog).

7 If there are any active instances of PDSOI currently running, observe the header of each **Main OI Screen** to identify the OI ID that applies to each open instance of the PDSOI.

- The format of the **Main OI Screen** header is PDS <OI_ID>, where <OI_ID> has the format <MachineID>_<ConsoleID>.
- For example:

  PDS DIG06_ops is in the header of a Main OI Screen.

  - **DIG06_ops** is the OI ID.
  - **DIG06** is the Machine ID.
  - **ops** is the Console ID.

8 If there are multiple instances of PDSOI currently running with what should be the single controlling OI ID on each instance of the GUI, shut down all but one instance of the PDSOI with that OI ID.

- For detailed instructions refer to the **Shut Down the PDS Operator Interface (PDSOI)** procedure (Section 18.8.3).
- In general it is good practice to have only one controlling instance of the PDSOI active at a time.
- Any other instances of the PDSOI that are launched for monitoring purposes should have different OI IDs (i.e., different Console IDs).
- For example:
  - **DIG06_ops** might be the instance of PDSOI that is always brought up on a workstation in the PDS area for the purpose of controlling the processing of jobs in OPS mode.
  - **DIG06_mon** might be brought up on a workstation in a remote location to allow monitoring jobs in OPS mode without ever being used to activate or otherwise control jobs.
- If for some reason there are multiple controlling instances of the PDSOI, it is crucial for each to have a different OI ID (i.e., different Console ID) to avoid conflicts.

9 If there is no current instance of PDSOI with the OI ID indicated in the status file name or .ppf contents, start another PDSOI using the specified OI ID.
- For detailed instructions refer to the **Start the PDS Operator Interface (PDSOI)** procedure (Section 18.7.3).

10 Change the values of the following job parameters using the PDS Maintenance Module as described in the **Change the Values of Job Parameters Using the PDS Maintenance Module** procedure (Section 18.11.2):
- PDSINFO Work Table:
  - Change the **Status** of each unit in the job to **F**.
- PDSINFO Jobs Table:
  - Change the **Status** of the job to **F**.
  - Change the **Job Status** of the job to **QC-Hold**.

11 Observe the information displayed on the PDSOI **Main OI Screen** to determine whether the **Job Status** for the job has changed to **QC-Hold**.
- If the **Job Status** for the job has changed to **QC-Hold**, the job line for the job is yellow.

12 If the **Job Status** for the job has changed to **QC-Hold**, perform the QC check.
- For detailed instructions refer to the **Respond to a Status of QC-Hold (Performing a QC Check or Verification)** procedure (Section 18.9.12).

13 If the **Job Status** for the job has not changed to **QC-Hold**, reprocess the job.
- For detailed instructions refer to the **Reprocess a Job** procedure (Section 18.11.20).

Table 18.11-30. Respond to a Job's Status Not Changing to QC-Hold Upon Successful Completion - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Verify that production of the affected job was successful (review job log)	Use procedure in Section 18.11.34 or Section 18.11.35
2	Go to the procedure to reprocess a job (if job production was not successful)	Use procedure in Section 18.11.20
3	Check the synchronization of the Rimage PC time with PDS system time (if CD or DVD job)	Use procedure in Section 18.11.6
4	Determine which instance of PDSOI was used to activate the job (if not a CD or DVD job or if checking/restoring synchronization of the Rimage PC time with PDS system time is not effective)	Use procedure in Section 18.11.15
5	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
6	**ps -ef | grep PDSMTOIX**	**enter text, press Enter**

Table 18.11-30. Respond to a Job's Status Not Changing to QC-Hold Upon Successful Completion - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
7	Observe the header of each **Main OI Screen** to identify the OI ID on each (if applicable)	**read text**
8	Shut down all but one instance of the PDSOI with the relevant OI ID (if applicable)	Use procedure in Section 18.8.3
9	Start PDSOI using the specified OI ID (if applicable)	Use procedure in Section 18.7.3
10	Change the values of job parameters: PDSINFO Work Table: **Status** (each unit) → **F** PDSINFO Jobs Table: **Status** → **F** **Job Status** → **QC-Hold**	Use procedure in Section 18.11.2
11	Determine whether **Job Status** has changed to **QC-Hold** (PDSOI **Main OI Screen**)	**read text**
12	Perform the QC check (if **Job Status** is **QC-Hold**)	Use procedure in Section 18.9.12
13	Go to the procedure to reprocess a job (if **Job Status** not **QC-Hold**)	Use procedure in Section 18.9.18

18.11.25 Respond to a Job on a Lag Report

A lag report specifies all orders that still need to be produced, broken down by various time-frame ranges. A corresponding file (i.e., $PDSROOT/summary/lag<timestamp>.rpt) is generated.

A job may show up on the lag report but not show up on the PDSOI. This condition is usually due to a data problem.

Table 18.11-31 presents (in a condensed format) the steps required to respond to a job on a lag report. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Perform the **Start the PDS Maintenance Module** procedure (Section 18.7.8).

2 **Single-click** on the **PDSINFO Work Table** button on the PDS **Maintenance Module Main Menu**.

- The **PDSINFO Table Maintenance Form (PDSMTPDT)** or **PDSINFO Work Table** is displayed.

3 In the **Job Key** field on the **PDSINFO Work Table** enter:

<job key>

- **<job key>** is shown on the Lag Report.

4 **Single-click** on the **Execute Query** button near the bottom of the **PDSINFO Work Table**.

- The database is queried for data concerning the job represented by the **Job Key** and the relevant data are displayed on the **PDSINFO Work Table**.

5 Observe the data in all of the various fields on the **PDSINFO Work Table** to determine whether there is missing data in any field, especially the **Product Code** and **Output Specs** fields.

- At least during the initial implementation of PDS in ECS there is only one **Product Code**; i.e., G001.
  - To determine acceptable product codes perform the **Determine Product Codes Using the PDS Maintenance Module** procedure (Section 18.11.12).
- To check the **Output Specs** compare the entries in the **Output Specs** and **Product Media** fields of the **PDSINFO Work Table** to determine whether the entries are consistent.
  - To determine acceptable output specifications perform the **Determine Output Specifications Using the PDS Maintenance Module** procedure (Section 18.11.10).

6 If there is missing or incorrect data in any field, in the appropriate field enter:

<value>

7 **Single-click** on the **Save** button on the **PDSINFO Work Table**.

- The record is saved in the database with the new value entered in the appropriate field.
- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

8 **Single-click** on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display additional records (units) for the job.

9 Repeat Steps 5 through 8 for all additional records that need to be modified for the job.

10 When all records that need to be modified for the job have been corrected, **single-click** on the **Exit** button at the bottom of the window.

- If the **Exit** button is not visible on the maintenance module form, **single-click** on the **Cancel Query** button.

  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the PDS **Maintenance Module Main Menu** is displayed.

11 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, **single-click** on the appropriate button from the following selections:

- **Yes** - to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** is displayed.
- **No** - to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** is displayed.

12 Perform the **Determine Product Codes Using the PDS Maintenance Module** procedure (Section 18.11.12) to determine whether there are appropriate entries in the **PVT_PRCDTBL_TBL** database table for **Product Code**.

- Includes determining whether there is an appropriate entry for **Product Code** in the **PDS Description** field (**PVT_PRCDTBL_TBL** database table).

13 Perform the **Determine Output Specifications Using the PDS Maintenance Module** procedure (Section 18.11.10) to determine whether there are appropriate entries in the **OUT_OTSPTBLV_TBL** database table for **Output Spec**.

- Includes determining whether there is an appropriate entry for **Output Spec** in the **PDS Description** field (**OUT_OTSPTBLV_TBL** database table).

14 Perform the **Specify Job Selection Criteria** procedure (Section 18.9.3).

- The **Main OI Screen** is displayed.
- Includes ensuring that the specified criteria include the values for the job on the lag report.

15 Observe information displayed on the **Main OI Screen**.

- The job on the lag report should be displayed on the **Main OI Screen**.

16 If the problem could not be identified through any of the preceding steps, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

- If the job on the lag report is still not displayed on the **Main OI Screen**, that is an indication that the problem was not identified through any of the preceding steps.

Table 18.11-31. Respond to a Job on a Lag Report - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Start the PDS Maintenance Module	Use procedure in Section 18.7.8
2	**PDSINFO Work Table** button	**single-click**
3	**<job key>** (in the **Job Key** field)	**enter text, press Enter**
4	**Execute Query** button	**single-click**
5	Determine whether there is missing data in any field	**read text**
6	**<value>** [field(s) on the **PDSINFO Work Table**] (if applicable)	**enter text, press Enter**
7	**Save** button	**single-click**
8	next/previous record buttons (**> >> < <<**) as necessary to display additional records	**single-click**
9	Repeat Steps 5 through 8 for all additional records that need to be modified for the job	
10	**Exit** button	**single-click**
11	**Yes** (if applicable)	**single-click**
12	Determine whether there are appropriate entries in the **PVT_PRCDTBL_TBL** database table for **Product Code**	Use procedure in Section 18.11.12
13	Determine whether there are appropriate entries in the **OUT_OTSPTBLV_TBL** database table for **Output Spec**.	Use procedure in Section 18.11.10
14	Specify job selection criteria	Use procedure in Section 18.9.3
15	Observe information displayed on the **Main OI Screen**	**read text**
16	Submit a trouble ticket (if applicable)	Use procedure in Chapter 8

18.11.26 Respond to a Locked-Up Screen

The problem is that the PDSOI screen is locked up and it is not possible to get access to the main menu in order to shut down the GUI.

Table 18.11-32 presents (in a condensed format) the steps required to respond to a locked-up screen. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 In the UNIX window where the PDSOI was originally started at the command line prompt enter:

ps -ef | grep PDSMTOIX

- The following type of message is displayed:

```
pds    790367    790059  0 10:15:11 pts/8   0:00 grep PDSMTOIX
pds    233139          1  0   Feb 08  pts/66  0:27 f45runm PDSMTOIX
pds    779612          1  0 09:25:06 pts/8   0:03 f45runm PDSMTOIX
```

- All current processes owned by the user ID are displayed.
- PDSMTOIX is the name of the Oracle Form for PDSOI.
- In the preceding example the **grep** command returns the same pts/8 as one of the PDSMTOIX lines.
- In the example the process ID (pid) of the PDSMTOIX process is 779612.

2 At the command line prompt enter:

kill -15 <process ID>

- The PDSOI screen is dismissed.
- **<process ID>** refers to the process ID of the process to be killed.

Table 18.11-32. Respond to a Locked-Up Screen - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server) (where the PDSOI was originally started)	**single-click**
2	**ps -ef | grep PDSMTOIX**	**enter text, press Enter**
3	**kill -15 <process ID>**	**enter text, press Enter**

18.11.27 Respond to a Problem Starting PDSOI

The problem is that the pdsoi alias was typed but the PDSOI GUI was not displayed. Likely causes include improper setting of the DISPLAY environmental variable and inadvertent deletion of the pdsoi alias from the alias list.

Table 18.11-33 presents (in a condensed format) the steps required to respond to a problem starting PDSOI. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

NOTE: It may take a few seconds for the PDSOI to be displayed.

1 Wait a few seconds for the PDSOI to be displayed.

2 If the PDSOI is not displayed after a few seconds, at the command line prompt enter:

echo $DISPLAY

- The following type of response should be received:

  x0dig06:12.0

- If a **DISPLAY - Undefined variable** message was received, the DISPLAY environmental variable was not set properly.

3 If the DISPLAY environmental variable was not set properly, at the command line prompt enter:

ps -ef | grep PDSMTOIX

- The following type of message is displayed:

  pds 790367 790059 0 10:15:11 pts/8 0:00 grep PDSMTOIX
  pds 779612 1 0 09:25:06 pts/8 0:03 f45runm PDSMTOIX

- All current processes owned by the user ID are displayed.
- PDSMTOIX is the name of the Oracle Form for PDSOI.
- In the example the process ID (pid) of the PDSMTOIX process is 779612.

4 If the DISPLAY environmental variable was not set properly, at the command line prompt enter:

kill -15 <process ID>

- The process is terminated.
- **<process ID>** refers to the process ID of the process to be terminated.

5 If the DISPLAY environmental variable was not set properly, at the command line prompt enter:

exit

- **logout** is an acceptable alternative command.
- The log-in to the PDS Server host is terminated; control is returned to the previous host.

6 If the DISPLAY environmental variable was not set properly, repeat Step 5 as necessary to return to the original log-in host.

- Exit from as many hosts as necessary to return to the original host.

7 If the DISPLAY environmental variable was not set properly, perform the **Start the PDS Operator Interface (PDSOI)** procedure (Section 18.7.3).

- Set the DISPLAY environmental variable properly this time.

8 If the DISPLAY environmental variable was set properly, at the command line prompt enter:

alias pdsoi

- The actual executable name should be returned.
- For example:

  /data1/pds_it/run/pdsoi_prod.sh

9 If the executable name was not returned in response to the **alias pdsoi** command, at the command line prompt enter:

alias pdsoi /<path>/<executable>

- For example:

  alias pdsoi /data1/pds_it/run/pdsoi_prod.sh

- <**path**> represents the full directory path to the directory containing the executable program.
- <**executable**> represents the name of the executable program.

Table 18.11-33. Respond to a Problem Starting PDSOI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Wait a few seconds for the PDSOI to be displayed	**wait**
2	**echo $DISPLAY** (if applicable)	**enter text, press Enter**
3	**ps -ef | grep PDSMTOIX** (if applicable)	**enter text, press Enter**
4	**kill -15 <process ID>** (if applicable)	**enter text, press Enter**
5	**exit** (if applicable)	**enter text, press Enter**
6	Repeat Step 5 as necessary to return to the original log-in host (if applicable)	
7	Start the PDS Operator Interface (PDSOI) (if applicable)	Use procedure in Section 18.7.3
8	**alias pdsoi** (if applicable)	**enter text, press Enter**
9	**alias pdsoi /<path>/<executable>** (if applicable)	**enter text, press Enter**

18.11.28 Respond to a Save Changes Dialogue Box When Exiting a Maintenance Module Window

The problem is that after having clicked on the **Exit** button to exit a maintenance module window a dialogue box containing the message “Do you want to save changes?” is displayed.

The procedure is performed as part of one of the following procedures:

- **Change the Values of Job Parameters Using the PDS Maintenance Module** (Section 18.11.2).
- **Change the Values of Order Parameters Using the PDSIS Maintenance Module** (Section 18.11.3).
- **Respond to a Job on a Lag Report** (Section 18.11.25).

In each case after clicking on the **Exit** button to exit a maintenance module window a dialogue box containing the message "Do you want to save changes?" is displayed.

Table 18.11-34 presents (in a condensed format) the steps required to respond to a save changes dialogue box when exiting a maintenance module window. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Single-click** on the appropriate button from the following selections:

- **Yes** - to accept the changes and dismiss the dialogue box and maintenance module window.
  - The dialogue box is dismissed.
  - The maintenance module window is dismissed.
  - The maintenance module main menu is displayed.
  - If changes have been made that cannot be saved to the database, single-clicking on **Yes** does not override the restrictions; in such a case it is not possible to get out of the maintenance module window except by single-clicking on **No**. A permission problem could cause an inability to save changes.
- **No** - to dismiss the dialogue box and maintenance module window without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The maintenance module window is dismissed.
  - The maintenance module main menu is displayed.
- **Cancel** - to dismiss the dialogue box and return to the maintenance module window.
  - The dialogue box is dismissed.
  - The maintenance module window is displayed.

2 If changes should be saved but it is not possible to save changes and get out of the maintenance module window, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

- If the dialogue does not accept **Yes** as a response, it is not possible to save changes and get out of the maintenance module window.

Table 18.11-34. Respond to a Save Changes Dialogue Box When Exiting a Maintenance Module Window - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	**Yes**	**single-click**
2	Submit a trouble ticket (if applicable)	Use procedure in Chapter 8

18.11.29 Respond to a "Waiting for Drive Selection" Message on the Job Monitor

The procedure to **Respond to a "Waiting for Drive Selection" Message on the Job Monitor** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). The problem is that a job or unit has been activated from the PDS **Main OI Screen** or **OI Detail Screen** but the **Media Drive Selection** window is not visible.

Table 18.11-35 presents (in a condensed format) the steps required to respond to a "Waiting for Drive Selection" message on the job monitor. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If the **Media Drive Selection** window does not appear within a reasonable period of time (a couple of minutes), minimize other windows in the workspace and see if it was hidden behind another window.

- The **Media Drive Selection** window can sometimes be found behind other windows.

2 If the **Media Drive Selection** window is visible in the workspace, continue with job activation.

- For detailed instructions refer to the **Activate a Job** procedure (Section 18.9.7).

3 If the **Media Drive Selection** window is not visible anywhere in the workspace, access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

4 At the command line prompt enter:

cd

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID at the command line prompt enter:

    echo $PDSROOT

5 At the command line prompt enter:

cd run

- Change to the "run" directory.

6 At the command line prompt enter:

genericout <job key>

- Run the **genericout** program using the job ID as an argument.
- The **Media Drive Selection** window should be displayed.

7 If the **Media Drive Selection** window is visible in the workspace, continue with job activation.
- For detailed instructions refer to the **Activate a Job** procedure (Section 18.9.7).

8 If the **Media Drive Selection** window is not visible anywhere in the workspace, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 18.11-35. Respond to a "Waiting for Drive Selection" Message on the Job Monitor - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Minimize other windows in the workspace and see if the **Media Drive Selection** window was hidden behind another window	**single-click**
2	If the **Media Drive Selection** window is visible in the workspace, continue with job activation	Use procedure in Section 18.9.7
3	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
4	**cd**	**enter text, press Enter**
5	**cd run**	**enter text, press Enter**
6	**genericout <job key>**	**enter text, press Enter**
7	If the **Media Drive Selection** window is visible in the workspace, continue with job activation	Use procedure in Section 18.9.7
8	Submit a trouble ticket (if applicable)	Use procedure in Chapter 8

18.11.30 Respond to Duplicate Jobs on the PDSOI

The procedure to **Respond to Duplicate Jobs on the PDSOI** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). The problem is that jobs are displayed on the PDSOI multiple times. If the PDSOI continues to create duplicate jobs after duplicates have been removed, there may be a data problem in the PDSINFO table.

Table 18.11-36 presents (in a condensed format) the steps required to respond to duplicate jobs on the PDSOI. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Observe the job keys of the "duplicate" jobs on the **Main OI Screen** to verify that the jobs are true duplicates.
- Verify that the jobs have the same exact job key (i.e., **all** digits the same).

2 Perform the **Start the PDS Maintenance Module** procedure (Section 18.7.8).

3 **Single-click** on the **PDSINFO Jobs Table** button on the PDS **Maintenance Module Main Menu**.
- The **PDSINFO Jobs Table Maintenance Form (PDSMTPJT)** or **PDSINFO Jobs Table** is displayed.

4 **Single-click** and **drag** (to highlight the text) in the **Job Key** field for the appropriate job on the **Main OI Screen**.
- **Job Key** text is highlighted on the **Main OI Screen**.

5 **Single-click** in the **Job Key** field on the **PDSINFO Jobs Table** with the **center** mouse button.
- **Job Key** is pasted in the **Job Key** field on the **PDSINFO Jobs Table**.

6 **Single-click** on the **Execute Query** button near the bottom of the **PDSINFO Jobs Table**.
- The database is queried for data concerning the job represented by the **Job Key** and the relevant data are displayed on the **PDSINFO Jobs Table**.

7 Observe the data in all fields of the form.

8 **Single-click** on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display additional records with the same job key.

9 Observe the data in all fields of the form.

- Check **all** fields to identify any field with data that differs from that shown for the preceding record.

10 Repeat Steps 8 and 9 for all records with the same job key in the **PDSINFO Jobs Table**.

11 If any field has data that differ from preceding records, determine which record is the correct one.

- For example, if the **OI ID** is filled in on one record and blank on the others, the one that contains a value is the "correct" one.
  - It means that the job has been started using the specified OI ID and work will be performed using the specified OI ID only.
  - Another OI ID would not work on the job.

12 After determining which job is the correct one, record (make a note of) the values in the fields in the **PDSINFO Jobs Table**.

13 **Single-click** on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display additional records with the same job key.

- Ensure that the current record being displayed in the table is one of those to be removed, not the record to be kept.

14 Execute the following menu path:

Record → Remove

- The removed record is no longer displayed on the screen, but the record to be kept is displayed (unless there are multiple duplicates).

15 **Single-click** on the **Save** button on the **PDSINFO Jobs Table**.

16 If there are multiple duplicates, repeat Steps 13 through 15 to remove the additional duplicate(s).

17 If the **OI ID** specified in the **PDSINFO Jobs Table** is different from the OI ID used in starting the current PDSOI, start another PDSOI using the OI ID specified in the **PDSINFO Jobs Table**.

- For detailed instructions refer to the **Start the PDS Operator Interface (PDSOI)** procedure (Section 18.7.3).

18 If the **OI ID** specified in the **PDSINFO Jobs Table** is different from the OI ID used in starting the current PDSOI, process the job using the PDSOI started using the OI ID specified in the **PDSINFO Jobs Table**.

- For detailed instructions refer to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

19 **Single-click** on the **Exit** button at the bottom of the **PDSINFO Jobs Table**.
- If the **Exit** button is not visible on the form, **single-click** on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the PDS **Maintenance Module Main Menu** is displayed.

20 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, **single-click** on the appropriate button from the following selections:
- **Yes -** to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** is displayed.
- **No -** to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** is displayed.

21 **Single-click** on the **PDSINFO Work Table** button on the PDS **Maintenance Module Main Menu**.
- The **PDSINFO Table Maintenance Form (PDSMTPDT)** or **PDSINFO Work Table** is displayed.

22 **Single-click** and **drag** (to highlight the text) in the **Job Key** field for the appropriate job on the **Main OI Screen**.
- **Job Key** text is highlighted on the **Main OI Screen**.

23 **Single-click** in the **Job Key** field on the **PDSINFO Work Table** with the **center** mouse button.
- **Job Key** is pasted in the **Job Key** field on the **PDSINFO Work Table**.

24 **Single-click** on the **Execute Query** button near the bottom of the **PDSINFO Work Table**.
- The database is queried for data concerning the job represented by the **Job Key** and the relevant data are displayed on the **PDSINFO Work Table**.

25 Compare the values in the fields on the **PDSINFO Work Table** with the values recorded from the fields on the **PDSINFO Jobs Table** to identify all discrepancies.

26 If the values of any parameters on the **PDSINFO Work Table** are inconsistent with the values recorded from the fields on the **PDSINFO Jobs Table** (especially **Product Media** and **Product Code**), **single-click** in the appropriate field of the **PDSINFO Work Table**.

27 If the values of any parameters on the **PDSINFO Work Table** are inconsistent with the values recorded from the fields on the **PDSINFO Jobs Table**, in the appropriate field of the **PDSINFO Work Table** enter:

<value>

28 Repeat Steps 26 and 27 as necessary to modify values in other fields of the **PDSINFO Work Table**.

29 **Single-click** on the **Save** button on the **PDSINFO Work Table**.

- The record is saved in the database with the new value entered in the appropriate field.
- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

30 **Single-click** on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display additional records (units) for the job.

31 Repeat Steps 25 through 30 as necessary for all additional records that need to be modified for the job.

32 **Single-click** on the **Exit** button at the bottom of the **PDSINFO Work Table**.

- If the **Exit** button is not visible on the form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the PDS **Maintenance Module Main Menu** is displayed.

33 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, **single-click** on the appropriate button from the following selections:

- **Yes** - to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** is displayed.

- **No** - to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The PDS Maintenance Module Main Menu is displayed.

34 **Single-click** on the **Exit** button at the bottom of the PDS **Maintenance Module Main Menu** window.
- The PDS **Maintenance Module Main Menu** is dismissed.
- The PDS maintenance module has been shut down.

35 If the PDSOI continues to create duplicate jobs, identify and modify fields that are blank or contain invalid values.
- Make changes to the PDS Maintenance Module **PDSINFO Work Table** as necessary.
- For detailed instructions refer to the **Change the Values of Job Parameters Using the PDS Maintenance Module** procedure (Section 18.11.2).

36 If the PDSOI has continued to create duplicate jobs, repeat the preceding steps as necessary to remove duplicate records.

Table 18.11-36. Respond to Duplicate Jobs on the PDSOI - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Observe the job keys of the "duplicate" jobs on the **Main OI Screen** to verify that the jobs are true duplicates	**read text**
2	Start the PDS Maintenance Module	Use procedure in Section 18.7.8
3	**PDSINFO Jobs Table** button	**single-click**
4	Copy **<job key>** (in the **Job Key** field on the **Main OI Screen**)	**single-click** and **drag**
5	Paste **<job key>** (in the **Job Key** field on the **PDSINFO Jobs Table**)	**center-click**
6	**Execute Query** button	**single-click**
7	Observe the data in all fields of the form	**read text**
8	Next/previous record buttons (**> >> < <<**) as necessary to display additional records	**single-click**
9	Observe the data in all fields of the form	**read text**
10	Repeat Steps 8 and 9 for all records with the same job key in the **PDSINFO Jobs Table**	
11	If any field has data that differ from preceding records, determine which record is the correct one	**read text**
12	Make a note of the values in the fields	**write text**

Table 18.11-36. Respond to Duplicate Jobs on the PDSOI - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
13	Next/previous record buttons (**> >> < <<**) as necessary to display additional records	**single-click**
14	**Record → Remove**	**single-click**
15	**Save** button	**single-click**
16	Repeat Steps 13 through 15 to remove duplicate record(s) (if applicable)	
17	Start another PDSOI using the OI ID specified in the **PDSINFO Jobs Table** (if applicable)	Use procedure in Section 18.7.3
18	Process the job using the PDSOI started using the OI ID specified in the **PDSINFO Jobs Table** (if applicable)	Use procedure in Section 18.9.1
19	**Exit** button	**single-click**
20	**Yes** button (if applicable)	**single-click**
21	**PDSINFO Work Table** button	**single-click**
22	Copy **<job key>** (in the **Job Key** field on the **Main OI Screen**)	**single-click** and **drag**
23	Paste **<job key>** (in the **Job Key** field on the **PDSINFO Work Table**)	**center-click**
24	**Execute Query** button	**single-click**
25	Identify all discrepancies between values in the fields on the **PDSINFO Work Table** with values in the fields on the **PDSINFO Jobs Table**	**read text**
26	**<value>** (in appropriate field of the **PDSINFO Work Table**) (if applicable)	**enter text**
27	Repeat preceding step as necessary to modify values in other fields (if applicable)	
28	**Save** button (if applicable)	**single-click**
29	Next/previous record buttons (**> >> < <<**) as necessary to display additional records	**single-click**
30	Repeat Steps 25 through 29 to modify additional record(s) (if applicable)	
31	**Exit** button	**single-click**
32	**Yes** button (if applicable)	**single-click**
33	**Exit** button (PDS **Maintenance Module Main Menu** window)	**single-click**
34	If the PDSOI continues to create duplicate jobs, modify fields that are blank or contain invalid values	Use procedure in Section 18.11.2
35	If the PDSOI has continued to create duplicate jobs, repeat the preceding steps as necessary	

18.11.31 Respond to Low Disk Space

The procedure to **Respond to Low Disk Space** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). The problem is that the available space on a disk has become low (e.g., as indicated in the **Assembly Disk Usage** section of the **Job Monitor Main Window**).

Table 18.11-37 presents (in a condensed format) the steps required to respond to low disk space. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Wait before activating any jobs that would use the disk resource.

2 Complete orders that are being processed.
- For detailed instructions refer to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

3 Access a terminal window logged in to the PDS Server host.
- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

4 At the command line prompt enter:

cd /pdssa/assemble

- Change to the assembly directory.

5 At the command line prompt enter:

ls

- A list of subdirectories and files in the assembly directory is displayed.

6 At the command line prompt enter:

rm <file name>

- Remove unneeded data from the directory.
- **<file name>** refers to unneeded file(s) or subdirectory(ies).

7 Repeat Step 6 as necessary to remove unneeded data from the assembly directory.

8 Return to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

Table 18.11-37. Respond to Low Disk Space - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Wait before activating any jobs that would use the disk resource	**wait**
2	Complete orders that are being processed	Use procedure in Section 18.9.1
3	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
4	**cd /pdssa/assemble**	**enter text, press Enter**
5	**ls**	**enter text, press Enter**
6	**rm <file name>**	**enter text, press Enter**
7	Repeat Step 6 (as necessary)	
8	Return to the **Monitor/Control Product Processing Using PDS** procedure	Use procedure in Section 18.9.1

18.11.32 Respond to No Printouts (Either Jewel-Case Inserts or Paper Reports)

The procedure to **Respond to No Printouts (Either Jewel-Case Inserts or Paper Reports)** is performed as part of the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1). The problem is that either jewel-case inserts or paper reports (e.g., summary reports, quality check reports) are not printing.

Table 18.11-38 presents (in a condensed format) the steps required to respond to the problem of no printouts (either jewel-case inserts or paper reports). If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Observe the printer to determine whether there are any obvious faults (e.g., power off, paper supply empty, paper jam).

2 Respond to obvious faults, if any.

- Turn the power on, replenish the paper supply, clear the paper jam, etc. as necessary.
- For detailed instructions refer to the applicable printer manual.
- If the problem has not been resolved, continue with Step 3.

3 If the jewel-case printer is affected and the printer displays a "Wrong Media in Multi-Purpose Tray" message, reset the printer settings.

- From the Menu on the front panel, select **Printer Settings** → **Multi-Purpose Tray** → **Paper Type** → **Tek Labels** then select **Paper Size** → **#10 Envelope**.

- For detailed instructions refer to the jewel-case printer manual.
- The printer should start printing properly.
- If the problem has not been resolved, continue with Step 4.

4 **Single-click** on **Printers** on the menu bar of the **Main OI Screen**.
- The **Default Printers** dialogue box is displayed.
- The current selections for printers for reports and jewel-case inserts are displayed.

5 If no printer is selected for either Report Printer or Jewel Case Printer, **single-click** and **hold** the applicable option button (either **Report Printer** or **Jewel Case Printer**) to display a menu of printers, **move** the mouse cursor to the desired selection (highlighting it), then **release** the mouse button.
- If the desired printer is not available on the list of printers, submit a request to the supervisor to have it added to the list.
- Selected printer is displayed on the option button when the mouse button is released.

6 If an alternate printer is to be designated for the other type of printer, repeat Step 5 for the other printer.

7 **Single-click** on the **Return** button.
- The **Main OI Screen** is displayed.

8 If either printer still does not provide output, access a terminal window logged in to the PDS Server host.
- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

9 If either printer still does not provide output, at the command line prompt enter:

lp -d <printer ID> <file name>

- **<printer ID>** refers to the printer to be tested.
- **<file name>** refers to the name of a file to be printed on the printer to be tested.
- For example:

  lp -d x0dih04 0000104030361_0001.ppf

  – **x0dih04** is the printer being tested.
  – **0000104030361_0001.ppf** is a ppf file being used as a test file.
  – The ppf file should be printed on x0dih04.
- For additional details refer to the **Reprint PDS Documents and Labels** procedure (Section 18.11.19).

10 If the specified file did not print on the printer being tested, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

11 If the test file did print on the printer and it is not the jewel-case printer that is affected, go to Step 15.

12 If the test file did print on the printer and it is the jewel-case printer that is affected, examine the job log for an entry indicating that the job has stalled while waiting for status from Rimage.

- For example, if the last message is "Waiting for Rimage to signal status" and there have been no further entries for several minutes or there are multiple entries that include "volsdone:0 sleepcount…," the NFS connection may have been lost.
  - A Network File System (NFS) mount is needed in order to see the job control directory (e.g., /pdssa/rimage_jobcontrol) on the PDS system.
  - When the Windows NT system for the Rimage PC is set up, the PDS job control directory on the PDS Server host (e.g., x0dig06) is typically mapped to the PC's Z: drive.
- For detailed instructions refer to either the **View a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** procedure for (Section 18.11.34) or the **View a Job Log Using the PDS Job Monitor** procedure (Section 18.11.35).

13 If the job has stalled while waiting for status from Rimage, check the NFS connection.

- For detailed instructions refer to the **Check/Restore the Rimage PC NFS Connection** procedure (Section 18.11.7).

14 If the NFS connection is good or if the job does not go to completion after the NFS connection has been restored, check synchronization of the Rimage PC time with the PDS system time.

- For detailed instructions refer to the **Check/Restore Synchronization of the Rimage PC Time with PDS System Time** procedure (Section 18.11.6).

15 If the problem has not been resolved through any of the preceding actions, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 18.11-38. Respond to No Printouts (Either Jewel-Case Inserts or Paper Reports) - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Observe the printer for obvious faults	**observe**
2	Respond to obvious faults (if applicable)	**turn the power on, replenish the paper supply, clear the paper jam, etc.** (as necessary)
3	Reset the printer settings (if necessary)	Use procedure in jewel-case printer manual

Table 18.11-38. Respond to No Printouts (Either Jewel-Case Inserts or Paper Reports) - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
4	**Printers** (on the menu bar of the **Main OI Screen**)	**single-click**
5	**<printer>** (either **Report Printer** or **Jewel Case Printer** option button as applicable)	**single-click**
6	Repeat Step 5 for the other printer (if applicable)	
7	**Return** button	**single-click**
8	UNIX window (PDS Server) (if applicable)	**single-click** or use procedure in Section 18.2.1
9	**lp -d <printer ID> <file name>** (if applicable)	**read text**
10	Submit a trouble ticket (if applicable)	Use procedure in Chapter 8
11	Go to Step 15 (if the test file did print and it is not the jewel-case printer that is affected)	
12	Examine the job log for an entry indicating that the job stalled while waiting for status from Rimage (if applicable)	Use procedure in Section 18.11.34 or Section 18.11.35
13	Check the NFS connection (if applicable)	Use procedure in Section 18.11.7
14	Check synchronization of the Rimage PC time with the PDS system time (if applicable)	Use procedure in Section 18.11.6
15	Submit a trouble ticket (if applicable)	Use procedure in Chapter 8

18.11.33 Respond to PDSOI's Failure to Update Status

The problem is that the PDSOI does not seem to be picking up status files. The likely cause is that there is no corresponding instance of PDSOI currently running.

Table 18.11-39 presents (in a condensed format) the steps required to respond to PDSOI's failure to update status. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the command line prompt enter:

cd

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID at the command line prompt enter:

    echo $PDSROOT

3 At the command line prompt enter:

cd status

- Change to the "status" directory.

4 At the command line prompt enter:

ls

- A list of the subdirectories and files in the "status" directory is displayed.

5 Observe the entries in the list of subdirectories and files in the "status" directory to identify the status file for the job.

- The file has the format <Machine ID>_<Console ID>_<Job Key>.status
- For example:

  DIG6-IT_pds_0000104030361_0001.status

  - **DIG6-IT** is the Machine ID.
  - **pds** is the Console ID.
  - **0000104030361_0001** is the Job Key.

6 If there is no status file for the job, go to the **Respond to a Job's Status Not Changing to QC-Hold Although Production is Successful** procedure (Section 18.11.24).

7 Observe the header of each current **Main OI Screen** to identify the OI ID that applies to each open instance of the PDSOI.

- The format of the **Main OI Screen** header is PDS <OI ID>, where <OI ID> has the format <Machine ID>_<Console ID>
- For example:

  PDS DIG6-ST_pds is in the header of a **Main OI Screen**.

  - **DIG6-ST** is the Machine ID.
  - **pds** is the Console ID.

8 If there is no current instance of PDSOI with the OI ID specified in the status file name, start another PDSOI using the OI ID specified in the status file name.

- For detailed instructions refer to the **Start the PDS Operator Interface (PDSOI)** procedure (Section 18.7.3).

9 Process the job (that has the job key specified in the status file name) using the PDSOI started using the OI ID specified in the status file name.

- For detailed instructions refer to the **Monitor/Control Product Processing Using PDS** procedure (Section 18.9.1).

Table 18.11-39. Respond to PDSOI's Failure to Update Status - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**cd**	**enter text, press Enter**
3	**cd status**	**enter text, press Enter**
4	**ls**	**enter text, press Enter**
5	Identify the status file for the job	**read text**
6	Respond to the job's status not changing to QC-Hold (if no status file)	Use procedure in Section 18.11.24
7	Identify the OI ID that applies to each open instance of the PDSOI	**read text**
8	Start another PDSOI using the OI ID specified in the status file name (if applicable)	Use procedure in Section 18.7.3
9	Process the job using the OI ID specified in the status file name	Use procedure in Section 18.9.1

18.11.34 View a Job Log or Job Production Parameter File (PPF) Using UNIX Commands

Although the PDS Job Monitor provides the Distribution Technician with a relatively easy means of gaining access to the log for a particular job, if it is not available, UNIX commands can be used to gain access to a log file or job Production Parameter File (PPF).

Table 18.11-40 presents (in a condensed format) the steps required to view a job log or job Production Parameter File (PPF) using UNIX commands. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 Access a terminal window logged in to the Operations Workstation.

- Examples of Operations Workstation host names include **e0acs03**, **g0acs02**, **l0acs01**, and **n0acs03**.
- For detailed instructions refer to the **Log in to ECS Hosts** procedure (Section 18.2.1).

2 At the UNIX command line prompt enter:

cd

- Change directory to the PDS root directory, which contains the PPF files for the jobs being processed by PDS.
- When logged in with a PDS user ID, **cd** is an alias that changes the current working directory to the PDS root directory.
- If a PPF is to be viewed, go to Step 4.
- If a job log is to be viewed, continue with Step 3.

3 If a job log is to be viewed, at the UNIX command line prompt enter:

cd summary

- Change directory to the "summary" directory, which contains the log files for the jobs being processed by PDS.

4 At the UNIX command line prompt enter:

pg <filename>

- **<filename>** refers to the PPF or log file to be reviewed and consists of the job key (as displayed on the **Main OI Screen**) and the file-name extension, either "ppf" or "log," as applicable (e.g., TS20112130001_0001.ppf, TS20112130001_0001.log).
- Either the PPF file or the first page of the log file (as applicable) is displayed.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view, more**) can be used to review the log file.

5 Review the PPF or log.

- The following **pg** commands (at the **:** prompt) are useful:
  - **n** then **Return/Enter** (go to Page n).
  - **Return/Enter** or **+1** then **Return/Enter** (go down to the next page).
  - **-1** then **Return/Enter** (go back to the preceding page).
  - **+n** then **Return/Enter** (go down n number of pages).
  - **-n** then **Return/Enter** (go back n number of pages).
  - **+nl** then **Return/Enter** (go down n number of lines).
  - **-nl** then **Return/Enter** (go back n number of lines).
  - **$** then **Return/Enter** [go to the last page (end of file)].
  - **q** then **Return/Enter** (exit from pg).

Table 18.11-40. View a Job Log or Job Production Parameter File (PPF) Using UNIX Commands - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	UNIX window (PDS Server)	**single-click** or use procedure in Section 18.2.1
2	**cd**	**enter text, press Enter**
3	**cd summary** (if a job log is to be viewed)	**enter text, press Enter**
4	**pg <filename>**	**enter text, press Enter**
5	Review the PPF or log	**read text**

18.11.35 View a Job Log Using the PDS Job Monitor

The PDS Job Monitor provides the Distribution Technician with a relatively easy means of gaining access to the log for a particular job. If the PDS Job Monitor is not available, UNIX commands can be used to gain access to log files, as described in the **View a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** procedure (Section 18.11.34).

Table 18.11-41 presents (in a condensed format) the steps required to view a job log using the PDS Job Monitor. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If the **Job Monitor Main Window** is not already in operation, start the PDS Job Monitor (refer to Section 18.7.5).
- The **Job Monitor Main Window** is displayed.

2 **Place** the mouse cursor on the relevant job in the running job list of the **Job Monitor Main Window**, **single-click** and **hold** the **right** mouse button, **move** the mouse cursor to **View Job Log** (highlighting it), then **release** the mouse button.
- Pop-up menu appears with the options **View Job Log, View Job PPF, Force AutoRimage Completion** [appears only when the selected job is waiting for a completion message from a Rimage writer]**, Terminate Job.**
- Select **View Job Log** from the pop-up menu.
  - The log file for the selected job is displayed in a text window.

3 Review the log.

4 To exit from the log **single-click** on the **Exit** button at the bottom of the window.
- The window is dismissed.

Table 18.11-41. View a Job Log Using the PDS Job Monitor - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Start the PDS Job Monitor (if necessary)	Use procedure in Section 18.7.5
2	**View Job Log** (**Job Monitor Main Window**)	**right-click**
3	Review the log	**read text**
4	**Exit** button	**single-click**

18.11.36 View a Job PPF Using the PDS Job Monitor

The PDS Job Monitor provides the Distribution Technician with a relatively easy means of gaining access to the production parameter file for a particular job. The PPF specifies all of the information that the job needs to run (e.g., the media type, data path, bin number, etc.). If the PDS Job Monitor is not available, UNIX commands can be used to gain access to PPFs, as described in the **View a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** procedure (Section 18.11.34).

Table 18.11-42 presents (in a condensed format) the steps required to view a job PPF using the PDS Job Monitor. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 If the **Job Monitor Main Window** is not already in operation, start the PDS Job Monitor (refer to Section 18.7.5).
- The **Job Monitor Main Window** is displayed.

2 **Place** the mouse cursor on the relevant job in the running job list of the **Job Monitor Main Window**, **single-click** and **hold** the **right** mouse button, **move** the mouse cursor to **View Job PPF** (highlighting it), then **release** the mouse button.
- Pop-up menu appears with the options **View Job Log, View Job PPF, Force AutoRimage Completion** [appears only when the selected job is waiting for a completion message from a Rimage writer]**, Terminate Job.**
- Select **View Job PPF** from the pop-up menu.
  - The production parameter file (PPF) for the selected job is displayed in a text window.

3 Review the PPF file.

4 To exit from the PPF file **single-click** on the **Exit** button at the bottom of the window.
- The window is dismissed.

Table 18.11-42. View a Job PPF Using the PDS Job Monitor - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Start the PDS Job Monitor (if necessary)	Use procedure in Section 18.7.5
2	**View Job PPF** (**Job Monitor Main Window**)	**right-click**
3	Review the PPF file	**read text**
4	**Exit** button	**single-click**

18.11.37 View an Extended Error Message

The procedure to **View an Extended Error Message** is performed as part of the procedure to **Check/Clear Errors on PDSIS** (Section 18.11.4).

Table 18.11-43 presents (in a condensed format) the steps required to view an extended error message. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the detailed procedures that follow.

1 **Single-click** on the action button at the beginning of the relevant error status line (on the **PDSIS OI Error Screen**).
- The **Action List** box is displayed.

2 **Single-click** on **Expanded Message** in the **Action List** box.
- **Expanded Message** is highlighted.

3 **Single-click** on the appropriate button from the following selections:
- **OK** - to display the extended message window.
  - The **Extended Error Message Window** is displayed.
- **Cancel** - to dismiss the **Action List** box and return to the screen that was displayed before the action button was selected.
  - The **PDSIS OI Error Screen** is displayed.

4 Observe information displayed on the extended message window.

5 To return to the **Check/Clear Errors on PDSIS** procedure (Section 18.11.4) **single-click** on the **Close** button.
- The Extended Message Window is dismissed.
- The **PDSIS OI Error Screen** is displayed.

Table 18.11-43. View an Extended Error Message - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Action button (on **PDSIS OI Error Screen**)	**single-click**
2	**Expanded Message**	**single-click**
3	**OK** button	**single-click**
4	**Close** button	**single-click**

19. User Services

User Services personnel at the DAACs provide support services to the scientists, graduate and undergraduate students, and students in grades K-12, as well as teachers, or commercial users who may use ECS to pull data products for their programs. In this role, User Services exercises five major responsibilities (at EDC, there are two additional responsibilities):

- help create new users – creating new accounts and performing other account management activities.
- support order tracking – keeping logs of user contacts, retrieving user information, and helping trace and report the status of order processing.
- resolve user requests/problems – respond to user requests and act on behalf of users to provide ECS services and products.
- initiate/track problem reports – initiate an ECS problem report based on a user called-in (or e-mailed) advice of a system problem (i.e., an instance in which the system does not conform to specified or advertised performance).
- coordinate external and internal sources to resolve user issues/problems – respond to user issues and resolve problems by identifying and energizing the necessary resources, both internal (e.g., DAAC operations personnel) and external (e.g., engineering from the Sustaining Engineering Organization, resources from the System Monitoring and Control Center, personnel from other DAACs).
- (EDC only) support users of the ASTER Data Acquisition Request (DAR) tool for preparing and submitting requests for acquisition of data by the ASTER instrument.
- (EDC only) support users of the EOS Data Gateway (EDG) Search and Order tool for preparing and submitting requests for production of ASTER on-demand products.

To fulfill their responsibilities, User Services personnel may use ECS custom software tools, including account management tools, an order tracking tool, ECS subscription tools, the Data Dictionary Maintenance Tool, the ASTER DAR tool, and the ODFRM tool. They may also use a customized commercial software, Remedy, to create and maintain user contact records. Finally, they may use the EOS Data Gateway tool for creating data searches and orders.

Subsequent sections related to User Services address procedures for the following functions:

- Section 19.1 ECS User Account Management.
- Section 19.2 Creating and Maintaining User Contact Log Records.
- Section 19.3 Processing an Order.
- Section 19.4 Working with the Spatial Subscription Server and Data Pool
- Section 19.5 Using the ECS Order Tracking Tool.
- Section 19.6 Using the Data Dictionary Maintenance Tool.
- Section 19.7 (EDC Only) Creating and Managing ASTER Data Acquisition Requests.
- Section 19.8 (EDC Only) On-Demand Product Requests.

For each set of functions, an **Activity Checklist** table provides an overview of the tasks to be completed. The outline of the Activity Checklist is as follows:

Column one - ***Order*** shows the order in which tasks could be accomplished.

Column two - ***Role*** lists the Role/Manager/Operator responsible for performing the task.

Column three -***Task*** provides a brief explanation of the task.

Column four - ***Section*** provides the Procedure (P) section number or Instruction (I) section number where details for performing the task can be found.

Column five - ***Complete?*** is used as a checklist to keep track of which task steps have been completed.

19.1 ECS User Account Management

All registered users of the ECS have a personal "user account" that is maintained within the ECS User Profile database. The account contains the user's name, User ID, e-mail address, preferred shipping address, billing address, and other information regarding the user that is needed when processing user requests. Table 19.1-1 provides an Activity Checklist for ECS User Account Management functions.

Table 19.1-1. ECS User Account Management - Activity Checklist (1 of 2)

Order	Role	Task	Section	Complete?
1	User Services	Launch Account Management Application using UNIX Commands	(P) 19.1.1	
2	User Services	Retrieve Individual Account Screens on Local Read-Only GUI	(P) 19.1.2.1	
3	User Services	Retrieve Full User Profile on SMC GUI	(P) 19.1.2.2	
4	User Services	Enter Personal Information for Account	(P) 19.1.3.1	
5	User Services	Enter Mailing Address for Account	(P) 19.1.3.2	
6	User Services	Enter Shipping Address for Account	(P) 19.1.3.3	
7	User Services	Enter Billing Address for Account	(P) 19.1.3.4	
8	User Services	Enter Account Information and Create the User Account	(P) 19.1.3.5	
9	User Services	Edit/Modify Personal Information	(P) 19.1.4.1	
10	User Services	Edit/Modify Mailing Address	(P) 19.1.4.2	
11	User Services	Edit/Modify Shipping Address	(P) 19.1.4.3	
12	User Services	Edit/Modify Billing Address	(P) 19.1.4.4	
13	User Services	Edit/Modify Account Information	(P) 19.1.4.5	
14	User Services	Edit/Modify DAR Information	(P) 19.1.4.6	
15	User Services	Delete an ECS Account	(P) 19.1.5	

Table 19.1-1. ECS User Account Management - Activity Checklist (2 of 2)

Order	Role	Task	Section	Complete?
16	User Services	Cancel an ECS Account (Probation)	(P) 19.1.6	
17	User Services	Troubleshooting: Check Log Files for Account Management	(P) 19.1.7	

19.1.1 Launch Account Management Application Using UNIX Commands

The Account Management tool at the DAAC is read-only, permitting display of information in the local User Profile database. Changes to a user's profile are accomplished through use of the Account Management tool at the SMC; any changes made at the SMC are replicated for read-only access to the DAACs. Access to the Account Management functions at the DAAC or at the SMC is gained through the use of UNIX commands. Launching the Account Management application starts with the assumption that the applicable servers are running and the operator has logged in to the ECS system or has logged in remotely to the SMC. Table 19.1-2 presents the steps required to launch the Account Management application using UNIX commands. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the UNIX command shell prompt, type **setenv DISPLAY *clientname*:0.0** and then press the **Return/Enter** key.

- For ***clientname***, use either the local terminal/workstation IP address or its machine name.

2 Start the log-in to the MSS client server by typing **/tools/bin/ssh *hostname*** *(e.g.*, g0mss21, l0mss21, e0mss21, n0mss21, m0mss16) at the UNIX command shell prompt, and then press the **Return/Enter** key.

- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 3.
- If you have not previously set up a secure shell passphrase; go to Step 4.

3 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 5.

4 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.

5 To change to the directory containing the utility scripts to start Account Management GUIs, type **cd /usr/ecs/*MODE*/CUSTOM/utilities**, where ***MODE*** will likely be **TS1**, **TS2**, or **OPS**, and then press the **Return/Enter** key.
- The working directory is changed to **/usr/ecs/*MODE*/CUSTOM/utilities**.

6 Type **EcMsAcDAACRegUserGUIStart *MODE*** (to launch the GUI at your local site) or **EcMsAcSMCRegUserGUIStart *MODE*** (to launch the GUI at the SMC), where ***MODE*** is **TS1**, **TS2**, or **OPS** (or other) as selected in Step 5, and then press the **Return/Enter** key.
- The **ECS User Account Management** window is displayed.
- On the SMC tool, the window shows two folders: **Request Account** and **Profile Account**; on the DAAC tool, only the **Profile Account** folder appears.

Table 19.1-2. Launch Account Management Application Using UNIX Commands

Step	What to Do	Action to Take
1	**setenv DISPLAY *clientname*:0.0**	**enter text; press Return/Enter**
2	**/tools/bin/ssh *hostname***	**enter text; press Return/Enter**
3	***Passphrase*** (or Step 4)	**enter text; press Return/Enter**
4	***Password***	**enter text; press Return/Enter**
5	**cd /usr/ecs/*MODE*/CUSTOM/utilities**	**enter text; press Return/Enter**
6	**EcMsAcDAACRegUserGUIStart *MODE*** (at DAAC) OR **EcMsAcSMCRegUserGUIStart *MODE*** (at SMC)	**enter text; press Return/Enter**

19.1.2 Retrieve a User Account/Validate a User

When a user contacts User Services with any request, it is typical for User Services to retrieve the user's account. User account information can be used to validate the user and/or provide information that will be needed to process the user's request. At the DAAC, to view all user profile data for an account it is necessary to retrieve (select tabs for) individual account screens (e.g., Personal Information, Mailing Address, Shipping Address, Account Information) one at a time. Although you are not likely to log into the SMC just to retrieve account information, if you are logged in there, the Account Management tool at the SMC provides for display of a screen showing the entire profile at once. If desired, it is also possible to retrieve individual screens at the SMC. A separate procedure is provided for each of the two different retrieval approaches.

19.1.2.1 Retrieve Individual Account Screens on the Local Read-Only GUI

Table 19.1-3 presents the steps required to retrieve individual account screens on the local read-only GUI. If you are already familiar with the procedure, you may prefer to use this quick-step

table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the local **ECS User Account Management** application GUI (refer to Procedure 19.1.1 **Launch Account Management Application Using UNIX Commands**).
- The **ECS User Account Management** window is displayed; at the DAAC, the only top-level tab displayed is **Profile Account**.
- Folders and fields applicable to existing accounts are displayed.

2 Click on the **Retrieve by DAAC** option button and select your DAAC from the displayed list, or select **All**.
- The selected choice is displayed on the option button.

3 Click on the **Retrieve** button.
- The account list field displays the list of accounts for the option selected in Step 2.

4 If desired, enter a search criterion, either using the **Find** field (located to the right of the **Find** button just below the account listing box) and clicking **Find**, or by clicking on the **User ID** or **Last Name** button and entering an appropriate ID or name in the associated text field; click on the **Retrieve** button.
- Account(s) meeting the entered search criterion are displayed (***Note***: The search functions are case-sensitive.)

5 Scroll through the accounts listed (if necessary) until the desired account is visible, then click on the account to highlight it.
- Six folders are displayed that contain detailed information about the selected account: **Account Information**, **Personal Information**, **Shipping Address**, **Billing Address**, **Mailing Address**, and **DAR Information**.

6 Click on each folder to display desired information. The user account information needed in order to validate the user is displayed.

Table 19.1-3. Retrieve Individual Account Screens on Local Read-Only GUI

Step	What to Do	Action to Take
1	Launch the **ECS User Account Management GUI**	Use procedure in Section 19.1.1
2	Select DAAC (**Retrieve by DAAC** option button)	**click option**
3	Activate **Retrieve** button	**single-click**
4	Filter with **Find** or search criterion field and **Retrieve**	**enter text; single-click**
5	Scroll and highlight desired account	**single-click**
6	Click tabs to review folders	**single-click each tab**

19.1.2.2 Retrieve Full User Profile on the SMC GUI

Table 19.1-4 presents the steps required to retrieve a user's entire account profile on the SMC Account Management GUI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **ECS User Account Management** application GUI at the SMC (refer to Procedure 19.1.1 **Launch Account Management Application Using UNIX Commands**).

- The **ECS User Account Management** window is displayed; at the SMC, two top-level tabs are displayed: **Request Account** and **Profile Account**.

2 Click on the **Profile Account** tab.

- Folders and fields applicable to existing accounts are displayed.

3 Click on the **Retrieve by DAAC** option button and select your DAAC from the displayed list, or select **All**.

- The selected choice is displayed on the option button.

4 Click on the **Retrieve** button.

- The account list field displays the list of accounts for the option selected in Step 2.

5 If desired, enter a search criterion, either using the **Find** field (located to the right of the **Find** button just below the account listing box) and clicking **Find**, or by clicking on the **User ID** or **Last Name** button and entering an appropriate ID or name in the associated text field; click on the **Retrieve** button.

- Account(s) meeting the entered search criterion are displayed (***Note***: The search functions are case-sensitive.)

6 Scroll through the accounts listed (if necessary) until the desired account is visible, then click on the account to highlight it.

- Six folders are displayed that contain detailed information about the selected account: **Account Information**, **Personal Information**, **Shipping Address**, **Billing Address**, **Mailing Address**, and **DAR Information**.

7 Click on the **View Entire Profile** button at the bottom of the window.

- The User Profile screen is displayed.
- This is a read only screen; no changes can be made without going to each individual folder.

- The User Profile screen displays the information contained in the Personal Information folder, Account Information folder, Shipping Address folder, Billing Address folder, Mailing Address folder, and the DAR Information folder.

8 After examining the displayed information to verify the user's account, click the **Close** button to exit from the User Profile screen.

Table 19.1-4. Retrieve Full User Profile on SMC GUI

Step	What to Do	Action to Take
1	Launch the **ECS User Account Management GUI**	Use procedure in Section 19.1.1
2	Select **Profile Account**	**single-click**
3	Select DAAC (**Retrieve by DAAC** option button)	**click option**
4	Activate **Retrieve** button	**single-click**
5	Filter with **Find** or search criterion field and **Retrieve**	**enter text; single-click**
6	Scroll and highlight desired account	**single-click**
7	Activate **View Entire Profile** button	**single-click**
8	Activate **Close** button	**single-click**

19.1.3 Create a User Account

If a user registers through the **Become a registered user** link on the EOS Data Gateway tool (URL: http://redhook.gsfc.nasa.gov/~imswww/pub/imswelcome/), a user account with basic privileges is created in the database at the SMC and replicated to the DAAC sites. However, it is possible to create an account for a user by entering user information in five subordinate folders under the **Request Account** tab on the ECS User Account Management tool at the SMC. If User Services is creating an account in this manner, it is essential to have the needed user information. This information should be obtained at the time the user requests assistance in registration. A separate procedure is provided for entering the data in each of the five required subfolders, and a sixth procedure is provided for entering data to authorize an approved user for submission of an ASTER Data Acquisition Request (DAR).

19.1.3.1 Enter Personal Information for Account

The **Personal Information** folder contains the user name, e-mail address, organization, telephone number, mother's maiden name, affiliation, project, home DAAC, and primary area of study. The user may need to be contacted in order to obtain all the information needed. This procedure assumes that the operator has the ECS User Account Management tool opened at the SMC with the **Request Account** tab selected. Table 19.1-5 presents the steps required to enter personal information for an account. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Click the **Personal Information** folder.
- The **Personal Information** folder opens.

2 Click on the **Title** field.
- The cursor moves to the **Title** field.

3 Enter the user's **Title**, then press **Tab**.
- A pull-down menu is available and may be used instead of typing the **Title**:
  - Point the mouse on the arrow to the right of the **Title** field.
  - While holding the mouse pointer button down, **highlight** the **Title** you require.
  - **Release** the mouse button.

4 The title you have chosen appears in the **Title** field.

5 The Titles in the drop-down box are **Dr**, **Mr**, **Ms**, **Miss**, **Mrs**, and **Rev**.
- The cursor moves to the **First Name** field.

6 Enter the user's **first name**, then press **Tab**.
- The cursor moves to the **MI** field.

7 Enter the user's **middle initial**, then press **Tab**.
- The cursor moves to the **Last Name** field.

8 Enter the user's **last name**, then press **Tab**.
- The cursor moves to the **Email:** field.

9 Enter the user's **Email:** address, then press **Tab**.
- The cursor moves to the **User ID:** field.

10 Enter the **User ID:**, and then press **Tab**.
- The cursor moves to the **Organization:** field.

11 Enter the user's **organization:**, and then press **Tab**.
- The cursor moves to pull-down arrow next to the **Affiliation:** field.

12 Click on the pull-down arrow next to the **Affiliation:** field.

13 A pull-down menu appears with choices of **K-12**, **Commercial**, **Government**, **University**, and **Other**.

14 Click on the choice indicating the user's affiliation.

15 The selected choice appears in the **Affiliation:** field.

16 Click on the **User Verification Key:** field.
- The cursor moves to the **User Verification Key:** field.

17 Enter the user's **User Verification Key:**, then press **Tab**.
- The cursor moves to the pull-down arrow next to the **Home DAAC:** field.

18 Click on the pull-down arrow next to the **Home DAAC:** field.

19 A pull-down menu appears with choices of **ASF**, **CSN**, **EDC**, **GSF**, **JPL**, **LAR**, **MDC**, **MSF**, **NSC**, **ORN**, **RBD**, **SMC**, and **VTC**.

20 Click on the three-letter choice for the home DAAC.
- The selected three-letter choice appears in the **Home DAAC:** field.

21 Click on the **Project:** field.
- The cursor moves to the **Project:** field.

22 Enter the **Project:** and then press **Tab**.
- The cursor moves to the pull-down arrow next to the **Primary Area of Study:** field.

23 Click on the pull-down arrow next to the **Primary Area of Study:** field.
- A pull-down menu appears with a number of choices.

24 Click on the choice reflecting the user's Primary Area of Study.
- The **Personal Information** folder is complete.

Table 19.1-5. Enter Personal Information for Account (1 of 2)

Step	What to Do	Action to Take
1	Select **Personal Information** folder	**single-click**
2	Move cursor to **Title:** field	**single-click**
3	Enter user's **Title**	**enter text; press Tab**
4	Enter user's **First Name**	**enter text; press Tab**
5	Enter user's **Middle Initial**	**enter text; press Tab**
6	Enter user's **Last Name**	**enter text; press Tab**

Table 19.1-5. Enter Personal Information for Account (2 of 2)

Step	What to Do	Action to Take
7	Enter user's **Email** address	**enter text; press Tab**
8	Enter the **User ID**	**enter text; press Tab**
9	Enter the user's **Organization**	**enter text; press Tab**
10	Open **Affiliation:** pull-down menu	**single-click**
11	Select the user's **Affiliation**	**single-click**
12	Move cursor to **User Verification Key:** field	**single-click**
13	Enter the user's **User Verification Key**	**enter text; press Tab**
14	Open **Home DAAC:** pull-down menu	**single-click**
15	Select the user's **Home DAAC**	**single-click**
16	Move cursor to **Project:** field	**single-click**
17	Enter the user's **Project**	**enter text; press Tab**
18	Open **Primary Area of Study:** pull-down menu	**single-click**
19	Select the user's **Primary Area of Study**	**single-click**

19.1.3.2 Enter Mailing Address for Account

The **Mailing Address** is used for normal correspondence, and may be different from the shipping and billing addresses. User Services is responsible for maintaining up-to-date mailing addresses. This procedure assumes that the operator has the ECS User Account Management tool opened at the SMC with the **Request Account** tab selected. Table 19.1-6 presents the steps required to enter the mailing address for an account. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Click the **Mailing Address** folder tab.
- The **Mailing Address** folder opens.

2 Click on the first **Address:** field.

3 Enter the user's **mailing address**, then press **Tab**.
- The cursor moves to the second **Address:** field.

4 If a second address field is needed to complete the user's **mailing address**, enter the **mailing address**, then press **Tab**.
- If a second address field is not needed, press **Tab** to bypass the field.
- The cursor moves to the third **Address:** field.

5 If a third address field is needed to complete the user's **Mailing Address**, enter the **mailing address**, then press **Tab**.

- If a third address field is not needed, press **Tab** to bypass the field.
- The cursor moves to the **City:** field.

6 Enter the **City:** to which regular correspondence is sent, then press **Tab**.

- The cursor moves to the pull-down arrow next to the **State/Province:** field.

7 Click on the pull-down arrow next to the **State/Province:** field.

- A pull-down menu appears permitting choice among a list of states.

8 Click on the choice for the user's **State** or **Province** for the **mailing address**, then press **Tab**.

- The cursor moves to the **Zip/Postal Code:** field.

9 Enter the **Zip/Postal Code:** for the mailing address, then press **Tab**.

- The cursor moves to the pull-down arrow next to the **Country:** field.

10 Click on the pull-down arrow next to the **Country:** field.

- A pull-down menu appears permitting choice among a list of countries.

11 Click on the choice for the **Country:** for the **mailing address**, then press **Tab**.

- The cursor moves to the **Telephone:** field.

12 Enter the **Telephone number** used at the mailing address, then press **Tab**.

- The cursor moves to the **Fax:** field.

13 Enter the **Fax number** used at the mailing address, then press **Tab**.

- The **Mailing Address** folder is now complete.

Table 19.1-6. Enter Mailing Address for Account

Step	What to Do	Action to Take
1	Select **Mailing Address** folder	**single-click**
2	Move cursor to first **Address:** field	**single-click**
3	Enter user's **mailing address**	**enter text; press Tab**
4	Enter any second line of user's **mailing address**	**enter text; press Tab**
5	Enter any third line of user's **mailing address**	**enter text; press Tab**
6	Enter **city** of user's mailing address	**enter text; press Tab**
7	Open **State/Province:** pull-down menu	**single-click**
8	Select **State/Province** of the user's mailing address	**single-click; press Tab**
9	Enter the **Zip/Postal Code**	**enter text; press Tab**
10	Open **Country:** pull-down menu	**single-click**
11	Select **Country** of the user's mailing address	**single-click; press Tab**
12	Enter **telephone number**	**enter text; press Tab**
13	Enter **fax number**	**enter text; press Tab**

19.1.3.3 Enter Shipping Address for Account

The **Shipping Address** folder contains the address for shipping data and may be different from the mailing and billing addresses. User Services always confirms the shipping address with the user before shipping data. This procedure assumes that the operator has the ECS User Account Management tool opened at the SMC with the **Request Account** tab selected. Table 19.1-7 presents the steps required to enter the shipping address for an account. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Click the **Shipping Address** folder tab.
- The **Shipping Address** folder opens.

2 Click on the **Title:** field.
- The cursor moves to the **Title:** field.

3 Enter the user's **Title**, then press **Tab**.
- A pull-down menu is available and may be used instead of typing the **Title**:
  - Point the mouse on the arrow to the right of the **Title:** field.
  - While holding the mouse pointer button down, **highlight** the **Title** you require.
  - **Release** the mouse button.

4 The title you have chosen appears in the **Title:** field.

5 The Titles in the drop-down box are **Dr**, **Mr**, **Ms**, **Miss**, **Mrs**, and **Rev**.

- The cursor moves to the **First Name:** field.

6 Enter the user's **first name**, then press **Tab**.

- The cursor moves to the **MI:** field.

7 Enter the user's **middle initial**, then press **Tab**.

- The cursor moves to the **Last Name:** field.

8 Enter the user's **last name**, then press **Tab**.

- The cursor moves to the first **Address:** field.

9 Enter the user's **Shipping Address**, then press **Tab**.

- The cursor moves to the second **Address:** field.

10 If a second address field is needed to complete the user's **Shipping Address**, enter the **Shipping Address**, then press **Tab**.

- If a second address field is not needed, press **Tab** to bypass the field.
- The cursor moves to the third **Address:** field.

11 If a third address field is needed to complete the user's **Shipping Address**, enter the **Shipping Address**, then press **Tab**.

- If a third address field is not needed, press **Tab** to bypass the field.
- The cursor moves to the **Organization:** field.

12 Enter the user's **Organization**, then press **Tab**.

- The cursor moves to the **State/Province:** field.

13 Click on the pull-down arrow next to the **State/Province:** field.

- A pull-down menu appears permitting choice among a list of states.

14 Click on the choice for the user's **State** or **Province** for the shipping address, then press **Tab**.

- The cursor moves to the **City:** field.

15 Enter the **City:** to which the data will be shipped, then press **Tab**.

- The cursor moves to the pull-down arrow next to the **Zip/Postal Code:** field.

16 Enter the **Zip/Postal Code:** for the shipping address, then press **Tab**.

- The cursor moves to the pull-down arrow next to the **Country:** field.

17 Click on the pull-down arrow next to the **Country:** field.
- A pull-down menu appears permitting choice among a list of countries.

18 Click on the choice for the **Country:** to which the data will be shipped, then press **Tab**.
- The cursor moves to the **Telephone:** field.

19 Enter the **Telephone number** used at the shipping address, then press **Tab**.
- The cursor moves to the **Fax:** field.

20 Enter the **Fax number** used at the shipping address, then press **Tab**.
- The **Shipping Address** folder is now complete.

Table 19.1-7. Enter Shipping Address for Account

Step	What to Do	Action to Take
1	Select **Shipping Address** folder	**single-click**
2	Move cursor to **Title:** field	**single-click**
3	Enter user's **Title**	**enter text; press Tab**
4	Enter user's **First Name**	**enter text; press Tab**
5	Enter user's **Middle Initial**	**enter text; press Tab**
6	Enter user's **Last Name**	**enter text; press Tab**
7	Enter user's **shipping address**	**enter text; press Tab**
8	Enter any second line of user's **shipping address**	**enter text; press Tab**
9	Enter any third line of user's **shipping address**	**enter text; press Tab**
10	Enter the user's **organization**	**enter text; press Tab**
11	Open **State/Province:** pull-down menu	**single-click**
12	Select **State/Province** of the user's shipping address	**single-click; press Tab**
13	Enter **city** of user's shipping address	**enter text; press Tab**
14	Enter the **Zip/Postal Code**	**enter text; press Tab**
15	Open **Country:** pull-down menu	**single-click**
16	Select **Country** of the user's shipping address	**single-click; press Tab**
17	Enter **telephone number**	**enter text; press Tab**
18	Enter **fax number**	**enter text; press Tab**

19.1.3.4 Enter Billing Address for Account

The **Billing Address** is the address to which payment-due billings are sent and may be different from the mailing and shipping addresses. User Services is responsible for maintaining up-to-date billing addresses. This procedure assumes that the operator has the ECS User Account Management tool opened at the SMC with the **Request Account** tab selected. Table 19.1-8 presents the steps required to enter the billing address for an account. If you are already familiar

with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Click the **Billing Address** folder tab.
- The **Billing Address** folder opens.

2 Click on the **Title:** field.
- The cursor moves to the **Title:** field.

3 Enter the user's **Title**, then press **Tab**.
- A pull-down menu is available and may be used instead of typing the **Title**:
  - Point the mouse on the arrow to the right of the **Title:** field.
  - While holding the mouse pointer button down, **highlight** the **Title** you require.
  - **Release** the mouse button.

4 The title you have chosen appears in the **Title:** field.

5 The Titles in the drop-down box are **Dr**, **Mr**, **Ms**, **Miss**, **Mrs**, and **Rev**.
- The cursor moves to the **First Name:** field.

6 Enter the user's **first name**, then press **Tab**.
- The cursor moves to the **MI:** field.

7 Enter the user's **middle initial**, then press **Tab**.
- The cursor moves to the **Last Name:** field.

8 Enter the user's **last name**, then press **Tab**.
- The cursor moves to the first **Address:** field.

9 Enter the user's **Billing Address**, then press **Tab**.
- The cursor moves to the second **Address:** field.

10 If a second address field is needed to complete the user's **Billing Address**, enter the **Billing Address**, then press **Tab**.
- If a second address field is not needed, press **Tab** to bypass the field.
- The cursor moves to the third **Address:** field.

11 If a third address field is needed to complete the user's **Billing Address**, enter the **Billing Address**, then press **Tab**.
- If a third address field is not needed, press **Tab** to bypass the field.
- The cursor moves to the **Organization:** field.

12 Enter the user's **Organization**, then press **Tab**.
- The cursor moves to the **City:** field.

13 Enter the **City:** to which the payment due billings will be sent, then press **Tab**.
- The cursor moves to the pull-down arrow next to the **State/Province:** field.

14 Click on the pull-down arrow next to the **State/Province:** field.
- A pull-down menu appears permitting choice among a list of states.

15 Click on the choice for the user's **State** or **Province** for the billing address, then press **Tab**.
- The cursor moves to the **Zip/Postal Code:** field.

16 Enter the **Zip/Postal Code:** for the billing address, then press **Tab**.
- The cursor moves to the pull-down arrow next to the **Country:** field.

17 Click on the pull-down arrow next to the **Country:** field.
- A pull-down menu appears permitting choice among a list of countries.

18 Click on the choice for the **Country:** to which the payment due billings will be sent, then press **Tab**.
- The cursor moves to the **Telephone:** field.

19 Enter the **Telephone number** used at the billing address, then press **Tab**.
- The cursor moves to the **Fax:** field.

20 Enter the **Fax number** used at the billing address, then press **Tab**.
- The **Billing Address** folder is now complete.

Table 19.1-8. Enter Billing Address for Account (1 of 2)

Step	What to Do	Action to Take
1	Select **Billing Address** folder	**single-click**
2	Move cursor to **Title:** field	**single-click**
3	Enter user's **Title**	**enter text; press Tab**
4	Enter user's **First Name**	**enter text; press Tab**
5	Enter user's **Middle Initial**	**enter text; press Tab**

Table 19.1-8. Enter Billing Address for Account (2 of 2)

Step	What to Do	Action to Take
6	Enter user's **Last Name**	**enter text; press Tab**
7	Enter user's **billing address**	**enter text; press Tab**
8	Enter any second line of user's **billing address**	**enter text; press Tab**
9	Enter any third line of user's **billing address**	**enter text; press Tab**
10	Enter the user's **organization**	**enter text; press Tab**
11	Enter **city** of user's billing address	**enter text; press Tab**
12	Open **State/Province:** pull-down menu	**single-click**
13	Select **State/Province** of the user's billing address	**single-click; press Tab**
14	Enter the **Zip/Postal Code**	**enter text; press Tab**
15	Open **Country:** pull-down menu	**single-click**
16	Select **Country** of the user's billing address	**single-click; press Tab**
17	Enter **telephone number**	**enter text; press Tab**
18	Enter **fax number**	**enter text; press Tab**

19.1.3.5 Enter Account Information and Create the User Account

The **Account Information** folder contains the date the account was created, expiration date, account number, privilege level, NASA User designation, V0 Gateway User Category, V0 Gateway User Type, V0 Gateway Password, and indication whether the user is authorized to order ASTER L1B data. Once the information is entered in this folder, completing all required information in the five sub-folders under the **Request Account** tab, a click on the **Create Account** button at the bottom of the window establishes the account. It also results in automatic dispatch of an e-mail message to the user's e-mail address with notification that the account has been created. The User Services representative will complete the account registration process by providing the user with the initial ECS account password (in this special case where User Services is creating an account for a user; normally, when a user registers through access to the URL and web interface, the password is selected at that time by the user as part of the registration process). The password dissemination is done in accordance with local DAAC policy. The system deletes an account when the expiration date is reached. One week prior to the expiration date, an e-mail message is sent to the user and to User Services with notification that the account will be deleted on the expiration date. This date is ordinarily used when an account is "cancelled" (placed on probation due to non-payment of bills). This procedure assumes that the operator has the ECS User Account Management tool opened at the SMC with the **Request Account** tab selected. Table 19.1-9 presents the steps required to enter the account information. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Click the **Account Information** folder.
- The **Account Information** folder information is displayed.

2 Click on the **Expiration Date:** field.
- The cursor moves to the **Expiration Date:** field.

3 Enter the **Expiration Date** only if required by the DAAC for new accounts, then press **Tab**.
- The cursor moves to the **Privilege Level:** field.

4 Click on the pull-down arrow next to the **Privilege Level:** field.
- A pull-down menu appears with choices of **XPRESS**, **VHigh**, **HIGH**, **NORMAL**, and **LOW**.

5 Click on the appropriate choice for **Privilege Level**.
- The selected choice appears in the **Privilege Level:** field.

6 Click on the pull-down arrow next to the **NASA User:** field.
- A pull-down menu appears with choices of **Privileged**, **Regular**, and **Non-NASA**.

7 Click on the appropriate choice for **NASA User**.
- The selected choice appears in the **NASA User:** field.

8 Click on the pull-down arrow next to the **V0 Gateway Category:** field.
- A pull-down menu appears with the choices of **USA** and **Non-USA**.

9 Click on the appropriate choice for **V0 Gateway Category**.
- The selected choice appears in the **V0 Gateway Category:** field.

10 Click on the pull-down arrow next to the **V0 Gateway User Type:** field.
- A pull-down menu appears with the choices of **DAACOPS**, **ECSDEV**, **V0CERES**, and **GUEST**.

11 Click on the appropriate choice for **V0 Gateway User Type**.
- The selected choice appears in the **V0 Gateway User Type:** field.

12 Click in the **V0 Gateway Password:** field.
- The cursor moves to the **V0 Gateway Password:** field.

13 Enter a password that can be used temporarily with the account until the user changes it to a personally selected one, and note the password to be sent to the user.
- The typed entry appears in the **V0 Gateway Password:** field.

14 If the user is to be authorized for ASTER L1B requests, click on the check button next to **Authorize for ASTER L1B**.

- The check button appears to be depressed.
- The Account Information folder is complete.

15 When the information is complete, click the **Create Account** button.

- The account is created; a confirming email is sent to the user and the account and its information is now available in the approved list on the **Profile Account** folder.

Table 19.1-9. Enter Account Information and Create the User Account

Step	What to Do	Action to Take
1	Select **Account Information** folder	**single-click**
2	Move cursor to **Expiration Date:** field	**single-click**
3	If required by DAAC, enter **expiration date**	**enter text; press Tab**
4	Open **Privilege Level:** pull-down menu	**single-click**
5	Select appropriate **privilege level**	**single-click**
6	Open **NASA User:** pull-down menu	**single-click**
7	Select choice for **NASA User**	**single-click**
8	Open **V0 Gateway Category:** pull-down menu	**single-click**
9	Select choice for **V0 Gateway Category**	**single-click**
10	Open **V0 Gateway User Type:** pull-down menu	**single-click**
11	Select choice for **V0 Gateway User Type**	**single-click**
12	Move cursor to **V0 Gateway Password:** field	**single-click**
13	Enter ***Password***	**enter text**
14	If appropriate, select check button to **Authorize for ASTER L1B**	**single-click**
15	Activate the **Create Account** button	**single-click**

19.1.4 Edit/Modify an Existing Account

User Services has the responsibility of maintaining ECS user accounts. Part of this responsibility is to stay in close contact with the user to ensure that the records containing the users' shipping and billing addresses, as well as the remainder of the information maintained in the user account folders, are up-to-date. There are six folders containing information about the user. The six folders are maintained in the ECS User Account Management tool. Three of the folders contain addresses: **Mailing Address**, **Shipping Address**, and **Billing Address**. All the addresses can be the same; however, some companies may have different addresses for accounts receivable, regular correspondence, and the shipment of data. When an address change requested by a user does not indicate which address folder to change, User Services must contact the user for this information. User Services may have reviewed the previous address folders and noticed that the

three folders contained the same previous address; however, it is inappropriate to assume that the same circumstances apply now. Always contact the user to make sure. The remaining three folders contain **Personal Information**, **Account Information**, and **DAR Information**. The **Profile Account** folder, which is located in the ECS User Account Management tool, is used for all editing and modifications.

19.1.4.1 Edit/Modify Personal Information

Table 19.1-10 presents the steps required to edit/modify personal information for a user's account. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **ECS User Account Management** application GUI at the SMC (refer to Procedure 19.1.1 **Launch Account Management Application Using UNIX Commands**).

- The **ECS User Account Management** window is displayed; at the SMC, two top-level tabs are displayed: **Request Account** and **Profile Account**.

2 Click on the **Profile Account** tab.

- Folders and fields applicable to existing accounts are displayed.

3 Click on the **Retrieve by DAAC** option button and select your DAAC from the displayed list, or select **All**.

- The selected choice is displayed on the option button.

4 Click on the **Retrieve** button.

- The account list field displays the list of accounts for the option selected in Step 2.

5 If desired, enter a search criterion, either using the **Find** field (located to the right of the **Find** button just below the account listing box) and clicking **Find**, or by clicking on the **User ID** or **Last Name** button and entering an appropriate ID or name in the associated text field; click on the **Retrieve** button.

- Account(s) meeting the entered search criterion are displayed (***Note***: The search functions are case-sensitive.)

6 Scroll through the accounts listed (if necessary) until the desired account is visible, then click on the account to highlight it.

- Six folders are displayed that contain detailed information about the selected account: **Account Information**, **Personal Information**, **Shipping Address**, **Billing Address**, **Mailing Address**, and **DAR Information**.

7 Click on the **Personal Information** tab.
- The **Personal Information** folder information is displayed.

8 Click in the field where the information is to be modified (e.g., if the organization with which the user is affiliated is to be changed, click in the **Organization:** field).
- The cursor moves to the selected field.

9 Enter the new information, and then press the **Tab** key.
- The cursor moves to the next field.

10 Repeat Steps 8 and 9 for any additional information to be changed.

11 Click the **Apply Edit** button to implement the change(s) to the **Personal Information** folder.
- A confirmation dialog is displayed asking **Do you really want to apply the edit?** and providing buttons labeled **Yes**, **No**, and **Help**.

12 Click on the **Yes** button in the dialog box.
- The edit is applied and the changed information is reflected in the account data.

Table 19.1-10. Edit/Modify Personal Information

Step	What to Do	Action to Take
1	Launch the **ECS User Account Management GUI** at the SMC	Use procedure in Section 19.1.1
2	Select **Profile Account** tab	**single-click**
3	Select DAAC (**Retrieve by DAAC** option button)	**click option**
4	Activate **Retrieve** button	**single-click**
5	Filter with **Find** or search criterion field and **Retrieve**	**enter text; single-click**
6	Scroll and highlight desired account	**single-click**
7	Select **Personal Information** tab	**single-click**
8	Move cursor to field to be changed	**single-click**
9	Enter changes	**enter text; press Tab**
10	Repeat Steps 8 and 9 for any additional changes	
11	Activate the **Apply Edit** button	**single-click**
12	Activate the **Yes** button	**single-click**

19.1.4.2 Edit/Modify Mailing Address

Table 19.1-11 presents the steps required to edit/modify the mailing address for a user's account. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you

are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **ECS User Account Management** application GUI at the SMC (refer to Procedure 19.1.1, **Launch Account Management Application Using UNIX Commands**).

- The **ECS User Account Management** window is displayed; at the SMC, two top-level tabs are displayed: **Request Account** and **Profile Account**.

2 Click on the **Profile Account** tab.

- Folders and fields applicable to existing accounts are displayed.

3 Click on the **Retrieve by DAAC** option button and select your DAAC from the displayed list, or select **All**.

- The selected choice is displayed on the option button.

4 Click on the **Retrieve** button.

- The account list field displays the list of accounts for the option selected in Step 2.

5 If desired, enter a search criterion, either using the **Find** field (located to the right of the **Find** button just below the account listing box) and clicking **Find**, or by clicking on the **User ID** or **Last Name** button and entering an appropriate ID or name in the associated text field; click on the **Retrieve** button.

- Account(s) meeting the entered search criterion are displayed (***Note***: The search functions are case-sensitive.)

6 Scroll through the accounts listed (if necessary) until the desired account is visible, then click on the account to highlight it.

- Six folders are displayed that contain detailed information about the selected account: **Account Information**, **Personal Information**, **Shipping Address**, **Billing Address**, **Mailing Address**, and **DAR Information**.

7 Click on the **Mailing Address** tab.

- The **Mailing Address** folder information is displayed.

8 Click in the field where the information is to be modified (e.g., if the city in the mailing address is to be changed, click in the **City:** field).

- The cursor moves to the selected field.

9 Enter the new information, and then press the **Tab** key.

- The cursor moves to the next field.

10 Repeat Steps 8 and 9 for any additional information to be changed.

11 Click the **Apply Edit** button to implement the change(s) to the **Mailing Address** folder.
- A confirmation dialog is displayed asking **Do you really want to apply the edit?** and providing buttons labeled **Yes**, **No**, and **Help**.

12 Click on the **Yes** button in the dialog box.
- The edit is applied and the changed information is reflected in the account data.

Table 19.1-11. Edit/Modify Mailing Address

Step	What to Do	Action to Take
1	Launch the **ECS User Account Management GUI** at the SMC	Use procedure in Section 19.1.1
2	Select **Profile Account** tab	**single-click**
3	Select DAAC (**Retrieve by DAAC** option button)	**click option**
4	Activate **Retrieve** button	**single-click**
5	Filter with **Find** or search criterion field and **Retrieve**	**enter text; single-click**
6	Scroll and highlight desired account	**single-click**
7	Select **Mailing Address** tab	**single-click**
8	Move cursor to field to be changed	**single-click**
9	Enter changes	**enter text; press Tab**
10	Repeat Steps 8 and 9 for any additional changes	
11	Activate the **Apply Edit** button	**single-click**
12	Activate the **Yes** button	**single-click**

19.1.4.3 Edit/Modify Shipping Address

Table 19.1-12 presents the steps required to edit/modify the shipping address for a user's account. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **ECS User Account Management** application GUI at the SMC (refer to Procedure 19.1.1 **Launch Account Management Application Using UNIX Commands**).
- The **ECS User Account Management** window is displayed; at the SMC, two top-level tabs are displayed: **Request Account** and **Profile Account**.

2 Click on the **Profile Account** tab.
- Folders and fields applicable to existing accounts are displayed.

3 Click on the **Retrieve by DAAC** option button and select your DAAC from the displayed list, or select **All**.

- The selected choice is displayed on the option button.

4 Click on the **Retrieve** button.

- The account list field displays the list of accounts for the option selected in Step 2.

5 If desired, enter a search criterion, either using the **Find** field (located to the right of the **Find** button just below the account listing box) and clicking **Find**, or by clicking on the **User ID** or **Last Name** button and entering an appropriate ID or name in the associated text field; click on the **Retrieve** button.

- Account(s) meeting the entered search criterion are displayed (***Note***: The search functions are case-sensitive.)

6 Scroll through the accounts listed (if necessary) until the desired account is visible, then click on the account to highlight it.

- Six folders are displayed that contain detailed information about the selected account: **Account Information**, **Personal Information**, **Shipping Address**, **Billing Address**, **Mailing Address**, and **DAR Information**.

7 Click on the **Shipping Address** tab.

- The **Shipping Address** folder information is displayed.

8 Click in the field where the information is to be modified (e.g., if the city in the shipping address is to be changed, click in the **City:** field).

- The cursor moves to the selected field.

9 Enter the new information, and then press the **Tab** key.

- The cursor moves to the next field.

10 Repeat Steps 8 and 9 for any additional information to be changed.

11 Click the **Apply Edit** button to implement the change(s) to the **Shipping Address** folder.

- A confirmation dialog is displayed asking **Do you really want to apply the edit?** and providing buttons labeled **Yes**, **No**, and **Help**.

12 Click on the **Yes** button in the dialog box.

- The edit is applied and the changed information is reflected in the account data.

Table 19.1-12. Edit/Modify Shipping Address

Step	What to Do	Action to Take
1	Launch the **ECS User Account Management GUI** at the SMC	Use procedure in Section 19.1.1
2	Select **Profile Account** tab	**single-click**
3	Select DAAC (**Retrieve by DAAC** option button)	**click option**
4	Activate **Retrieve** button	**single-click**
5	Filter with **Find** or search criterion field and **Retrieve**	**enter text; single-click**
6	Scroll and highlight desired account	**single-click**
7	Select **Shipping Address** tab	**single-click**
8	Move cursor to field to be changed	**single-click**
9	Enter changes	**enter text; press Tab**
10	Repeat Steps 8 and 9 for any additional changes	
11	Activate the **Apply Edit** button	**single-click**
12	Activate the **Yes** button	**single-click**

19.1.4.4 Edit/Modify Billing Address

Table 19.1-13 presents the steps required to edit/modify the billing address for a user's account. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **ECS User Account Management** application GUI at the SMC (refer to Procedure 19.1.1, **Launch Account Management Application Using UNIX Commands**).

- The **ECS User Account Management** window is displayed; at the SMC, two top-level tabs are displayed: **Request Account** and **Profile Account**.

2 Click on the **Profile Account** tab.

- Folders and fields applicable to existing accounts are displayed.

3 Click on the **Retrieve by DAAC** option button and select your DAAC from the displayed list, or select **All**.

- The selected choice is displayed on the option button.

4 Click on the **Retrieve** button.

- The account list field displays the list of accounts for the option selected in Step 2.

5 If desired, enter a search criterion, either using the **Find** field (located to the right of the **Find** button just below the account listing box) and clicking **Find**, or by clicking on the **User ID** or **Last Name** button and entering an appropriate ID or name in the associated text field; click on the **Retrieve** button.

- Account(s) meeting the entered search criterion are displayed (***Note***: The search functions are case-sensitive.)

6 Scroll through the accounts listed (if necessary) until the desired account is visible, then click on the account to highlight it.

- Six folders are displayed that contain detailed information about the selected account: **Account Information**, **Personal Information**, **Shipping Address**, **Billing Address**, **Mailing Address**, and **DAR Information**.

7 Click on the **Billing Address** tab.

- The **Billing Address** folder information is displayed.

8 Click in the field where the information is to be modified (e.g., if the city in the billing address is to be changed, click in the **City:** field).

- The cursor moves to the selected field.

9 Enter the new information, and then press the **Tab** key.

- The cursor moves to the next field.

10 Repeat Steps 8 and 9 for any additional information to be changed.

11 Click the **Apply Edit** button to implement the change(s) to the **Billing Address** folder.

- A confirmation dialog is displayed asking **Do you really want to apply the edit?** and providing buttons labeled **Yes**, **No**, and **Help**.

12 Click on the **Yes** button in the dialog box.

- The edit is applied and the changed information is reflected in the account data.

Table 19.1-13. Edit/Modify Billing Address (1 of 2)

Step	What to Do	Action to Take
1	Launch the **ECS User Account Management GUI** at the SMC	Use procedure in Section 19.1.1
2	Select **Profile Account** tab	**single-click**
3	Select DAAC (**Retrieve by DAAC** option button)	**click option**
4	Activate **Retrieve** button	**single-click**
5	Filter with **Find** or search criterion field and **Retrieve**	**enter text; single-click**
6	Scroll and highlight desired account	**single-click**

Table 19.1-13. Edit/Modify Billing Address (2 of 2)

Step	What to Do	Action to Take
7	Select **Billing Address** tab	**single-click**
8	Move cursor to field to be changed	**single-click**
9	Enter changes	**enter text; press Tab**
10	Repeat Steps 8 and 9 for any additional changes	
11	Activate the **Apply Edit** button	**single-click**
12	Activate the **Yes** button	**single-click**

19.1.4.5 Edit/Modify Account Information

Table 19.1-14 presents the steps required to edit/modify the account information for a user's account. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **ECS User Account Management** application GUI at the SMC (refer to Procedure 19.1.1, **Launch Account Management Application Using UNIX Commands**).

- The **ECS User Account Management** window is displayed; at the SMC, two top-level tabs are displayed: **Request Account** and **Profile Account**.

2 Click on the **Profile Account** tab.

- Folders and fields applicable to existing accounts are displayed.

3 Click on the **Retrieve by DAAC** option button and select your DAAC from the displayed list, or select **All**.

- The selected choice is displayed on the option button.

4 Click on the **Retrieve** button.

- The account list field displays the list of accounts for the option selected in Step 2.

5 If desired, enter a search criterion, either using the **Find** field (located to the right of the **Find** button just below the account listing box) and clicking **Find**, or by clicking on the **User ID** or **Last Name** button and entering an appropriate ID or name in the associated text field; click on the **Retrieve** button.

- Account(s) meeting the entered search criterion are displayed (***Note***: The search functions are case-sensitive.)

6 Scroll through the accounts listed (if necessary) until the desired account is visible, then click on the account to highlight it.

- Six folders are displayed that contain detailed information about the selected account: **Account Information**, **Personal Information**, **Shipping Address**, **Billing Address**, **Mailing Address**, and **DAR Information**.

7 Click on the **Account Information** tab.

- The **Account Information** folder information is displayed.

8 Click in the field where the information is to be modified (e.g., if the user's privilege level is to be changed, click on the pull-down arrow next to the **Privilege Level:** field).

- A pull-down menu appears with choices of **XPRESS**, **VHigh**, **HIGH**, **NORMAL**, and **LOW**.

9 Click on the choice for the new privilege level, and then press the **Tab** key.

- The selected choice appears in the **Privilege Level:** field.

10 Repeat Steps 8 and 9 for any additional information to be changed by use of pull-down menus.

- ***Note***: The **V0 Gateway Password:** field is not available for change (grayed out). If a user forgets the password, there is a link on the EOS Data Gateway (EDG) start page for **Forgot My Password**, through which a user can have a new, system-generated password sent by email. There is no requirement for User Services to change a user's password.

11 If the change is to authorize the user for ASTER L1B requests, or if the user is currently authorized for ASTER L1B requests but the authorization is to be removed, click on the check button next to **Authorize for ASTER L1B**.

- The check button appears to change state, from unselected to depressed or depressed to unselected, respectively.

12 Click the **Apply Edit** button to implement the change(s) to the **Account Information** folder.

- A confirmation dialog is displayed asking **Do you really want to apply the edit?** and providing buttons labeled **Yes**, **No**, and **Help**.

13 Click on the **Yes** button in the dialog box.

- The edit is applied and the changed information is reflected in the account data.

Table 19.1-14. Edit/Modify Account Information

Step	What to Do	Action to Take
1	Launch the **ECS User Account Management GUI** at the SMC	Use procedure in Section 19.1.1
2	Select **Profile Account** tab	**single-click**
3	Select DAAC (**Retrieve by DAAC** option button)	**click option**
4	Activate **Retrieve** button	**single-click**
5	Filter with **Find** or search criterion field and **Retrieve**	**enter text; single-click**
6	Scroll and highlight desired account	**single-click**
7	Select **Shipping Address** tab	**single-click**
8	Open pull-down menu in field to be changed by selection from pull-down menu	**single-click**
9	Select choice from pull-down menu	**single-click**
10	Repeat Steps 8 and 9 for any additional changes for fields with pull-down menus	
11	If ASTER L1B access is to be changed, activate check button for **Authorize for ASTER L1B**	**single-click**
12	Activate the **Apply Edit** button	**single-click**
13	Activate the **Yes** button	**single-click**

19.1.4.6 Edit/Modify DAR Information for Account

The **DAR Information** folder contains an indication of user privileges for ASTER expedited data requests and ASTER categories. Such special privileges cannot be selected by a user when registering on the registration web page accessible from the EOS Data Gateway (EDG) tool. Instead the user who needs special privileges (e.g., permission to submit an ASTER Data Acquisition Request) must contact User Services to request the authorization. For a user approved for the special privilege, User Services then accesses the Account Management tool at the SMC and edits the **DAR Information** folder to provide the authorization. Table 19.1-15 presents the steps required to modify the DAR information for authorization. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **ECS User Account Management** application GUI at the SMC (refer to Procedure 19.1.1, **Launch Account Management Application Using UNIX Commands**).

- The **ECS User Account Management** window is displayed; at the SMC, two top-level tabs are displayed: **Request Account** and **Profile Account**.

2 Click on the **Profile Account** tab.
- Folders and fields applicable to existing accounts are displayed.

3 Click on the **Retrieve by DAAC** option button and select your DAAC from the displayed list, or select **All**.
- The selected choice is displayed on the option button.

4 Click on the **Retrieve** button.
- The account list field displays the list of accounts for the option selected in Step 2.

5 If desired, enter a search criterion, either using the **Find** field (located to the right of the **Find** button just below the account listing box) and clicking **Find**, or by clicking on the **User ID** or **Last Name** button and entering an appropriate ID or name in the associated text field; click on the **Retrieve** button.
- Account(s) meeting the entered search criterion are displayed (***Note***: The search functions are case-sensitive.)

6 Scroll through the accounts listed (if necessary) until the desired account is visible, then click on the account to highlight it.
- Six folders are displayed that contain detailed information about the selected account: **Account Information**, **Personal Information**, **Shipping Address**, **Billing Address**, **Mailing Address**, and **DAR Information**.

7 Click the **DAR Information** folder.
- The **DAR Information** folder opens.
- The displayed fields indicate no ASTER privileges.

8 Click on the pull-down arrow to the right of the **Dar Expedited Data** field.
- A pull-down menu appears with choices of **Yes** and **No**.

9 Click on the choice to indicate whether the user is (**Yes**) or is not (**No**) approved for requesting expedited data, then press **Tab**.
- The selected choice appears in the **Dar Expedited Data** field and the cursor moves to the **Aster Category** field.

10 Click on the pull-down arrow to the right of the **Aster Category** field.
- A pull-down menu appears with numerous choices for ASTER DAR privileges.

11 Click on the choice to indicate the category for which the user has been approved.
- The **Aster Category** field displays the selected category.

12 Click the **Apply Edit** button to implement the change(s) to the **DAR Information** folder.

- A confirmation dialog is displayed asking **Do you really want to apply the edit?** and providing buttons labeled **Yes**, **No**, and **Help**.

13 Click on the **Yes** button in the dialog box.

- The edit is applied and the changed information is reflected in the account data.

Table 19.1-15. Edit/Modify DAR Information

Step	What to Do	Action to Take
1	Launch the **ECS User Account Management GUI** at the SMC	Use procedure in Section19.1.1
2	Select **Profile Account** tab	**single-click**
3	Select DAAC (**Retrieve by DAAC** option button)	**click option**
4	Activate **Retrieve** button	**single-click**
5	Filter with **Find** or search criterion field and **Retrieve**	**enter text; single-click**
6	Scroll and highlight desired account	**single-click**
7	Select **DAR Information** tab	**single-click**
8	Open pull-down menu in **Dar Expedited Data** field	**single-click**
9	Select choice from pull-down menu	**single-click**
10	Open pull-down menu in **Aster Category** field	**single-click**
11	Select choice from pull-down menu	**single-click**
12	Activate **Apply Edit** button	**single-click**
13	Activate the **Yes** button	**single-click**

19.1.5 Delete an ECS Account

An ECS user can be deleted from the ECS database through the ECS User Account Management tool. Upon receipt of instructions to delete a user, User Services retrieves the user's account, validates the account scheduled for deletion, then completes the deletion. The Personal Information folder is generally the folder used to validate an account because it has the most information about the user (e.g., Name, Title, E-mail address, Organization, Telephone Number). Table 19.1-16 presents the steps required to delete an ECS account. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **ECS User Account Management** application GUI at the SMC (refer to Procedure 19.1.1, **Launch Account Management Application Using UNIX Commands**).

- The **ECS User Account Management** window is displayed; at the SMC, two top-level tabs are displayed: **Request Account** and **Profile Account**.

2 Click on the **Profile Account** tab.

- Folders and fields applicable to existing accounts are displayed.

3 Click on the **Retrieve by DAAC** option button and select your DAAC from the displayed list, or select **All**.

- The selected choice is displayed on the option button.

4 Click on the **Retrieve** button.

- The account list field displays the list of accounts for the option selected in Step 2.

5 If desired, enter a search criterion, either using the **Find** field (located to the right of the **Find** button just below the account listing box) and clicking **Find**, or by clicking on the **User ID** or **Last Name** button and entering an appropriate ID or name in the associated text field; click on the **Retrieve** button.

- Account(s) meeting the entered search criterion are displayed (***Note***: The search functions are case-sensitive.)

6 Scroll through the accounts listed (if necessary) until the desired account is visible, then click on the account to highlight it.

- Six folders are displayed that contain detailed information about the selected account: **Account Information**, **Personal Information**, **Shipping Address**, **Billing Address**, **Mailing Address**, and **DAR Information**.

7 Click the **View Entire Profile** button to review the account information and verify that the selected account is the one to be deleted.

- The User Profile screen displays the information contained in the **Personal Information** folder, **Account Information** folder, **Shipping Address** folder, **Billing Address** folder, **Mailing Address** folder, and the **DAR Information** folder.
- View the folder to validate the account scheduled for deletion.

8 After examining the displayed information to verify the user's account, click the **Close** button to exit from the User Profile screen.

- The User Profile screen is closed.

9 Click the **Delete Account** button.

- A confirmation dialog is displayed asking **Do you really want to delete the user account?** and providing buttons labeled **Yes**, **No**, and **Help**.

10 Click on the **Yes** button in the dialog box.

- The account is deleted and its entry is removed from the list of accounts.

Table 19.1-16. Delete an ECS Account

Step	What to Do	Action to Take
1	Launch the **ECS User Account Management GUI** at the SMC	Use procedure in Section19.1.1
2	Select **Profile Account** tab	**single-click**
3	Select DAAC (**Retrieve by DAAC** option button)	**click option**
4	Activate **Retrieve** button	**single-click**
5	Filter with **Find** or search criterion field and **Retrieve**	**enter text; single-click**
6	Scroll and highlight desired account	**single-click**
7	Activate the **View Entire Profile** button	**single-click**
8	Activate the **Close** button	**single-click**
9	Activate the **Delete Account** button	**single-click**
10	Activate the **Yes** button	**single-click**

19.1.6 Cancel an ECS Account (Probation)

User Services may cancel an ECS user account, which differs from deleting the account because it does not immediately remove the account from the database. It merely imposes a temporary probation period for the user's privileges, for an appropriate cause, such as failure to satisfy a payment due for services previously provided, or some other abuse of privileges. The process involves establishing an expiration date, upon which the account will be deleted from the database unless the cause of sanction is removed. If it becomes necessary to cancel an account, use the ECS User Account Management tool to retrieve and verify the account, and then proceed with the cancellation/sanction. Then contact the user with information that the account will be deleted and account privileges will be lost if the payment has not been received (or other cause has been rectified) by a specified date. Table 19.1-17 presents the steps required to cancel an ECS account (impose an expiration date). If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **ECS User Account Management** application GUI at the SMC (refer to Procedure 19.1.1 **Launch Account Management Application Using UNIX Commands**).

- The **ECS User Account Management** window is displayed; at the SMC, two top-level tabs are displayed: **Request Account** and **Profile Account**.

2 Click on the **Profile Account** tab.

- Folders and fields applicable to existing accounts are displayed.

3 Click on the **Retrieve by DAAC** option button and select your DAAC from the displayed list, or select **All**.

- The selected choice is displayed on the option button.

4 Click on the **Retrieve** button.

- The account list field displays the list of accounts for the option selected in Step 2.

5 If desired, enter a search criterion, either using the **Find** field (located to the right of the **Find** button just below the account listing box) and clicking **Find**, or by clicking on the **User ID** or **Last Name** button and entering an appropriate ID or name in the associated text field; click on the **Retrieve** button.

- Account(s) meeting the entered search criterion are displayed (***Note***: The search functions are case-sensitive.)

6 Scroll through the accounts listed (if necessary) until the desired account is visible, then click on the account to highlight it.

- Six folders are displayed that contain detailed information about the selected account: **Account Information**, **Personal Information**, **Shipping Address**, **Billing Address**, **Mailing Address**, and **DAR Information**.

7 Click the **View Entire Profile** button to review the account information and verify that the selected account is the one to be canceled (placed on probation).

- The User Profile screen displays the information contained in the **Personal Information** folder, **Account Information** folder, **Shipping Address** folder, **Billing Address** folder, **Mailing Address** folder, and the **DAR Information** folder.
- View the folder to validate the account scheduled for cancellation.

8 After examining the displayed information to verify the user's account, click the **Close** button to exit from the User Profile screen.

- The User Profile screen is closed.

9 Click the **Account Information** folder.

- The **Account Information** folder information is displayed.

10 Click on the **Expiration Date:** field.

- The cursor moves to the **Expiration Date:** field.

11 Enter an **Expiration Date** specifying the date on which the account is to be deleted if the user does not remove the cause for the probation.

- The entered date is displayed in the **Expiration Date:** field.

12 Click the **Apply Edit** button to implement the change to the **Account Information** folder.

- A confirmation dialog is displayed asking **Do you really want to apply the edit?** and providing buttons labeled **Yes**, **No**, and **Help**.

13 Click on the **Yes** button in the dialog box.

- The edit is applied and the changed information is reflected in the account data.
- When the expiration date is reached, the account is automatically deleted from the system.
- If the user takes action to resolve the issue before the expiration date is reached, the account may be reinstated by repeating this procedure, but at Step 11 removing the expiration date or setting it back to any limit specified by DAAC policy.

Table 19.1-17. Cancel an ECS Account (Probation)

Step	What to Do	Action to Take
1	Launch the **ECS User Account Management GUI** at the SMC	Use procedure in Section 19.1.1
2	Select **Profile Account** tab	**single-click**
3	Select DAAC (**Retrieve by DAAC** option button)	**click option**
4	Activate **Retrieve** button	**single-click**
5	Filter with **Find** or search criterion field and **Retrieve**	**enter text; single-click**
6	Scroll and highlight desired account	**single-click**
7	Activate the **View Entire Profile** button	**single-click**
8	Activate the **Close** button	**single-click**
9	Select the **Account Information** tab	**single-click**
10	Move the cursor to the **Expiration Date:** field	**single-click**
11	Enter **Expiration Date**	**enter text**
12	Activate the **Apply Edit** button	**single-click**
13	Activate the **Yes** button	**single-click**

19.1.7 Troubleshooting: Check Log Files for Account Management

Troubleshooting is a process of identifying the source of problems on the basis of observed trouble symptoms. The User Account Management tool is part of the ECS System Management Support Subsystem (MSS), and uses database functions in that subsystem. If the tool cannot be launched, or does not function (e.g., cannot retrieve accounts), you will need to ask the System Administrator to ensure that the User Registration/User Profile Server is functioning properly. It may be necessary to have the Database Administrator check to ensure that there are no problems with the database.

It is also possible to receive error messages when using the GUI while it is apparently functioning normally. Error messages and suggested corrective actions associated with the User

Account Management tool are listed in Appendix A of the *Operations Tools Manual* (Document 609-EMD-001).

Log files can often provide information that will identify possible sources of disruption in Account Management server function or communications, suggesting additional checks or actions that may help resolve the problem. Table 19.1-18 presents the steps required to check log files for account management. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 To log in to the host for the server and log(s) to be examined, type **/tools/bin/ssh <*hostname*>** and then press the **Return/Enter** key.
- For **<*hostname*>**, use **<*x*>0mss21**, where **<*x*>** = **e** for EDC, **g** for GSFC, **l** for LaRC, or **n** for NSIDC.
- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 2.
- If you have not previously set up a secure shell passphrase; go to Step 3.

2 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 4.
- The prompt reflects the login to the selected host.

3 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.
- The prompt reflects the login to the selected host.

4 Type **cd /usr/ecs/<*MODE*>/CUSTOM/logs** and then press the **Return/Enter** key.
- The prompt reflects the change to directory **/usr/ecs/<*MODE*>/CUSTOM/logs**.

5 To view a server log, type **pg *filename*** and then press the **Return/Enter** key.
- ***filename*** refers to the account management log file to be reviewed (e.g., **EcMs AcRegUserSrvr.ALOG**, **EcMsAcRegUserSrvrDebug.log**).
- The first page of the log file is displayed; additional sequential pages can be displayed by pressing the **Return/Enter** key at the **:** prompt.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **more**, **tail**) can be used to review the log file.
- Typically, the **<*server*>Debug.log** captures more detailed information than the **<*server*>.ALOG**. However, for some servers (e.g., **SDSRV**), there may be significant detail in the **<*server*>.ALOG**. It is also important to note that the

DebugLevel setting in the <***server***>**.CFG** file determines the level of detail captured in the <***server***>**Debug.log** (**0** is off, a setting of **1** captures status and errors, a setting of **2** captures major events, and a setting of **3** is a full trace recording of all activity). If the **DebugLevel** has been set to one of the lower levels during operations, the System Administrator may set it to **3** during troubleshooting.

6 Review the log file(s) to determine if there are any indications of connection problems or errors at start up.

- The **EcMsAcRegUserSrvrDebug.log** file for the User Profile/User Registration server may contain an error message concerning **PF Init** or some connection error or problem (notify the System Administrator).
- The **EcMsAcRegUserSrvr.ALOG** file may contain evidence of a Sybase error (e.g., **SybaseErrorCode1 =92014;SybaseErrorMesage1 ="*x*0mss21_srvr"** or **SybaseErrorCode2 =16;SybaseErrorMesage2 =""**) (notify the Database Administrator).

7 To exit the **pg** review of the log file, type **q** at the **:** prompt and then press the **Return/Enter** key.

Table 19.1-18. Check Log Files for Account Management

Step	What to Do	Action to Take
1	**/tools/bin/ssh *hostname***	**enter text; press Return/Enter**
2	***Passphrase*** (or Step 3)	**enter text; press Return/Enter**
3	***Password***	**enter text; press Return/Enter**
4	**cd /usr/ecs/*MODE*/CUSTOM/logs**	**enter text; press Return/Enter**
5	**pg *filename***	**enter text; press Return/Enter**
6	Review log file	**read text**
7	To exit, type **q** at the **:** prompt	**enter text; press Return/Enter**

19.2 Create/Update a User Contact Log Record

Any User Services event (user contact for any reason) is a cue for the User Services representative to create a record in the User Contact Log. Each record is assigned a unique Log ID, which can be used later to retrieve the record for review or updating with new information. The record contains other information about the user, referred to as the "contact," such as name, telephone number, e-mail address, home DAAC, and organization. It also documents the means of contact, the name of the person who received the contact, and the time of the contact, as well as descriptions of the reason for it.

The User Contact Log is a customized application of the Remedy commercial software package. The application is launched from the Remedy initial screen with a menu or button action. The

contact log entries may then be saved, searched, retrieved, and modified. The capability to modify existing records permits tracking and updating information related to a user contact that has follow-up actions until it is closed.

Table 19.2-1 provides an Activity Checklist for creating and updating User Contact Log entries.

Table 19.2-1. Create/Update a User Contact Log Record - Activity Checklist

Order	Role	Task	Section	Complete?
1	User Services	Launch the Remedy User Contact Log Application	(P) 19.2.1	
2	User Services	Create a User Contact Log Record	(P) 19.2.2	
3	User Services	Update a User Contact Log Record	(P) 19.2.3	

19.2.1 Launch the Remedy User Contact Log Application

Table 19.2-2 presents the steps required to launch the Remedy User Contact Log application. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the UNIX command shell prompt, type **setenv DISPLAY *clientname*:0.0** and then press the **Return/Enter** key.

- For ***clientname***, use either the local terminal/workstation IP address or its machine name.

2 Start the log-in to the MSS client server by typing **/tools/bin/ssh *hostname*** *(e.g.*, g0mss21, l0mss21, e0mss21, n0mss21) at the UNIX command shell prompt, and then press the **Return/Enter** key.

- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 3.
- If you have not previously set up a secure shell passphrase; go to Step 4.

3 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 5.

4 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.

5 To change to the directory containing the utility script to start the Remedy tool, type **cd /usr/ecs/*MODE*/COTS/remedy/bin**, where ***MODE*** will likely be **TS1**, **TS2**, or **OPS**, and then press the **Return/Enter** key.

- The working directory is changed to **/usr/ecs/*MODE*/COTS/remedy/bin**.

6 Type **aruser &** and then press the **Return/Enter** key.

- A Remedy Action Request System logo window is displayed briefly, followed by a Remedy initial screen from which a number of ECS application forms, including the User Contact Log, may be launched.

7 Follow menu path **File → Open** or click on the leftmost button near the top of the window.

- The **Open** dialog box is displayed, showing choices including: **RelB-Contact Log**, **RelB-TT-ForwardToSite**, **RelB-TroubleTickets**, and **TroubleTicket-Xfer**.

8 Click on **RelB-Contact Log** to highlight it and then click on the **New** button.

- The **New RelB Contact Log** window is displayed.

Table 19.2-2. Launch the Remedy User Contact Log Application

Step	What to Do	Action to Take
1	**setenv DISPLAY *clientname*:0.0**	**enter text; press Return/Enter**
2	**/tools/bin/ssh *hostname***	**enter text; press Return/Enter**
3	***Passphrase*** (or Step 4)	**enter text; press Return/Enter**
4	***Password***	**enter text; press Return/Enter**
5	**cd /usr/ecs/*MODE*/COTS/remedy/bin**	**enter text; press Return/Enter**
6	**aruser &**	**enter text; press Return/Enter**
7	Menu path **File → Open**	**click option**
8	Highlight **RelB-Contact Log** and activate **New** button	**clicks**

19.2.2 Create a User Contact Log Record

Table 19.2-3 presents the steps required to create a User Contact Log record. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **Remedy User Contact Log** application (refer to Procedure 19.2.1 **Launch the Remedy User Contact Log Application**).

- The **New RelB Contact Log** window is displayed.

2 Click on the **Contact Method** field.

- The cursor moves to the **Contact Method** field.

3 Enter the **Contact Method** (optional).

- A drop-down menu may also be used:
  - Place the mouse pointer on the arrow to the right of the **Contact Method** field.
  - While holding the mouse pointer button down, drag to **highlight** the **Contact Method** of your choice.
  - **Release** the mouse button.
  - The highlighted contact method appears in the **Contact Method** field.
- The methods in the drop-down box are **Phone**, **E-mail**, **Fax**, **US Mail**, and **Walk-in**.

4 Click on the **Short Description** field.

- The cursor moves to the **Short Description** field, which is 128 characters long.
- Queries that may later be used to locate existing User Contact Log records will search information in the **Short Description** field. Therefore, when you enter a short description, enter it with "search criteria" in mind.

5 Enter the **Short Description** (required).

- The typed entry appears in the **Short Description** field.

6 Click on the **Set Received Time** button (optional).

- The current time is displayed in the **Received Time** field.

7 Click on the **Long Description** field.

- The cursor moves to the **Long Description** field (used when the description requires more detail than the **Short Description** field will allow).
- The **Long Description** field is often used when a problem exists: it can help with the resolution of Trouble Tickets.

8 Enter a **Long Description** if needed (optional).

- The typed entry appears in the **Long Description** field.

9 Click on the **Contact Id** field.

- The cursor moves to the **Contact Id** field.

10 Enter the **Id** (User ID) of the person who contacted User Services.

- The **Contact Id** is not required unless a Trouble Ticket is being created from the User Contact Log.

11 If a **Contact Id** was entered at **Step 10**, click the **Set Contact Information** button and then go to **Step 22**; otherwise, go to **Step 12**.

- The system will automatically complete the **Contact Name**, **Contact Phone**, **Contact E-mail**, **Contact Home DAAC**, and **Contact Organization** fields, if the **Contact Id** has been entered (go to **Step 22**).
- If the contact is not a registered Remedy user, the contact fields must be manually completed (go to **Step 12**).

12 If the contact information was not automatically entered at **Step 11**, click in the **Contact Name** field.

- The cursor moves to the **Contact Name** field.

13 Enter the **Contact's Name** (optional).

- The typed entry appears in the **Contact Name** field.

14 Click in the **Contact Phone** field.

- The cursor moves to the **Contact Phone** field.

15 Enter the **Contact Phone** number (optional).

- The typed entry appears in the **Contact Phone** field.

16 Click on the **Contact E-mail** field.

- The cursor moves to the **Contact E-mail** field.

17 Enter the **Contact's E-mail address** (optional).

- The typed entry appears in the **Contact E-mail** field.

18 Click on the **Contact Home DAAC** field.

- The cursor moves to the **Contact Home DAAC** field.

19 Enter the **Contact Home DAAC** (optional).

- The typed entry appears in the **Contact Home DAAC** field.

20 Click on the **Contact Organization** field.

- The cursor moves to the **Contact Organization** field.

21 Enter the **Contact Organization** (optional).

- The typed entry appears in the **Contact Organization** field.

22 When all contact information has been entered, click in the **Receiving Operator** field.
- The cursor moves to the **Receiving Operator** field.

23 In the **Receiving Operator** field, enter the name of the operator (User Services Representative) who is creating the User Contact Log record.
- The typed entry appears in the **Receiving Operator** field.

24 Click in the **Category** field.
- The cursor moves to the **Category** field.

25 Enter the **Category**.
- A drop-down menu may also be used:
  - Place the mouse pointer on the arrow to the right of the **Category** field.
  - While holding the mouse pointer button down, drag to **highlight** the **Category** of your choice.
  - **Release** the mouse button.
  - The highlighted category appears in the **Category** field.
- The categories in the drop-down box are **Suggestion**, **Complaint**, **Concern**, **Order**, and **Subscription**.

26 Click the **Save** button near the upper right corner of the window (or follow menu path **Actions→Save**).
- The User Contact Log record is created and submitted to the database.
- A unique Id is generated for the record and entered into the **Log Id** field.
- A message **Submit successful: ID=<*site*><*nnn . . .*>** to indicate the submission and provide the record ID number.

Table 19.2-3. Create a User Contact Log Record (1 of 2)

Step	What to Do	Action to Take
1	Launch the **Remedy User Contact Log** application	Use procedure in Section 19.2.1
2	Move cursor to **Contact Method** field	**single-click**
3	Enter **Contact Method**	**enter text (or use drop-down menu)**
4	Move cursor to **Short Description** field	**single-click**
5	Enter **Short Description**	**enter text**
6	Activate **Set Received Time** button	**single-click**
7	Move cursor to **Long Description** field	**single-click**
8	Enter **Long Description**	**enter text**
9	Move cursor to **Contact Id** field	**single-click**
10	Enter **Contact Id** (required for Trouble Ticket)	**enter text**

Table 19.2-3. Create a User Contact Log Record (2 of 2)

Step	What to Do	Action to Take
11	Activate **Set Contact Information** button (if **Id** entered at Step 10; Go to Step 22)	**single-click**
12	Move cursor to **Contact Name** field	**single-click**
13	Enter **Contact Name**	**enter text**
14	Move cursor to **Contact Phone** field	**single-click**
15	Enter **Contact Phone**	**enter text**
16	Move cursor to **Contact E-mail** field	**single-click**
17	Enter **Contact E-mail**	**enter text**
18	Move cursor to **Contact Home DAAC** field	**single-click**
19	Enter **Contact Home DAAC**	**enter text**
20	Move cursor to **Contact Organization** field	**single-click**
21	Enter **Contact Organization**	**enter text**
22	Move cursor to **Receiving Operator** field	**single-click**
23	Enter **Receiving Operator**	**enter text**
24	Move cursor to **Category** field	**single-click**
25	Enter **Category**	**enter text (or use drop-down menu)**
26	Activate **Save** button (or menu **Actions→Save**)	**single-click (or use menu)**

19.2.3 Update a User Contact Log Record

When action is taken in relation to a user request for which there is an existing User Contact Log record, User Services updates the record. An update to the User Contact Log record therefore provides documentation of response to a request. The total record has several characteristics:

- It documents a user's initial request.
- It shows the progress or resolution of the contact that started the process.
- The User Contact Log record remains open until the request is completed.
- A User Contact Log record can be modified several times.
- For each modification, the log displays the operator that made the modification along with the date and time of the modification.

Table 19.2-4 presents the steps required to update a User Contact Log record. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **Remedy User Contact Log** application (refer to Procedure 19.2.1, **Launch the Remedy User Contact Log Application**).

- The **New RelB Contact Log** window is displayed.

2 Follow menu path **File→Open** or click on the leftmost button near the top of the window.

- The **Open** dialog box is displayed, showing choices including: **RelB-Contact Log**, **RelB-TT-ForwardToSite**, **RelB-TroubleTickets**, and **RelB-TT-ForwardToSMC**.

3 Click on **RelB-Contact Log** to highlight it and then click on the **Search** button.

- The **Search RelB Contact Log** window is displayed.

4 Click on the field to be used for finding the User Contact Log record to be updated (i.e., **Log Id** field. **Contact Name** field, **E-mail Address** field, or the **Short Description** field).

- The cursor is displayed in the selected field.

5 Enter the information appropriate for the selected field (i.e., **Log Id**, **Contact Name**, **E-mail Address**, or something remembered from the **Short Description**).

- The typed entry is displayed in the field.

6 Follow menu path **Actions→Search**.

- The User Contact Log record for the data request is displayed.

7 Click on the **Comment Log** field.

8 Enter a **Comment** describing the update.

- The comment should indicate the action(s) taken (e.g., **Order for data completed; 10 granules ordered.**).

9 Click the **Save** button near the upper right corner of the window (or follow menu path **Actions→Save**).

- The User Contact Log record update is submitted to the database.
- The **Modified-date** field will display the date and time of the modification.
- The **Last-Modified-by** field will display the name of the User Services Representative under whose log-in the edit is made.

10 To close a User Contact Log record, select the **Log Status** button, while holding the mouse button down, drag it to **Close**, then release the mouse button. Then save as in Step 9.

- The User Contact Log record is now closed.

Table 19.2-4. Update a User Contact Log Record

Step	What to Do	Action to Take
1	Launch the **Remedy User Contact Log** application	Use procedure in Section 19.2.1
2	Menu path **File→Open**	**click option**
3	Highlight **RelB-Contact Log** and activate **New** button	**clicks**
4	Move cursor to field for search	**single-click**
5	Enter search information	**enter text**
6	Menu path **Actions → Search**	**click option**
7	Move cursor to **Comment Log** field	**single-click**
8	Enter **Comment** describing action taken for update	**enter text**
9	Activate **Save** button (or menu **Actions→Save**)	**single-click (or use menu)**
10	To close a record, use **Log Status** button to select **Close** (then save as in Step 9)	**click-hold and drag; then single-click (or use menu)**

19.3 Process an Order

User Services may be called upon to assist a user in working with the EOS Data Gateway (EDG) Search and Order Tool to locate and order data from ECS archives. Under some circumstances, a user may need even more help, requesting User Services to perform the entire process of locating and ordering data on behalf of that user. User Services may also be called upon to provide user support for access to ECS data through the Data Pool, a repository of selected granules with associated metadata and, if available, browse granules accessible through use of a web browser to search and download by FTP. Table 19.3-1 provides an activity checklist for tasks associated with data search and order.

Table 19.3-1. Process an Order - Activity Checklist

Order	Role	Task	Section	Complete?
1	Science User/ User Services	Search and Order Data using the EDG Search and Order Tool	(P) 19.3.1	
2	Science User/ User Services	Locate and Download Data from the Data Pool using the Data Pool Web Access	(P) 19.3.2	

19.3.1 Search and Order Data Using the EDG Search and Order Tool

As a general rule, users trying to locate and obtain data from ECS probably should be directed to the EOS Data Gateway (EDG) web site to conduct their own searches. However, User Services can provide assistance or conduct the search for the user if needed. General information about data search and order, as well as specific on-line instructions, are available as follows:

- Guidance for user (User Manual for EOS Data Gateway) available on the WWW at the following URL**: http://redhook.gsfc.nasa.gov/~imswww/pub/imswelcome/**.
  - User Support links and News: technical information.
  - Frequently Asked Questions (FAQ): captures commonly sought information on terminology, search, data, and ordering with the EOS Data Gateway.
  - Tutorial: introduction to the tool and how to find and order data.
- Several approaches are available to the user.
  - Web-based Search and Order tool, for quick data access using simple search criteria; also allows easy downloading of pre-selected popular data and images; available at location http://redhook.gsfc.nasa.gov/~imswww/pub/imswelcome/.
  - Data center-specific searches; if user knows where the desired data are stored, the specific center may have a specialized tool for ordering data. Furthermore, at http://redhook.gsfc.nasa.gov/~imswww/pub/imswelcome/, the initial page contains a link to "Other Data Gateway Sites" that offer access to the EDG tool at various DAACs with useful information and links specific to those sites.
  - User Services assistance; the user may elect to have User Services do the search instead of personally accessing one of the available tools; use the EDG Web Client Search and Order Tool.

If a user requests support from User Services to locate and order data, it is appropriate to retrieve the (registered) user's account profile (see Procedure 19.1.1.1 **Retrieve Individual Account Screens on Local Read-Only GUI**) and to create a User Contact Log record for the request (see Procedure 19.2.2 **Create a User Contact Log Record**). Table 19.3-2 presents the steps required to search and order data using the EDG search and order tool. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the UNIX command shell prompt, type **setenv DISPLAY *clientname*:0.0** and then press the **Return/Enter** key.

- For ***clientname***, use either the local terminal/workstation IP address or its machine name.

2 Start the log-in to a Netscape host by typing **/tools/bin/ssh *hostname*** *(e.g.*, g0ins02, e0ins02, l0ins02, n0ins02) at the UNIX command shell prompt, and press the **Return/Enter** key.

- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 3.
- If you have not previously set up a secure shell passphrase; go to Step 4.

3 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 5.

4 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.

- You are logged in and a UNIX command shell prompt is displayed.

5 Type **netscape** and then press the **Return/Enter** key.

- The Netscape web browser is displayed.

6 Click in the **Netsite:** field.

- The field is highlighted.

7 Type **http://redhook.gsfc.nasa.gov/~imswww/pub/imswelcome** and then press the **Return/Enter** key.

- The EOS Data Gateway welcome screen is displayed, offering choices for types of entry, registration, news, user manual, sample data, and other information.

8 Click on the link for **Enter as guest**.

- If you are a registered user, you may instead click on the link for Enter as registered user and log in with your registered ID and password.
- The EOS Data Gateway Web Search and Order Tool initial Search Creation: Primary Data Search screen is displayed.
- Note: At various points in this procedure, you may encounter a security information warning. Unless you know of a specific potential danger that you must avoid, click on the **Continue submission** button when this warning is displayed.

9 Click on the **Choose Keywords for Selected Data Sets** button.

- The search screen displays an option to **Choose Keywords for One or More Categories**.

10 In the **Choose Keywords for One or More Categories** field, click on **DATA SET** and then click on the **Choose Keywords for >>** button.

- The **Keyword Selection: Data Set** screen is displayed.

11 On the **Keyword Selection: Data Set** screen, in the **Data Set List 1:** field, scroll down the list and select the data set of your choice, and then click on the **OK!** button.

- The primary search screen is displayed, indicating the selected choice as the selected data set.

12 In the **Choose Keywords for One or More Categories** field, click on **PARAMETER** and then click on the **Choose Keywords for >>** button.

- The **Keyword Selection: Parameter** screen is displayed.
- ***Note*:** The Primary Data Search screen provides a user with a button to **Show List of All Data Sets Available** as a first step in data search and order. The user may filter the list by site, or enter patterns and look for matching data sets.

13 On the **Keyword Selection: Parameter** screen, in the **Parameters:** field, select the parameter of your choice, and then click on the **OK!** button.

- The primary search screen is displayed, indicating the selected choice as the selected parameter.
- ***Note***: The **Filters for Parameter:** field permits a reduction in the number of parameters from which to choose. For example, if you are searching for **OZONE** and know that it is an **ATMOSPHERIC CHEMISTRY** parameter, you can select **ATMOSPHERIC CHEMISTRY** in the **Filters for Parameter:** field and then click the **Apply** button so that only those parameters are displayed. You can even reduce the choice to one by using a wild card filter, e.g., **OZ***.

14 In the **Choose Search Area** section of the primary data search screen, click on the radio button at the left of **Type in Lat/Lon Range** field.

- The radio button is filled in to indicate selection.
- If you select a radio button for one of the map entries, a map window is displayed; to use the map, follow instructions on the screen to create a rectangle over the area of interest on the map (the corresponding lat/lon values will be displayed in the appropriate fields when you return to the primary search screen).

15 In the Latitude and Longitude fields, enter values to define a rectangle corresponding to the requested area.

- The entered values appear in the fields.
- If desired, a click on the **<-Display lat/lon range on map** button will result in a rectangle corresponding to the selected area on the map on the left side of the **Choose Search Area** section.

16 Click in the **Start Date:** field.

- The cursor moves to the **Start Date:** field.

17 Type the date for the beginning of the time window desired for the acquisition of the desired data, in format **YYYY-MM-DD**.

- The typed entry is displayed in the field.

18 Click in the **End Date:** field.

- The cursor moves to the **End Date:** field.

19 Type the date for the end of the time window desired for the acquisition of the desired data in format **YYYY-MM-DD**.

- The typed entry is displayed in the field.

20 If desired, in the **Choose Additional Options** block near the bottom of the screen, click in one or more of the available fields to enter data specifying additional restrictions on the search (i.e., number of granules to be returned per data set, limit returns to granules with browse products, limit search time).

- Entered restrictions are reflected in the fields.
- ***Note***: There is also an indication that default metadata are returned in the search results and a **CUSTOMIZE** button for access to a screen permitting a user to select specific metadata to be returned.
- ***Note***: At the bottom of the screen, there is a block permitting a user to save the specified search criteria, and to retrieve a previously saved set of search criteria.

21 Click on the **Start Search!** Button.

- The search status screen is displayed, indicating **Search in progress . . . .**
- After a few moments, the **Results: Granule: Listing** screen is displayed.
- The system offers *Integrated Browse*; if a browse image is available for a listed granule, an **Image** link is available in the **Image Quicklook** column of the listing for that granule. A click on the **Image** link displays the available browse image.

22 If desired, click on the **Granule Attributes** link next to one of the listed granules.

- A **Data Granule Attributes** screen is displayed.
- Attributes for additional granules may be reviewed by clicking on one of the **Next/Previous Granule** links at the top of the **Data Granule Attributes** screen, or by clicking the browser **Back** button and clicking on the **Granule Attributes** link next to other listed items.

23 At the **Results: Granule: Listing** screen, click in the **Select** box(es) to select one or more granules to be ordered.

- The selected box(es) is/are filled in to indicate the selection(s).

24 Click on the **Add selections to cart** button near the top of the screen to add the *selected* data granules to the shopping cart.

- A **Data Quality Summary** screen may be displayed describing the quality status of any selected granule(s) and requiring a click on an **Accept** button at the bottom to proceed with the order.
- The **Step 1: Choose Ordering Options** screen is displayed with the list of items to be ordered (i.e., in the shopping cart).

25 Click on the **Choose Options** link next to one of the data granules selected for order.
- The **Choose Ordering Options** screen is displayed.

26 Click on the **Select** button for the desired option (e.g., **FtpPull FILEFORMAT**).
- The **Select** button is filled to indicate selection of the option.

27 Below the list of options, make a selection to indicate whether the selected packaging option is to apply to all items in the data set in the shopping cart, or just to the single granule. If the selection is to apply just to the single granule, use the browser **Back** button to go back and then repeat Steps 25 and 26 for any additional granules.

28 Click on the **Ok! Accept my choice & return to the shopping cart!** button.
- The **Step 1: Choose Ordering Options** screen is displayed with indications that the selected granules are ready to order.

29 Click on the **Go to Step 2: Order Form** button.
- The **Step 2: Order Form** screen is displayed.

30 Click in the **First name:** field
- The cursor moves to the **First name:** field.

31 Type the user's **first name**.
- The typed entry appears in the field.

32 Click in the **Last name:** field.
- The cursor moves to the **Last name:** field.

33 Type the user's **last name**.
- The typed entry appears in the field.

34 Fill in the other required fields (**Internet email address:**, **Street Address:**, **City:**, **State/Province:**, **Country:**, and **Telephone:**) by clicking in each field and typing an appropriate entry.
- The typed entries are displayed in the fields.
- ***Note***: The user can save the entered information in a profile, and provide information about ECS access. This is accomplished by clicking on the **User Preferences** link in the "navigator" area on the left side of the screen, and making appropriate entries on the resulting **User Preferences** screen. At the bottom of this screen, a user who is registered as an ECS user can enter a user name and password for ECS access.

35 Click on the option button to the right of the **Type:** field and select the appropriate type of organization or location for the user from the displayed list.

- The selected option is displayed in the field.

36 Click on the option button to the right of the **Category:** field and select **USA** (or **Non-USA** if appropriate) from the displayed list.

- The selected option is displayed in the field.

37 Click on the **Submit Order Now!** button or the **Go to Step 3: Review Order Summary** button.

- If you clicked on **Submit Order Now!**, the order is submitted and an **Order Submitted!** confirmation screen is displayed; the procedure is complete.
- If you clicked on **Go to Step 3: Review Order Summary**, the **Step 3: Order Summary** screen is displayed; go to Step 38.

38 When satisfied that the order information is correct, click on the **Go to Step 4: Submit Order!** button.

- The order is submitted and an **Order Submitted!** confirmation screen is displayed.

Table 19.3-2. Search and Order Data Using the EDG Search and Order Tool (1 of 2)

Step	What to Do	Action to Take
1	**setenv DISPLAY *clientname*:0.0**	**enter text; press Return/Enter**
2	**/tools/bin/ssh *hostname***	**enter text; press Return/Enter**
3	***Passphrase*** (or Step 4)	**enter text; press Return/Enter**
4	***Password***	**enter text; press Return/Enter**
5	**Netscape**	**enter text; press Return/Enter**
6	Move cursor to **Netsite:** field	**single-click**
7	**http://redhook.gsfc.nasa.gov/~imsww/pub/imswelcome**	**enter text; press Return/Enter**
8	Select **Enter as guest** / **Enter as registered user**)	**single-click**
9	**Choose Keywords for Selected Data Sets**	**single-click**
10	Highlight **DATA SET** and **Choose Keywords for>>**	**click choice and click button**
11	Select Data Set and activate **OK!** button	**click choice and click button**
12	Highlight **PARAMETER** and **Choose Keywords for>>**	**click choice and click button**
13	Select Parameter and activate **OK!** button	**click choice and click button**
14	Select **Type in Lat/Lon Range** (or map type)	**single-click**
15	Enter Lat/Lon values (or use map)	**enter text**
16	Move cursor to **Start Date:** field	**single-click**
17	Enter date (**YYYY-MM-DD**)	**enter text**
18	Move cursor to **End Date:** field	**single-click**
19	Enter date (**YYYY-MM-DD**)	**enter text**
20	Choose additional options; save search (optional)	**click(s) and enter text**

Table 19.3-2. Search and Order Data Using the EDG Search and Order Tool (2 of 2)

Step	What to Do	Action to Take
21	Activate **Start Search!** button	**single-click**
22	Review **Granule Attributes** / **Browse** image	**click(s)**
23	Choose (**Select**) granules to be ordered	**click(s)**
24	Activate **Add to Cart** button	**single-click**
25	Activate **Choose Options** button for a granule	**single-click**
26	Activate **Select** button for desired option	**single-click**
27	Apply options to all granules or repeat Steps 25 - 26	**single-click**
28	Activate **Ok! Accept my choice & return to shopping cart!** Button	**single-click**
29	Activate **Go to Step 2: Order Form** button	**single-click**
30	Move cursor to **First name:** field	**single-click**
31	Enter **first name**	**enter text**
32	Move cursor to **Last name:** field	**single-click**
33	Enter **last name**	**enter text**
34	Move cursor and enter **Internet email address;**, **Street Address;**, **City;**, **State/Province;**, **Country;**, and **Telephone;**.	**single-click and enter text; repeat for each entry**
35	Select Type (**Type:** option button)	**click option**
36	Select Category (**Category:** option button)	**click option**
37	**Submit Order Now!** or **Go to Step 3: Review Order Summary**	**single-click**
38	Activate **Go to Step 4: Submit Order!** button	**single-click**

19.3.1.1 Data Pool Access Using the EDG

The EDG indicates to a user any granules among the search results that are accessible on line – i.e., in the Data Pool – and provides links to the data, metadata, and browse data to allow download from the Data Pool. When a user searches ECS data holdings and obtains a list of granules, if the Data Pool contains a copy of any of the granules and associated metadata or browse data, there will be links in the **On-line Access** column of the listing. A click on a link for data or metadata results in display of a filter dialog to specify a location for download of the information from the Data Pool. A click on a link for browse data launches the browse image in a browse viewer.

19.3.2 Locate and Download Data from the Data Pool Using the Data Pool Web Access

The Data Pool provides users with a rapid means to obtain granules with associated metadata and any available browse granules. The access is through a web browser and download by FTP. User Services must be familiar with the tool and able to provide user assistance and support.

Table 19.3-3 presents the steps required to locate and download data from the Data Pool using the Data Pool web access. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the UNIX command shell prompt, type **setenv DISPLAY *clientname*:0.0** and then press the **Return/Enter** key.
- For ***clientname***, use either the local terminal/workstation IP address or its machine name.

2 Start the log-in to a Netscape host by typing **/tools/bin/ssh *hostname*** *(e.g.*, g0ins02, e0ins02, l0ins02, n0ins02) at the UNIX command shell prompt, and press the **Return/Enter** key.
- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 3.
- If you have not previously set up a secure shell passphrase; go to Step 4.

3 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 5.

4 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.
- You are logged in and a UNIX command shell prompt is displayed.

5 Type **netscape** and then press the **Return/Enter** key.
- The Netscape web browser is displayed.

6 Click in the **Netsite:** field.
- The field is highlighted.

7 Type the Universal Resource Locator (URL) for the data pool at the local site and then press the **Return/Enter** key.
- The **DataPool@*DAACsite*** welcome screen is displayed, offering a brief description of the data holdings and links enabling the user to start searching the Data Pool by **Data Group** or by **Theme**.

8 To select a search parameter click on the appropriate choice from the option list.

- The following choices are available:
  - **Data Group.**
  - **Theme.**
  - **Data Set.**
- The first selection screen is displayed.
  - If the search was started by clicking on **Data Group**, the screen lists data holdings by data group with a brief description of each group, granule count for each group, and a list of links to data groups for selection to start the search.
  - If the search was started by clicking on **Theme**, the screen lists themes with a brief description and granule count for each, with the theme names functioning as links for selection to start the search.
  - If the search was started by clicking on **Data Set**, the screen lists data sets with a brief description and granule count for each, with the data set names functioning as links for selection to start the search.

9 If the search is by **Theme**, click on the name of the theme for which the Data Pool is to be searched.

- A list of data groups is displayed for the selected theme.

10 Click on the link for the **Data Group** to be searched for appropriate or desired data.

- The screen displays the selected **Data Group** criteria and a list of links to Earth Science Data Types (**ESDT**s) for selection to narrow the search, along with information about the number of granules and volume of data available in the selected **Data Group**.

11 If desired, you may link to a pre-defined **Product Quality Summary** by selecting the desired **Data Group** type followed by the desired **Data Set** name.

12 Click on the **Get the Granule**.

- This will display a screen that has a link to the **Product Quality Summary**. To go to the **Quality Summary** web page, click on the **Product Quality Summary** link. If the Product Quality Summary link is not seen, then the Url has not been added to the Data Pool Collections database via the Data Pool Maintenance GUI or a Quality Summary web page does not exist.
- To return to the **Data Group** screen, click on the **DP Web Access Page** and select the **Data Group** link.

13 Click on the link for the **ESDT** to be searched for appropriate or desired data.

- The screen displays the selected criteria through **ESDT**, a calendar tool (for selecting a **day**, **week**, or **month** for which active links indicate the availability of data), and, as an alternative means for selecting a date range, fields with pop-up menu buttons for

specifying the **Start** year, month, and day and **End** year, month, and day to narrow the search based on temporal criteria.

- The screen also displays information about the number of granules and volume of data available in the selected ESDT. It offers a **Skip Temporal** link to move on to the next criterion without specifying a temporal criterion, a **Get the granules** link permitting an immediate search for granules based on the criteria narrowing the search to those granules, and a **Start a new search** link. There is also a button permitting the user to add any selected date to the search criteria and continue to narrow the search.

14 If desired, click on a day, week, or month on the calendar tool, or click on pop-up menu buttons and select a Start year, month, and day and End year, month, and day, and then click on the add it to your search criteria button. (Note: If you click on a month in the shaded box at the left of the calendar tool, the selected month is displayed on the tool.)

- The screen displays the selected criteria through **Date**, a matrix permitting the user to **Select a Time of Day**, and, as an alternative means for selecting a time range, fields with pop-up menu buttons for specifying a **Start Time** hour and minute and an **End Time** hour and minute to narrow the search.
- The screen also displays information about the number of granules and volume of data available in the selected Temporal period. It offers a **Skip Time-of-Day** link to move on to the next criterion without specifying a time of day, a **Get the granules** link permitting an immediate search for granules based on the criteria narrowing the search to those granules, and a **Start a new search** link. There is also a button permitting the user to add any selected time of day to the search criteria and continue to narrow the search.

15 If desired, click on a specific **time** (hour) on the matrix, or click on pop-up menu buttons and select a **Start Time:** hour and minute and **End Time:** hour and minute, and then click on the **add it to your search criteria** button. (***Note***: If you click on the link at the top of the matrix, the times displayed in the matrix can be toggled between starting **On the Hour** and starting **On the Half Hour**.)

- The screen displays the selected criteria through **Time of Day**, a map permitting the user to **Select from Map** (for Java-enabled browsers) to create a spatial search region, and, as an alternative means for creating a spatial search region, fields for specifying **North Latitude**, **South Latitude**, **West Longitude**, and **East Longitude** to select a bounding rectangle to narrow the search.
- The screen also displays information about the number of granules and volume of data available in the selected Time Range. It offers a **Skip choosing a spatial constraint** link to move on to the next criterion without specifying a time of day, a **Get the granules** link permitting an immediate search for granules based on the criteria narrowing the search to those granules, and a **Start a new search** link. There is also a button permitting the user to add any selected spatial polygon or bounding rectangle to the search constraints and continue to narrow the search.

16 If desired (and if using a Java-enabled browser), click repeatedly on the map to indicate successive points defining a polygon as a desired spatial search region, or drag the mouse to highlight a tile on the map, or sequentially click in the four latitude and longitude fields and type the coordinates for a desired spatial search region.

- The bounding polygon, rectangle, or tile appears on the map display, and/or the typed entries appear in the latitude and longitude fields.

17 Click on the **Add to Constraints** button.

- The screen displays the selected criteria through **Spatial Coverage** and a table with links permitting the user to **Select a Day/Night Flag** to narrow the search.
- The screen also displays information about the number of granules and volume of data available in the selected spatial search region. It offers a **Skip DayNightFlag** link to move on to the next criterion without specifying a Day/Night Flag value, a **Get the granules** link permitting an immediate search for granules based on the criteria narrowing the search to those granules, and a **Start a new search** link.

18 If desired, click on one of the links in the **Day/Night** column of the table.

- The screen displays the selected criteria through **Day/Night Flag**, a **Select Science QA for this *Data Type* Parameter** field with a pop-up menu button permitting the user to specify a parameter on which to select QA values, and a table with links permitting the user to select a QA value for the specified parameter.
- The screen also displays information about the number of granules and volume of data available in the selected day/night flag category. It offers a **Get the granules** link permitting an immediate search for granules based on the criteria narrowing the search to those granules and a **Start a new search** link.

19 If desired, click on the **Select Science QA for this parameter:** option button.

- A pop-up menu displays available parameters.

20 Click on the desired parameter.

- The selected parameter name is displayed on the **Select Science QA for this parameter** option button and the QA links and information in the table reflect the selected parameter.

21 Click on one of the value links in the **Science QA** column of the table.

- The search for granules is executed and the screen displays the selected criteria through selected **Science QA** value along with the results of the search. The located granules are listed in a table showing metadata on **Size**, **Date** and **Time**, and **Day/Night** flag. There are **Metadata Display** links providing access to **Science QA** metadata and **% Cloud Cover** metadata.
- The **Granule** identification column in the results table displays for each listed granule an icon for obtaining the **HDF** data, and icon for displaying metadata in a separate

Granule Metadata Viewer window, and, for any granule that has a browse image available, an icon for displaying associated browse images in a separate **Browse Viewer** window.

22 If desired, click on the **Science QA** link or **% Cloud Cover** link for different **Metadata Display**.

- Columns of the selected metadata are displayed in the results table, and availability of additional columns is indicated by the appearance of navigational arrow(s) on either side of the attribute name above the column labels.

23 If desired, click on one of the navigational arrows to display other columns of the selected metadata.

- Additional columns are displayed.

24 If desired, in the **Granule** identification column, click on an icon for the **Granule Metadata Viewer** for one of the granules.

- The **Granule Metadata Viewer** is displayed in a separate window, showing XML metadata for the selected granule; a scroll bar permits scrolling through the displayed metadata.

25 If desired, in the **Granule** identification column, click on an icon for the **Browse Viewer** for one of the granules.

- The **Browse Viewer** is displayed in a separate window, showing any available browse image for the selected granule; a scroll bar permits scrolling of the image.

26 If desired, in the **Granule** identification column, click on the shopping cart icon to add individual granules to a virtual shopping cart.

27 If desired, in the **Granule** identification column, click on the **HDF** folder icon (or on the granule identification link) or on one of the icons for a compression option to initiate download of the granule.

- Compression options include zip, gnu zip (gzip), and UNIX.
- The **Media Options** page is displayed.
  - The media options that are available for the data in the shopping cart are listed in a table that has the following types of information for each available option: **Media Type**, **Media Format**, **Max. Size Limit (MB)**, **Min. Size Limit (MB)**, **Media Capacity (MB)**, **Max Granule Counts**.
  - There are **Go Back to Cart** (shopping cart) and **Go Back to Result Page** buttons on the **Media Options** page.

28 To select one of the media options click in the appropriate box in the **Select One** column of the table of options.

- A check mark is displayed in the selected box.

29 To go to checkout or download, click on the **OK** button.
- If download was selected on the **Media Options** page, the save dialog is displayed.
- If a medium other than download was selected on the **Media Options** page, the **Checkout** page is displayed.

30 If download was selected on the **Media Options** page, enter any desired path specification for the download and click on the **OK** button.
- The selected granule is downloaded to the specified location.

31 If a medium other than download was selected on the **Media Options** page, adjacent to the **Include metadata file(s)?** question on the **Checkout** page click on the appropriate button from the following selections:
- **Yes** - to include metadata files with the order.
- **No** - to exclude metadata files from the order.

32 To specify a user string type the appropriate text in the **User String** text entry field.

33 Either type the appropriate data or click on the appropriate choice from the option list in the relevant fields of the **Addresses** block: **User Name, E-mail, Telephone, Organization, Street Address, City, State/Province, Zip Code, Country.**

34 Click on the **Confirm Order** button.
- A "Remember Values" Confirmation dialogue box is displayed.

35 If a **"Remember Values" Confirmation** dialogue box is displayed, click on the appropriate button from the following selections:
- **Yes**.
- **Never for this site**.
- **No**.

36 Observe the data displayed on the **Confirm Your Order** page.

37 To submit the order click on the **Please Submit Your Order** button.
- An **Order Acknowledgement** page is displayed.
- Order ID and order status are displayed.

Table 19.3-3. Locate and Download Data from the Data Pool using the Data Pool Web Access (1 of 2)

Step	What to Do	Action to Take
1	**setenv DISPLAY *clientname*:0.0**	**enter text; press Return/Enter**
2	**/tools/bin/ssh *hostname***	**enter text; press Return/Enter**
3	***Passphrase*** (or Step 4)	**enter text; press Return/Enter**
4	***Password***	**enter text; press Return/Enter**
5	**Netscape**	**enter text; press Return/Enter**
6	Move cursor to **Netsite:** field	**single-click**
7	Enter URL for Data Pool Web Access	**enter text; press Return/Enter**
8	Select link to start search (**Data Group**, **Theme**, or **Data Set**)	**single-click**
9	For a **Theme** search, select name of desired theme	**single-click**
10	Select **Data Group**	**single-click**
11	Select **Data Set**	**single-click**
12	Select **Get the Granule**	**single-click**
13	Select **Product Quality Summary**	**single-click**
14	Select **ESDT**	**single-click**
15	Select **Date** (or specify **Date Range**)	**single-click (or click options)**
16	Select **Time** (or specify **Start Time** and **End Time**)	**single-click (or click options)**
17	Create spatial search region	**click-drag or click and enter latitude and longitude**
18	Activate **Add Constraints** button	**single-click**
19	Select **Day/Night** flag	**single-click**
20	Open **Select Science QA for this *Data Type* Parameter** pop-up menu	**single-click**
21	Select **Parameter**	**single-click**
22	Select **QA for *Parameter*** value	**single-click**
23	Select **Metadata Display** category	**single-click**
24	Use navigational arrow(s) for more metadata columns	**click(s)**
25	Display metadata in **Granule Metadata Viewer**	**single-click**
26	Display browse image in **Browse Viewer**	**single-click**
27	Select shopping cart icon (if applicable)	**single-click**
28	Select **HDF** download or compression option (or option to add granule to shopping cart)	**single-click**
29	Select media option in the **Select One** column of the table of option	**single-click**
30	**OK** button	**single-click**
31	***path*** (for the download - if download was selected as the media option)	**enter text**
32	**OK** button (if download was selected as the media option)	**single-click**
33	**Yes** or **No** (as applicable - to include metadata files with the order) (if a hard medium was selected)	**single-click**

Table 19.3-3. Locate and Download Data from the Data Pool using the Data Pool Web Access (2 of 2)

Step	What to Do	Action to Take
34	**string** (in the **User String** text entry field) (if applicable)	**enter text**
35	***address_data*** (in the relevant fields of the **Addresses** block) (if applicable)	**enter text**
36	**Confirm Order** button	**single-click**
37	**Yes**, **Never for this site**, or **No** (as applicable) (in the **"Remember Values" Confirmation** dialogue box)	**single-click**
38	**Please Submit Your Order** button	**single-click**

19.4 Working with the Spatial Subscription Server and Data Pool

User Services and Science Data Specialists use the Spatial Subscription Server GUI to create subscriptions for inserting data into the Data Pool and to perform other tasks necessary to manage the Data Pool. Table 19.4-1 provides an activity checklist for tasks using the Spatial Subscription Server GUI for Data Pool Management.

Table 19.4-1. Use the Spatial Subscription Server GUI for Data Pool Management - Activity Checklist (1 of 4)

Order	Role	Task	Section	Complete?
1	User Services/ Science Data Specialist [full-capability or limited-capability]	Launch the Spatial Subscription Server GUI	(P) 19.4.1	
2	User Services/ Science Data Specialist [full-capability or limited-capability]	Shut Down the Spatial Subscription Server GUI (End a Spatial Subscription Server GUI Session)	(P) 19.4.2	
3	User Services/ Science Data Specialist [full-capability or limited-capability]	Use the Spatial Subscription Server GUI to List Subscribable Events	(P) 19.4.3	

Table 19.4-1. Use the Spatial Subscription Server GUI for Data Pool Management - Activity Checklist (2 of 4)

Order	Role	Task	Section	Complete?
4	User Services/ Science Data Specialist [full-capability or limited-capability]	Use the Spatial Subscription Server GUI to List and View Subscriptions in the NSBRV Database	(P) 19.4.4	
5	User Services/ Science Data Specialist [full-capability only]	Use the Spatial Subscription Server GUI to Add a Subscription to the NSBRV Database	(P) 19.4.5	
6	User Services/ Science Data Specialist [full-capability only]	Use the Spatial Subscription Server GUI to Update a Subscription in the NSBRV Database	(P) 19.4.6	
7	User Services/ Science Data Specialist [full-capability only]	Use the Spatial Subscription Server GUI to Delete (Cancel) a Subscription in the NSBRV Database	(P) 19.4.7	
8	User Services/ Science Data Specialist [full-capability or limited-capability]	Use the Spatial Subscription Server GUI to List Subscriptions Associated with a Theme	(P) 19.4.8	
9	User Services/ Science Data Specialist [full-capability or limited-capability]	Use the Spatial Subscription Server GUI to Obtain a List of Bundling Orders and View a Bundling Order	(P) 19.4.9	
10	User Services/ Science Data Specialist [full-capability only]	Use the Spatial Subscription Server GUI to Cancel a Bundling Order and Its Associated Subscriptions	(P) 19.4.10	
11	User Services/ Science Data Specialist [full-capability only]	Use the Spatial Subscription Server GUI to Add a Bundling Order	(P) 19.4.11	

Table 19.4-1. Use the Spatial Subscription Server GUI for Data Pool Management - Activity Checklist (3 of 4)

Order	Role	Task	Section	Complete?
12	User Services/ Science Data Specialist [full-capability only]	Use the Spatial Subscription Server GUI to Update a Bundling Order	(P) 19.4.12	
13	User Services/ Science Data Specialist [full-capability; limited-capability has read-only access]	Use the Spatial Subscription Server GUI to Configure Bundling Order Completion Criteria Default Values	(P) 19.4.13	
14	User Services/ Science Data Specialist [full-capability or limited-capability]	Use the Spatial Subscription Server GUI to View the Acquire and Notification Actions Being Processed	(P) 19.4.14	
15	User Services/ Science Data Specialist [full-capability; limited-capability has read-only access]	Use the Spatial Subscription Server GUI to View and Remove Failed Actions	(P) 19.4.15	
16	User Services/ Science Data Specialist [full-capability or limited-capability]	Use the Spatial Subscription Server GUI to View Statistics on Processing of Events and Actions by the NSBRV	(P) 19.4.16	
17	User Services/ Science Data Specialist [full-capability only]	Prepare Input Files for Use with the SSS CLI	(P) 19.4.17	
18	User Services/ Science Data Specialist [full-capability only]	View a Subscription Using the SSS CLI	(P) 19.4.18	

Table 19.4-1. Use the Spatial Subscription Server GUI for Data Pool Management - Activity Checklist (4 of 4)

Order	Role	Task	Section	Complete?
19	User Services/ Science Data Specialist [full-capability only]	Add a New Subscription Using the SSS CLI	(P) 19.4.19	
20	User Services/ Science Data Specialist [full-capability only]	Update a Subscription Using the SSS CLI	(P) 19.4.20	
21	User Services/ Science Data Specialist [full-capability only]	Delete a Subscription Using the SSS CLI	(P) 19.4.21	

19.4.1 Launch the Spatial Subscription Server GUI

The procedure for launching the GUI is provided separately here and is referenced in other procedures. It applies to both full-capability and limited-capability operators.

Table 19.4-2 presents the steps required to launch the Spatial Subscription Server GUI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the UNIX command shell prompt, type **setenv DISPLAY *clientname*:0.0** and then press the **Return/Enter** key.

- For ***clientname***, use either the local terminal/workstation IP address or its machine name.

2 Start the log-in to a Netscape host by typing **/tools/bin/ssh *hostname*** *(e.g.*, g0ins02, e0ins02, l0ins02, n0ins02) at the UNIX command shell prompt, and press the **Return/Enter** key.

- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).

- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 3.
- If you have not previously set up a secure shell passphrase; go to Step 4.

3 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 5.

4 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.
- You are logged in and a UNIX command shell prompt is displayed.

5 Type **netscape &** then press **Return/Enter**.
- It may be necessary to type the path as well as the netscape command (e.g., **/tools/bin/netscape &**).
- It may be necessary to respond to dialogue boxes, especially if the browser is already being used by someone else who has logged in with the same user ID.
- The Netscape web browser is displayed.

6 If a bookmark has been created for the **Spatial Subscription Server GUI**, select the appropriate bookmark from those listed on the browser's **Bookmarks** button (or the **Communicator → Bookmarks** pull-down menu).
- The security login **Prompt** is displayed.

7 If no bookmark has been created for the **Spatial Subscription Server GUI**, type **http://*host*:*port*/*path*** in the browser's **Location (Go To)** field then press **Return/Enter**.
- For example:

  http://x0dps01.daac.ecs.nasa.gov:54321/NBSRV.html
- The security login **Prompt** is displayed.

8 Type the appropriate user name in the **User Name** box of the security login **Prompt**.

9 Type the appropriate password in the **Password** box of the security login **Prompt**.

NOTE: If the security login prompt reappears after the first time the user name and password have been entered (and the **OK** button has been clicked), it may not be due to a data entry problem. Try again to log in using the same user name and password. Sometimes it is necessary to enter the user name and password for the GUI more than once.

10 Click on the appropriate button from the following selections:

- **OK** - to complete the log-in and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **NSBRV Home Page** is displayed.
- **Cancel** - to dismiss the dialogue box without logging in.
  - The dialogue box is dismissed.
  - The Netscape web browser is displayed.

Table 19.4-2. Launch the Spatial Subscription Server GUI

Step	What to Do	Action to Take
1	**setenv DISPLAY *clientname*:0.0**	**enter text; press Return/Enter**
2	**/tools/bin/ssh *hostname***	**enter text; press Return/Enter**
3	***Passphrase*** (or Step 4)	**enter text; press Return/Enter**
4	***Password***	**enter text; press Return/Enter**
5	**netscape &**	**enter text; press Return/Enter**
6	***bookmark*** (for Spatial Subscription Server GUI)	**single-click**
7	**http://*host*:*port*/*path*** (if no bookmark is available)	**enter text; press Return/Enter**
8	***username***	**enter text**
9	***password***	**enter text**
10	**OK** button	**single-click**

19.4.2 Shut Down the Spatial Subscription Server GUI (End a Spatial Subscription Server GUI Session)

At some point it becomes necessary to shut down the Spatial Subscription Server GUI (end a Spatial Subscription Server GUI session). Table 19.4-3 presents the steps required to shut down the DPM GUI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Click on the **Home Page** link at the top of the **Spatial Subscription Server GUI**.

- The **Home Page** is displayed.

2 Click on the **End Session** link at the top of the **Spatial Subscription Server GUI**.

- A log-out page containing the message "Click on Button Below to End Session: NOTE: THIS WOULD ALSO SHUT DOWN THE BROWSER :" is displayed.

NOTE: To abort the log-out and return to the **Home Page**, click on the browser **Back** button.

3 Click on the **ShutDown** button.

- The Netscape browser is dismissed.

Table 19.4-3. Shut Down the Spatial Subscription Server GUI (End a Spatial Subscription Server GUI Session)

Step	What to Do	Action to Take
1	**Home Page** link	**single-click**
2	**End Session** link	**single-click**
3	**ShutDown** button	**single-click**

19.4.3 Use the Spatial Subscription Server GUI to List Subscribable Events

Suppose you want to obtain and examine a list of events for which subscriptions may be established, and to find insert events for MOD01 data. Use the procedure that follows, which is applicable to both full-capability and limited-capability operators.

Table 19.4-4 presents the steps required to use the Spatial Subscription Server GUI to list subscribable events. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).

- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

2 Click on the **List Events** link.

- The **List Events** page is displayed with a table of all ECS events for which a subscription can be created.

3 Observe information displayed on the **Manage Subscriptions** page.

- The table on the **List Events** page has columns containing the following types of subscription information:
  - **Collection.**
  - **Version.**
  - **Event Type.**
- The column headers in the table are links for sorting the list. There are also buttons for filtering the list.
- There are option lists for filtering the table data by **Collection**, **Version**, and/or **Event Type**.

- Event Type options include **ALL, DELETE, INSERT, UNDELETE, DELETEPHYSICAL,** and **UPDATEMETADATA**.

4 To **sort** the list click on the appropriate column header link (i.e., **Collection**, **Version**, or **Event Type**).
- If the list were sorted by **Event Type**, it would display events grouped by type: **DELETE** events would be listed first, followed by **INSERT** events, etc.

5 To **filter** the list to display certain types of information only, click on the appropriate option button (i.e., **Collection**, **Version**, or **Event Type**) and then click to select the desired option from the option list.
- The selected choice is displayed in the option field.

6 Repeat Step 5 to select an additional filter, if applicable.

7 Click on the **Filter** button to implement the selected filter.
- A list is displayed showing selected information only.

8 Return to Step 3.

Table 19.4-4. Use the Spatial Subscription Server GUI to List Subscribable Events

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**List Events** link	**single-click**
3	Observe information displayed on the **Manage Subscriptions** page	**read text**
4	**Collection**, **Version** or **Event Type** link (to sort list) (if applicable)	**single-click**
5	Subscribable events filter option (from the appropriate option list) (if applicable)	**click option**
6	Repeat Step 5 (if applicable)	
7	**Filter** button (to implement the selected filter) (if applicable)	**single-click**
8	Return to Step 3	

19.4.4 Use the Spatial Subscription Server GUI to List and View Subscriptions in the NSBRV Database

Suppose that you now want to view subscriptions related to MOD01 data, and then to review detailed information about a particular subscription. To obtain the list you will need to use the **Manage Subscriptions** link, filter on **Collection**, and then select and apply an option to **View**

the particular subscription. Use the following procedure, which is applicable to both full-capability and limited-capability operators.

Table 19.4-5 presents the steps required to use the Spatial Subscription Server GUI to list and view subscriptions in the NSBRV database. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).

- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

2 Click on the **Manage Subscriptions** link.

- The **Manage Subscriptions** page is displayed with a table listing all subscriptions in the NSBRV database.

3 Observe information displayed on the **Manage Subscriptions** page.

- The table on the **Manage Subscriptions** page has columns containing the following types of subscription information:
  - **Subscription Id.**
  - **User.**
  - **Collection.**
  - **Version.**
  - **Event Type.**
  - **Status.**
  - **Data Pool.**
  - **Start Date.**
  - **Expiration Date.**
  - **Time Last Updated.**
  - **Choose Subscription Action.**
- The column headers in the table, except for **Version**, **Event Type**, **Start Date**, and **Choose Subscription Action** are links for sorting the list.
- The **Choose Subscription Action** column has radio buttons for taking the following actions with respect to the corresponding subscription:
  - **View.**
  - **Update.**
  - **Cancel.**
- There are option lists for filtering the table data by **User**, **Collection**, **Status**, and/or **Data Pool**.

- There is a "**Change Collection Display to**" option button for switching the display between **TextEntry** and **SelectableList**.

4 To filter the list to display certain types of subscriptions only, click on the appropriate option button (i.e., **User**, **Collection**, **Status**, or **Data Pool**) and then click to select the desired option from the option list.
- The selected choice is displayed in the option field.

5 Repeat Step 4 to select an additional filter, if applicable.

6 Click on the **Filter** button to implement the selected filter.
- A list is displayed showing subscriptions that meet the filter criteria only.

7 To view a particular subscription first click on the **View** radio button in the **Choose Subscription Action** column for the subscription.
- The button is filled to indicate selection of the option.

8 To implement the selected action with respect to the particular subscription click on the **Apply** button in the **Choose Subscription Action** column for the subscription.
- A **View Subscriptions** page is displayed.

9 Observe information displayed on the **View Subscriptions** page.
- The table on the **Manage Subscriptions** page has columns containing the following types of subscription information:
  - **User.**
  - **Status.**
  - **Start Date.**
  - **Expiration Date.**
  - **Short Name.**
  - **Version.**
  - **Event Type.**
  - **Retention Period** (if applicable).
  - **Retention Priority** (if applicable).
  - **Science Granules and/or Metadata** (if applicable).
  - **Data Pool Action is associated with theme *x*** (if applicable).
  - etc.
- There are **View another subscription** and **Return to Home Page** links on the page.

10 Click on the **View another subscription** link or the **Return to Home Page** link (as appropriate) when finished viewing the subscription data on the **View Subscriptions** page.

11 Repeat Steps 3 through 10 as necessary to view additional subscriptions.

Table 19.4-5. Use the Spatial Subscription Server GUI to List and View Subscriptions in the NSBRV Database

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**Manage Subscriptions** link	**single-click**
3	Observe information displayed on the **Manage Subscriptions** page	**read text**
4	Subscription filter option (from the appropriate option list) (if applicable)	**click option**
5	Repeat Step 4 (if applicable)	
6	**Filter** button (to implement the selected filter(s)) (if applicable)	**single-click**
7	**View** radio button (in the **Choose Subscription Action** column for the subscription)	**single-click**
8	**Apply** button (in the **Choose Subscription Action** column for the subscription) (to implement the selected action)	**single-click**
9	Observe information displayed on the **View Subscriptions** page	**read text**
10	**View another subscription** link	**single-click**
11	Repeat Steps 3 through 10 (as necessary)	

19.4.5 Use the Spatial Subscription Server GUI to Add a Subscription to the NSBRV Database

A user who wants to have data made available for downloading through the Data Pool must contact the DAAC to request that a subscription be placed so that when data of the specified type are inserted in ECS, a copy is inserted in the Data Pool. User Services or Science Data Specialists then create the subscription, adding Data Pool qualification and retention criteria to meet the user's requirement within any constraints imposed for the Data Pool at the DAAC.

Suppose that a registered user requests Data Pool insert for MOD04_L2 003 data, specifying that the data granules inserted during the next two years be kept in the Data Pool for a period of 30 days. The user requests granules from daytime collection, in a geographic area bounded by 0 degrees North Latitude, -50 degrees East Longitude, -20 degrees South Latitude, and -70 degrees West Longitude. The user also requests notification as well as the Data Pool insert. Full-capability operators (only) can use the procedure that follows to create the necessary subscription.

Table 19.4-6 presents the steps required to use the Spatial Subscription Server GUI to add a subscription to the NSBRV database. If you are already familiar with the procedure, you may

prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).

- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

NOTE: At various points in this procedure, you may encounter a security information warning. Unless you know of a specific potential danger that you must avoid, click on the **Continue submission** button when the warning is displayed.

2 Click on the **Manage Subscriptions** link.

- The **Manage Subscriptions** page is displayed, providing a table of subscription information showing 11 columns: **Subscription Id**, **User**, **Collection**, **Version**, **Event Type**, **Status**, **Data Pool**, **Start Date**, **Expiration Date**, **Time Last Updated**, and **Choose Subscription Action** (containing radio buttons for selecting an action to take and **Apply** buttons for implementing the selected actions).

3 Click on the **Add Subscriptions** link.

- The **Add Subscriptions** page is displayed.

4 Type the User Id for the requesting user in the **User Id** text entry field.

- The entered User Id must be a valid registered user (i.e., must be listed in the User Profile database).
- The typed entry is displayed in the **User Id** field.

5 To select a **Status** option click on the appropriate choice from the option list.

- **Active**.
- **Inactive**.

6 If the start date for the subscription is different from the default (current date and time) type the appropriate date and time in the **Start Date (mm/dd/yyyy hh:mm)** text entry box.

- The date and time should be entered in ***mm/dd/yyyy hh:mm*** format

7 If the expiration date for the subscription is different from the default (one year from the current date and time) type the appropriate date and time in the **Expiration Date (mm/dd/yyyy hh:mm)** text entry box.

- The date and time should be entered in ***mm/dd/yyyy hh:mm*** format

8 Type the first few characters of the name of the collection for which the subscription is to be created (e.g., **MOD04**) in the **Collection Short Name** text entry box.

9 Click on the **Apply** button.
- A **SELECT Short Name/Version/Event Type** option button and a **Numbers of String Qualifiers** button are displayed, along with an **Apply** button.

10 To select a **Short Name/Version/Event Type** option click on the appropriate choice (e.g., **MOD04_L2 003 INSERT**) from the option list.

11 To select a **Numbers of String Qualifiers** option click on the appropriate choice (e.g., **1**) from the option list.

12 Click on the **Apply** button.
- Option buttons and fields are displayed to permit the entry of data in two general categories; i.e., **Subscription Qualifiers** and **Action Information**.
- In the **Subscription Qualifiers** section it is possible to select **Attribute Name/Type** and enter **Min Value** and **Max Value** for any valid **Integer/Float/Date** qualifiers, string **Value** qualifiers, and **Latitude** and **Longitude** coordinates to define a bounding rectangle spatial qualifier for the subscription to be created.
- In the **Action Information** section there is a button to specify that the subscription is to be associated with a bundling order; if that button is not selected, one has the choice of one or more of three actions (i.e., **Acquire**, **E-Mail Notification**, or **Data Pool**). There are blocks with option lists and text entry fields for defining the selected action(s) to be taken upon occurrence of the event for which the subscription is to be created.
- At the bottom of the page is an **Add Subscription** button for submitting the subscription.

13 To select a different **Logical Basis** option (if applicable) click on the appropriate choice (e.g., **AND**) from the option list.

14 To select an integer, float, or date **Attribute Name/Type** option (if applicable) click on the appropriate choice from the **Integer/Float/Date Attribute Name/Type** option list.

15 To specify a minimum value for an integer, float, or date attribute (if applicable) type the appropriate value in the **Integer/Float/Date Min Value** text entry box.

16 To specify a maximum value for an integer, float, or date attribute (if applicable) type the appropriate value in the **Integer/Float/Date Max Value** text entry box.

17 Repeat Steps 14 through 16 as necessary to specify additional integer, float, or date attributes.

18 To select a string **Attribute Name/Type** option (if applicable) click on the appropriate choice from the **String Attribute Name/Type** option list.

19 To specify a value for a string attribute (if applicable) type the appropriate value in the **String Value** text entry box.

20 Repeat Steps 18 and 19 as necessary to specify additional string attributes.

21 To specify spatial coordinates of intersecting LLBox (if applicable) type the appropriate values in the following text entry boxes.

- **North Latitude.**
- **West Longitude.**
- **East Longitude.**
- **South Latitude.**
- For example:

  North Latitude 0

  West Longitude -70

  East Longitude -50

  South Latitude -20

NOTE: Every subscription must have at least one action specified and may have more than one.

22 To associate the subscription with a bundling order (if applicable) first click in the **Bundling Order** box.

23 To continue the process of associating a subscription with a bundling order (if applicable) click on the appropriate choice from the **Bundling Order Selection** option list.

- If a subscription is associated with a bundling order, skip Steps 24 through 27 and go to Step 28.

24 To select subscription action(s) click in the following boxes as applicable (a check mark in a box indicates that the action has been selected):

- **Acquire** – to request shipment of the data specified in the subscription.
- **E-Mail Notification** - to request e-mail notification of the event specified in the subscription.

- **Data Pool** - to request insertion of data specified in the subscription into the Data Pool.

NOTE: Multiple actions can be selected.

25 If **Acquire** was selected in Step 24, either type the appropriate data or click on the appropriate choice from the option list in the relevant fields of the **Acquire Information** block:

- **User Profile.**
- **User String** [if applicable (to distinguish the subscription from others)].
- **Email Address.**
- **Media Type.**
- **Priority.**
- **User** [applicable to ftp push or secure copy distributions only].
- **Password** [applicable to ftp push or secure copy distributions only].
- **Enter password again for verification** [applicable to ftp push or secure copy distributions only].
- **Host** [applicable to ftp push or secure copy distributions only].
- **Directory** [applicable to ftp push or secure copy distributions only].

26 If **E-Mail Notification** was selected in Step 24, either type the appropriate data or click on the appropriate choice from the option list in the relevant fields of the **E-Mail Notification Information** block:

- **Action Address.**
- **User String** [if applicable (to distinguish the subscription from others)].
- **Metadata.**

27 If **Data Pool** was selected in Step 24, either type the appropriate data or click on the appropriate choice from the option list in the relevant fields of the **Data Pool Information** block:

- **Retention Period (in days)** [e.g., **30**].
- **Retention Priority (valid range 1 thru 255)** [e.g., 200].
- **Science Granules and/or Metadata** [e.g., science and metadata].
- **Click here to add theme:** [click in the box if the granules to be added to the Data Pool as a result of the subscription are to be associated with a theme].
- **Enter first few characters of name** [optional - if associating the granules from the subscription with a theme].

28 Click on the **Add Subscription** button.

- If the **Click here to add theme:** box was checked, a **Select Theme for Data Pool Action** page is displayed.

- If the **Click here to add theme:** box was not checked, a message is displayed confirming that "Subscription *x* was added" to the database and buttons permit **Add another subscription** or **Return to Home Page**.

29 To select a theme for Data Pool action (if applicable) first click on the appropriate choice from the **Select Theme for Data Pool Action** option list.

30 To make the theme association retroactive (if applicable) first click in the **To make theme association retroactive check here:** box.

31 To implement the theme association (if applicable) click on the **Apply** button on the **Select Theme for Data Pool Action** page.

- A message is displayed confirming that "Subscription *x* was updated/added" to the database and buttons permit **Add another subscription** or **Return to Home Page**.

32 Click on the appropriate link from the following selections:

- **Add… another subscription**.
  - The **Manage Subscriptions** page is displayed.
- **Update another subscription**.
  - The **Manage Subscriptions** page is displayed.
- **Return to Home Page**.
  - The **Home Page** is displayed.

Table 19.4-6. Use the Spatial Subscription Server GUI to Add a Subscription to the NSBRV Database (1 of 3)

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**Manage Subscriptions** link	**single-click**
3	**Add Subscriptions** link	**single-click**
4	***UserId*** (in the **User Id** text entry field)	**enter text**
5	**Status** option (i.e., **Active** or **Inactive** from the **Status** option list)	**single-click**
6	***mm/dd/yyyy hh:mm*** (in the **Start Date (mm/dd/yyyy hh:mm)** text entry box) (if applicable)	**enter text**
7	***mm/dd/yyyy hh:mm*** (in the **Expiration Date (mm/dd/yyyy hh:mm)** text entry box) (if applicable)	**enter text**
8	***collection*** (first few letters) (in the **Collection Short Name** text entry box)	**enter text**
9	**Apply** button	**single-click**

Table 19.4-6. Use the Spatial Subscription Server GUI to Add a Subscription to the NSBRV Database (2 of 3)

Step	What to Do	Action to Take
10	**Short Name/Version/Event Type** option (from the option list)	**single-click**
11	**Numbers of String Qualifiers** option (from the option list)	**single-click**
12	**Apply** button	**single-click**
13	**Logical Basis** option (from the option list) (if applicable)	**single-click**
14	**Attribute Name/Type** option (from the **Integer/Float/Date Attribute Name/Type** option list) (if applicable)	**single-click**
15	***value*** (in the **Integer/Float/Date Min Value** text entry box) (if applicable)	**enter text**
16	***value*** (in the **Integer/Float/Date Max Value** text entry box) (if applicable)	**enter text**
17	Repeat Steps 14 through 16 as necessary	
18	**Attribute Name/Type** option (from the **String Attribute Name/Type** option list) (if applicable)	**single-click**
19	***value*** (in the **String Value** text entry box) (if applicable)	**enter text**
20	Repeat Steps 18 and 19 (as necessary)	
21	***coordinate*** (in **North Latitude** text entry box) (if applicable)	**enter text**
22	***coordinate*** (in **West Longitude** text entry box) (if applicable)	**enter text**
23	***coordinate*** (in **East Longitude** text entry box) (if applicable)	**enter text**
24	***coordinate*** (in **South Latitude** text entry box) (if applicable)	**enter text**
25	**Bundling Order** box (to associate the subscription with a bundling order) (if applicable)	**single-click**
26	**Bundling Order** option (from the **Bundling Order Selection** option list) (if applicable)	**single-click**
27	***action*** options (**Acquire**, **E-Mail Notification**, and/or **Data Pool** box(es)) (as applicable)	**single-click**
28	***acquire*** options (in the relevant fields of the **Acquire Information** block) (if applicable)	**enter text/single-click**
29	***notification*** options (in the relevant fields of the **E-Mail Notification Information** block) (if applicable)	**enter text/single-click**
30	***datapool*** options (in the relevant fields of the **Data Pool Information** block) (if applicable)	**enter text/single-click**

Table 19.4-6. Use the Spatial Subscription Server GUI to Add a Subscription to the NSBRV Database (3 of 3)

Step	What to Do	Action to Take
31	**Add Subscription** button.	**single-click**
32	**Theme** option (from the **Select Theme for Data Pool Action** option list) (if applicable)	**single-click**
33	**To make theme association retroactive check here:** box (if applicable)	**single-click**
34	**Apply** button (on the **Select Theme for Data Pool Action** page) (if applicable)	**single-click**

19.4.6 Use the Spatial Subscription Server GUI to Update a Subscription in the NSBRV Database

On occasion, it may be necessary to modify or delete existing subscriptions in the NSBRV database. The **Spatial Subscription Server GUI** web access supports these requirements. However, only full-capability operators can modify or delete existing subscriptions using the **Spatial Subscription Server GUI**. Limited-capability operators can view subscriptions but may not modify or delete them.

It may become desirable to extend the period of retention in a Data Pool insert subscription. For example, if conditions arise that increase user interest in the data that will be inserted as a result of the subscription, keeping the data in the Data Pool longer is a way to be responsive to that user interest. Such conditions might be unusual weather activity, flooding, volcanic activity, or other events in the area covered by the subscription.

The update procedure for extending the period of retention in a Data Pool insert overlaps extensively with procedures for updating other information in an existing subscription, either for Data Pool insert (for example, to change qualifiers or to associate the subscription with a theme) or for notification/distribution of standard ECS products (for example, to change the distribution media type or other information defining the distribution). The operator accesses the subscription in the same way, makes the necessary inputs to specify the changes, and uses the **Update Subscription** button to submit the changes.

Table 19.4-7 presents the steps required to use the Spatial Subscription Server GUI to update a subscription in the NSBRV database. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).

- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

NOTE: At various points in this procedure, you may encounter a security information warning. Unless you know of a specific potential danger that you must avoid, click on the **Continue submission** button when the warning is displayed.

2 Click on the **Manage Subscriptions** link.

- The **Manage Subscriptions** page is displayed, providing a table of subscription information showing 11 columns: **Subscription Id**, **User**, **Collection**, **Version**, **Event Type**, **Status**, **Data Pool**, **Start Date**, **Expiration Date**, **Time Last Updated**, and **Choose Subscription Action** (containing radio buttons for selecting an action to take and **Apply** buttons for implementing the selected actions).

3 Find the subscription to be updated in the list of subscriptions on the **Manage Subscriptions** page.

- Scroll, sort, and/or filter the list as necessary.
  - For detailed instructions refer to the **Use the Spatial Subscription Server GUI to List and View Subscriptions in the NSBRV Database** procedure (Section 19.4.4).

4 Click on the **Update** radio button in the **Choose Subscription Action** column for the subscription to be updated.

- The button is filled to indicate selection of the option.

5 To implement the "update" action with respect to the subscription click on the **Apply** button in the **Choose Subscription Action** column for the subscription.

- An **Update Subscriptions** page is displayed.

6 To change the User Id (if applicable) type the User Id for the requesting user in the **User Id** text entry field.

- The entered User Id must be a valid registered user (i.e., must be listed in the User Profile database).
- The typed entry is displayed in the **User Id** field.

7 To change the status (if applicable) click on the appropriate choice from the **Status** option list.

- **Active**.
- **Inactive**.

8 To change the start date for the subscription (if applicable) type the appropriate date and time in the **Start Date (mm/dd/yyyy hh:mm)** text entry box.
- The date and time should be entered in ***mm/dd/yyyy hh:mm*** format

9 To change the expiration date for the subscription (if applicable) type the appropriate date and time in the **Expiration Date (mm/dd/yyyy hh:mm)** text entry box.
- The date and time should be entered in ***mm/dd/yyyy hh:mm*** format

NOTE: It is not possible to update the subscription event [**Short Name/Version/Event Type** (e.g., **MOD04_L2 003 INSERT**)].

NOTE: Option buttons and fields are displayed to permit the entry of data in two general categories; i.e., **Subscription Qualifiers** and **Action Information**. In the **Subscription Qualifiers** section it is possible to select **Attribute Name/Type** and enter **Min Value** and **Max Value** for any valid **Integer/Float/Date** qualifiers, string **Value** qualifiers, and **Latitude** and **Longitude** coordinates to define a bounding rectangle spatial qualifier for the subscription to be created. In the **Action Information** section there is a button to specify that the subscription is to be associated with a bundling order; if that button is not selected, one has the choice of one or more of three actions (i.e., **Acquire**, **E-Mail Notification**, or **Data Pool**). There are blocks with option lists and text entry fields for defining the selected action(s) to be taken upon occurrence of the event for which the subscription was created.

10 To select a different **Logical Basis** option (if applicable) click on the appropriate choice (e.g., **AND**) from the option list.

11 To change, add, or delete an integer, float, or date **Attribute Name/Type** option (if applicable) click on the appropriate choice from the **Integer/Float/Date Attribute Name/Type** option list.

12 To change, add, or delete a minimum value for an integer, float, or date attribute (if applicable) type (or delete, if necessary) the appropriate value in the **Integer/Float/Date Min Value** text entry box.

13 To change, add, or delete a maximum value for an integer, float, or date attribute (if applicable) type (or delete, if necessary) the appropriate value in the **Integer/Float/Date Max Value** text entry box.

14 Repeat Steps 11 through 13 as necessary to change, add, or delete integer, float, or date attributes.

15 To change, add, or delete a string **Attribute Name/Type** option (if applicable) click on the appropriate choice from the **String Attribute Name/Type** option list.

16 To change, add, or delete a value for a string attribute (if applicable) type (or delete, if necessary) the appropriate value in the **String Value** text entry box.

17 Repeat Steps 15 and 16 as necessary to change or specify additional string attributes.

18 To change, add, or delete spatial coordinates of intersecting LLBox (if applicable) type (or delete, if necessary) the appropriate values in the following text entry boxes (as necessary).

- **North Latitude.**
- **West Longitude.**
- **East Longitude.**
- **South Latitude.**

NOTE: Every subscription must have at least one action specified and may have more than one.

19 To associate the subscription with a bundling order (if applicable) first click in the **Bundling Order** box.

20 To continue the process of associating a subscription with a bundling order (if applicable) click on the appropriate choice from the **Bundling Order Selection** option list.

- If a subscription is associated with a bundling order, skip Steps 21 through 24 and go to Step 25.

21 To select or deselect subscription action(s) click in the following boxes as applicable (a check mark in a box indicates that the action has been selected):

- **Acquire** – to request shipment of the data specified in the subscription.
- **E-Mail Notification** - to request e-mail notification of the event specified in the subscription.
- **Data Pool** - to request insertion of data specified in the subscription into the Data Pool.

NOTE: Multiple actions can be selected.

22 If **Acquire** was selected in Step 21, change or add shipment data (if applicable) by either typing the appropriate data or clicking on the appropriate choice from the option list in the relevant fields of the **Acquire Information** block:

- **User Profile.**
- **User String** [if applicable (to distinguish the subscription from others)].

- **Email Address.**
- **Media Type.**
- **Priority.**
- **User** [applicable to ftp push or secure copy distributions only].
- **Password** [applicable to ftp push or secure copy distributions only].
- **Enter password again for verification** [applicable to ftp push or secure copy distributions only].
- **Host** [applicable to ftp push or secure copy distributions only].
- **Directory** [applicable to ftp push or secure copy distributions only].

23 If **E-Mail Notification** was selected in Step 21, change or add e-mail notification data by either typing the appropriate data or clicking on the appropriate choice from the option list in the relevant fields of the **E-Mail Notification Information** block:

- **Action Address.**
- **User String** [if applicable (to distinguish the subscription from others)].
- **Metadata.**

24 If **Data Pool** was selected in Step 21, change or add Data Pool insertion data either by typing the appropriate data or clicking on the appropriate choice from the option list in the relevant fields of the **Data Pool Information** block:

- **Retention Period (in days)**.
- **Retention Priority (valid range 1 thru 255)**.
- **Science Granules and/or Metadata.**
- **Click here to add theme:** [click in the box if the granules to be added to the Data Pool as a result of the subscription are to be associated with a theme].
- **Enter first few characters of name** [optional - if associating the granules from the subscription with a theme].

25 Click on the **Update Subscription** button.

- If the **Click here to add theme:** box was checked, a **Select Theme for Data Pool Action** page is displayed.
- If the **Click here to add theme:** box was not checked, a message is displayed confirming that "Subscription *x* was updated" to the database and buttons permit **Update another subscription** or **Return to Home Page**.

26 To select a theme for Data Pool action (if applicable) first click on the appropriate choice from the **Select Theme for Data Pool Action** option list.

27 To make the theme association retroactive (if applicable) first click in the **To make theme association retroactive check here:** box.

28 To implement the theme association (if applicable) click on the **Apply** button on the **Select Theme for Data Pool Action** page.

- A message is displayed confirming that "Subscription *x* was updated/added" to the database and buttons permit **Add another subscription** or **Return to Home Page**.

29 Click on the appropriate link from the following selections:

- **Add… another subscription**.
  - The **Manage Subscriptions** page is displayed.
- **Update another subscription**.
  - The **Manage Subscriptions** page is displayed.
- **Return to Home Page**.
  - The **Home Page** is displayed.

Table 19.4-7. Use the Spatial Subscription Server GUI to Update a Subscription in the NSBRV Database (1 of 2)

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**Manage Subscriptions** link	**single-click**
3	**Add Subscriptions** link	**single-click**
4	**Update** radio button (in the **Choose Subscription Action** column for the subscription to be updated)	**single-click**
5	**Apply** button (in the **Choose Subscription Action** column for the subscription)	**single-click**
6	***UserId*** (in the **User Id** text entry field) (if applicable)	**enter text**
7	**Status** option (i.e., **Active** or **Inactive** from the **Status** option list) (if applicable)	**single-click**
8	***mm/dd/yyyy hh:mm*** (in the **Start Date (mm/dd/yyyy hh:mm)** text entry box) (if applicable)	**enter text**
9	***mm/dd/yyyy hh:mm*** (in the **Expiration Date (mm/dd/yyyy hh:mm)** text entry box) (if applicable)	**enter text**
10	**Logical Basis** option (from the option list) (if applicable)	**single-click**
11	**Attribute Name/Type** option (from the **Integer/Float/Date Attribute Name/Type** option list) (if applicable)	**single-click**
12	***value*** (in the **Integer/Float/Date Min Value** text entry box) (if applicable)	**enter text**
13	***value*** (in the **Integer/Float/Date Max Value** text entry box) (if applicable)	**enter text**
14	Repeat Steps 11 through 13 as necessary	
15	**Attribute Name/Type** option (from the **String Attribute Name/Type** option list) (if applicable)	**single-click**
16	***value*** (in the **String Value** text entry box) (if applicable)	**enter text**
17	Repeat Steps 15 and 16 (as necessary)	

Table 19.4-7. Use the Spatial Subscription Server GUI to Update a Subscription in the NSBRV Database (2 of 2)

Step	What to Do	Action to Take
18	***coordinate*** (in **North Latitude** text entry box) (if applicable)	**enter text**
19	***coordinate*** (in **West Longitude** text entry box) (if applicable)	**enter text**
20	***coordinate*** (in **East Longitude** text entry box) (if applicable)	**enter text**
21	***coordinate*** (in **South Latitude** text entry box) (if applicable)	**enter text**
22	**Bundling Order** box (to associate the subscription with a bundling order) (if applicable)	**single-click**
23	**Bundling Order** option (from the **Bundling Order Selection** option list) (if applicable)	**single-click**
24	***action*** options (**Acquire**, **E-Mail Notification**, and/or **Data Pool** box(es)) (as applicable)	**single-click**
25	***acquire*** options (in the relevant fields of the **Acquire Information** block) (if applicable)	**enter text/single-click**
26	***notification*** options (in the relevant fields of the **E-Mail Notification Information** block) (if applicable)	**enter text/single-click**
27	***datapool*** options (in the relevant fields of the **Data Pool Information** block) (if applicable)	**enter text/single-click**
28	**Update Subscription** button.	**single-click**
29	**Theme** option (from the **Select Theme for Data Pool Action** option list) (if applicable)	**single-click**
30	**To make theme association retroactive check here:** box (if applicable)	**single-click**
31	**Apply** button (on the **Select Theme for Data Pool Action** page) (if applicable)	**single-click**

19.4.7 Use the Spatial Subscription Server GUI to Delete (Cancel) a Subscription in the NSBRV Database

If it is necessary to delete (cancel) a subscription, the **Spatial Subscription Server GUI** provides the means. Suppose Dr. L. Abuser contacts User Services with a request to cancel the subscription for ASTER expedited data. A full-capability operator (only) can use the following procedure to respond to such a request.

Table 19.4-8 presents the steps required to use the Spatial Subscription Server GUI to delete (cancel) a subscription in the NSBRV database. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).

- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

2 Click on the **Manage Subscriptions** link.

- The **Manage Subscriptions** page is displayed, providing a table of subscription information showing 11 columns: **Subscription Id**, **User**, **Collection**, **Version**, **Event Type**, **Status**, **Data Pool**, **Start Date**, **Expiration Date**, **Time Last Updated**, and **Choose Subscription Action** (containing radio buttons for selecting an action to take and **Apply** buttons for implementing the selected actions).

3 Observe information displayed on the **Manage Subscriptions** page.

- The table on the **Manage Subscriptions** page has columns containing the following types of subscription information:
  - **Subscription Id.**
  - **User.**
  - **Collection.**
  - **Version.**
  - **Event Type.**
  - **Status.**
  - **Data Pool.**
  - **Start Date.**
  - **Expiration Date.**
  - **Time Last Updated.**
  - **Choose Subscription Action.**
- The column headers in the table, except for **Version**, **Event Type**, **Start Date**, and **Choose Subscription Action** are links for sorting the list.
- The **Choose Subscription Action** column has radio buttons for taking the following actions with respect to the corresponding subscription:
  - **View.**
  - **Update.**
  - **Cancel.**
- There are option lists for filtering the table data by **User**, **Collection**, **Status**, and/or **Data Pool**.
- There is a "**Change Collection Display to**" option button for switching the display between **TextEntry** and **SelectableList**.

4 To filter the list to display certain types of subscriptions only, click on the appropriate option button and then click to select the desired option from the option list.
- The selected choice is displayed in the option field.

5 Repeat Step 4 to select an additional filter, if applicable.

6 Click on the **Filter** button to implement the selected filter.
- A list is displayed showing subscriptions that meet the filter criteria only.

7 Click on the **Cancel** radio button in the **Choose Subscription Action** column for the subscription to be canceled (deleted).
- The button is filled to indicate selection of the option.

8 Click on the **Apply** button in the **Choose Subscription Action** column for the subscription to be canceled (deleted).
- A confirmation page is displayed with the message "Are you sure that you want to cancel subscription *x*?"

9 Click on the appropriate link from the following selections:
- **Yes**- to confirm the deletion.
  - A "Subscription x was canceled" message is displayed.
- **No**- to abort the deletion.

10 Click on the appropriate link from the following selections:
- **Cancel another subscription**.
  - The **Manage Subscriptions** page is displayed.
- **Return to Home Page**.
  - The **Home Page** is displayed.

Table 19.4-8. Use the Spatial Subscription Server GUI to Delete (Cancel) a Subscription in the NSBRV Database (1 of 2)

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**Manage Subscriptions** link	**single-click**
3	Observe information displayed on the **Manage Subscriptions** page	**read text**
4	Subscription filter option (from the appropriate option list) (if applicable)	**click option**
5	Repeat Step 4 (if applicable)	**single-click**
6	**Filter** button (to implement the selected filter(s)) (if applicable)	**single-click**

Table 19.4-8. Use the Spatial Subscription Server GUI to Delete (Cancel) a Subscription in the NSBRV Database (2 of 2)

Step	What to Do	Action to Take
7	**Cancel** radio button (in the **Choose Subscription Action** column for the subscription)	**single-click**
8	**Apply** button (in the **Choose Subscription Action** column for the subscription) (to implement the selected action)	**single-click**
9	**Yes** link	**single-click**

19.4.8 Use the Spatial Subscription Server GUI to List Subscriptions Associated with a Theme

Both full-capability and limited-capability operators can use the procedure that follows to list subscriptions associated with a theme.

Table 19.4-9 presents the steps required to use the Spatial Subscription Server GUI to list subscriptions associated with a theme. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).

- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

2 Click on the **Manage Subscriptions** link.

- The **Manage Subscriptions** page is displayed with a table listing all subscriptions in the NSBRV database.

3 Click on the **List Themes** link.

- The **List Themes Request** page is displayed.
- An "Enter first few characters of theme name (or leave blank to view all):" message is displayed on the **List Themes Request** page.

4 To display all themes, click on the **Apply** button (without entering anything in the text box).

- The **Theme List** page is displayed with columns containing the following types of theme information:
  - **Theme Name.**

  - **Choose Theme Action.**
- All themes are displayed on the **Theme List** page.
- Go to Step 7.

5 To begin the process of displaying a particular theme, type the first few letters of the theme name in the text box on the **List Themes Request** page.

6 To continue the process of displaying a particular theme, click on the **Apply** button on the **List Themes Request** page.

- The **Theme List** page is displayed with columns containing the following types of theme information:
  - **Theme Name.**
  - **Choose Theme Action.**
- The relevant theme(s) is (are) displayed on the **Theme List** page.

7 To begin the process of viewing the list of subscriptions associated with a particular theme, click in the corresponding check box (in the **Choose Theme Action** column) on the **Theme List** page.

8 To view a list of the subscriptions associated with the specified theme, click on the corresponding **Apply** button (in the **Choose Theme Action** column) on the **Theme List** page.

- The **List Subscriptions for Theme** page is displayed.
  - The subscription(s) associated with the specified theme is (are) displayed.
  - Buttons are available for viewing, updating, or canceling each subscription being displayed or suspending, resuming, or canceling all subscriptions. (Refer to the applicable procedure for instructions on performing any of those actions.)

9 Observe information displayed on the **List Subscriptions for Theme** page.

- The table on the **List Subscriptions for Theme** page has columns containing the following types of subscription information:
  - **ID.**
  - **User.**
  - **Status.**
  - **Expiration Date.**
  - **ESDT ShortName/Version/EventType.**
  - **Choose Subscription Action.**
- The **Choose Subscription Action** column has radio buttons for taking the following actions with respect to the corresponding subscription:
  - **View.**
  - **Update.**
  - **Cancel.**

- At the bottom of the table there are radio buttons for selecting the following actions with respect to all listed subscriptions:
  - **Suspend All.**
  - **Resume All.**
  - **Cancel All.**

10 To take action with respect to a particular subscription first click on the appropriate radio button (i.e., **View**, **Update**, or **Cancel**) in the **Choose Subscription Action** column for the subscription.

- The button is filled to indicate selection of the option.

11 To implement a selected action with respect to a particular subscription click on the **Apply** button in the **Choose Subscription Action** column for the subscription.

- If **View** was the selected action, a **View Subscriptions** page is displayed.
  - Click on the **View another subscription** link or the **Return to Home Page** link (as appropriate) when finished viewing the subscription data on the **View Subscriptions** page.
- If **Update** was the selected action, an **Update Subscriptions** page is displayed.
  - Go to the **Use the Spatial Subscription Server GUI to Update a Subscription in the NSBRV Database** procedure (Section 19.4.6).
- If **Cancel** was the selected action, a confirmation page is displayed with the message "Are you sure that you want to cancel subscription *x*?"
  - Click on the **Yes** link to confirm the deletion.
  - Click on the **No** link to abort the deletion.

12 To take action with respect to all subscriptions associated with the theme first click on the appropriate radio button (i.e., **Suspend All**, **Resume All**, or **Cancel All**) at the bottom of the table on the **List Subscriptions for Theme** page.

- The button is filled to indicate selection of the option.

13 To implement a selected action with respect to all subscriptions associated with the theme click on the **Apply** button at the bottom of the table on the **List Subscriptions for Theme** page.

- If **Suspend All** was the selected action, an "All associated subscriptions have been suspended" message is displayed.
- If **Resume All** was the selected action, an "All associated subscriptions have been resumed" message is displayed.
- If **Cancel All** was the selected action, a confirmation page is displayed with the message "Are you sure that you want to cancel subscription *x*?"
  - Click on the **Yes** link to confirm the deletion.
  - Click on the **No** link to abort the deletion.

14 Click on the **View refreshed subscription list** link (if applicable).

- The **List Subscriptions for Theme** page is displayed.

Table 19.4-9. Use the Spatial Subscription Server GUI to List Subscriptions Associated with a Theme

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**Manage Subscriptions** link	**single-click**
3	**List Themes** link	**single-click**
4	**Apply** button	**single-click**
5	**List Subscriptions** box (in the **Choose Theme Action** column for the theme)	**single-click**
6	**Apply** button	**single-click**
7	Observe information displayed on the **List Subscriptions for Theme** page	**read text**
8	***action*** radio button (i.e., **View**, **Update**, or **Cancel**) (in the **Choose Subscription Action** column for the subscription) (if applicable)	**single-click**
9	**Apply** button (if applicable)	**single-click**
10	***action*** radio button (i.e., **Suspend All**, **Resume All**, or **Cancel All**) (at the bottom of the table on the **List Subscriptions for Theme** page) (if applicable)	**single-click**
11	**Apply** button (if applicable)	**single-click**
12	**View refreshed subscription list** link (if applicable)	**single-click**

19.4.9 Use the Spatial Subscription Server GUI to Obtain a List of Bundling Orders and View a Bundling Order

The Spatial Subscription Server GUI is used to list, view, create, update, cancel, and list associated subscriptions for bundling orders. These functions are accessible through the **Manage Bundling Orders** link. The limited-capability operator may view bundling orders and the subscriptions associated with them. The full-capability operator can perform those same functions and create, update, or cancel bundling orders as well.

Table 19.4-10 presents the steps required to use the Spatial Subscription Server GUI to obtain a list of bundling orders and view a bundling order. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).

- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

NOTE: At various points in this procedure, you may encounter a security information warning. Unless you know of a specific potential danger that you must avoid, click on the **Continue submission** button when the warning is displayed.

2 Click on the **Manage Bundling Orders** link.

- The **Manage Bundling Orders** page is displayed.

3 Observe information displayed on the **Manage Bundling Orders** page.

- The table on the **Manage Bundling Orders** page has columns containing the following types of bundling order information:
  - **Bundling Order.**
  - **User.**
  - **Creation Date.**
  - **Expiration Date.**
  - **Media Type.**
  - **Status.**
  - **Choose Bundling Order Action.**
- The column headers in the table, except for **Choose Bundling Order Action** are links for sorting the list.
- The **Choose Bundling Order Action** column has radio buttons for taking the following actions with respect to the corresponding bundling order:
  - **View.**
  - **Update.**
  - **Cancel.**
  - **List Subs** [list associated subscriptions].
- There are option lists for filtering the table data by **User**, **Media Type**, and/or **Status**.
- There are links on the page to **Add Bundling Order** and **Configure Defaults**.

4 To filter the list to display certain types of bundling orders only, click on the appropriate option button (i.e., **User**, **Media Type**, or **Status**) and then click to select the desired option from the option list.

- The selected choice is displayed in the option field.

5 Repeat Step 4 to select an additional filter, if applicable.

6 Click on the **Filter** button to implement the selected filter.
- A list is displayed showing subscriptions that meet the filter criteria only.

7 To view a particular bundling order first click on the **View** radio button in the **Choose Bundling Order Action** column for the bundling order.
- The button is filled to indicate selection of the option.

8 To implement the selected action click on the **Apply** button in the **Choose Bundling Order Action** column for the bundling order.
- A **View Bundling Order** page is displayed.

9 Observe information displayed on the **View Bundling Order** page.
- The **View Bundling Order** page displays the following types of bundling order information:
  - **Bundling Order ID.**
  - **User Name.**
  - **Creation Date.**
  - **Expiration Date.**
  - **Media Type.**
  - **Current Status.**
  - **User String.**
  - **Email Address.**
  - **Distribution Priority.**
  - **scp distribution information: User** (if applicable).
  - **scp distribution information: Host** (if applicable).
  - **scp distribution information: Directory** (if applicable).
  - **Completion criteria: Minimum Bundle Size.**
  - **Completion criteria: Minimum Granule Count.**
  - **Completion criteria: Maximum Bundle Age.**
- There is a **Return to bundling order list** link.

10 Click on the **Return to bundling order list** link when finished viewing the bundling order data on the **View Bundling Order** page.

11 To view subscriptions associated with a particular bundling order first click on the **List Subs** radio button in the **Choose Bundling Order Action** column for the bundling order.
- The button is filled to indicate selection of the option.

12 To implement the selected action click on the **Apply** button in the **Choose Bundling Order Action** column for the subscription.
- A **Bundling Order Subscriptions (Subscriptions for bundling order *x*)** page is displayed.

13 Observe information displayed on the **Bundling Order Subscriptions (Subscriptions for bundling order *x*)** page.

- The **Bundling Order Subscriptions (Subscriptions for bundling order *x*)** page displays the following types of subscription information:
  - **ID.**
  - **User.**
  - **Status.**
  - **Expiration Date.**
  - **ESDT ShortName/Version/EventType.**
  - **Choose Subscription Action.**
- The **Choose Subscription Action** column has radio buttons for taking the following actions with respect to the corresponding subscription:
  - **View.**
  - **Update.**
  - **Cancel.**

14 To take action with respect to a particular subscription first click on the appropriate radio button (i.e., **View**, **Update**, or **Cancel**) in the **Choose Subscription Action** column for the subscription.

- The button is filled to indicate selection of the option.

15 To implement a selected action with respect to a particular subscription click on the **Apply** button in the **Choose Subscription Action** column for the subscription.

- If **View** was the selected action, a **View Subscriptions** page is displayed.
  - Click on the **View another subscription** link or the **Return to Home Page** link (as appropriate) when finished viewing the subscription data on the **View Subscriptions** page.
- If **Update** was the selected action, an **Update Subscriptions** page is displayed.
  - Go to the **Use the Spatial Subscription Server GUI to Update a Subscription in the NSBRV Database** procedure (Section 19.4.6).
- If **Cancel** was the selected action, a confirmation page is displayed with the message "Are you sure that you want to cancel subscription *x*?"
  - Click on the **Yes** link to confirm the deletion.
  - Click on the **No** link to abort the deletion.

16 To return to the **View Bundling Order** page from the **Bundling Order Subscriptions (Subscriptions for bundling order *x*)** page click on the browser **Back** button.

17 Repeat Steps 3 through 16 as necessary to view additional bundling orders.

Table 19.4-10. Use the Spatial Subscription Server GUI to Obtain a List of Bundling Orders and View a Bundling Order

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**Manage Bundling Orders** link	**single-click**
3	Observe information displayed on the **Manage Bundling Orders** page	**read text**
4	Bundling order filter option (from the appropriate option list) (if applicable)	**single-click**
5	Repeat Step 4 (if applicable)	
6	**Filter** button (to implement the selected filter) (if applicable)	**single-click**
7	**View** radio button (in the **Choose Bundling Order Action** column for the bundling order)	**single-click**
8	**Apply** button (in the **Choose Bundling Order Action** column for the bundling order)	**single-click**
9	Observe information displayed on the **View Bundling Order** page	**read text**
10	**Return to bundling order list** link (when applicable)	**single-click**
11	**List Subs** radio button (in the **Choose Bundling Order Action** column for the bundling order)	**single-click**
12	**Apply** button (in the **Choose Bundling Order Action** column for the subscription)	**single-click**
13	Observe information displayed on the **Bundling Order Subscriptions (Subscriptions for bundling order *x*)** page	**read text**
14	***action*** radio button (i.e., **View**, **Update**, or **Cancel**) (in the **Choose Subscription Action** column for the subscription) (if applicable)	**single-click**
15	**Apply** button (if applicable)	**single-click**

19.4.10 Use the Spatial Subscription Server GUI to Cancel a Bundling Order and Its Associated Subscriptions

To cancel a bundling order and its associated subscriptions a full-capability operator (only) can use the procedure that follows.

Table 19.4-11 presents the steps required to use the Spatial Subscription Server GUI to cancel a bundling order and its associated subscriptions. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).

- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

NOTE: At various points in this procedure, you may encounter a security information warning. Unless you know of a specific potential danger that you must avoid, click on the **Continue submission** button when the warning is displayed.

2 Click on the **Manage Bundling Orders** link.

- The **Manage Bundling Orders** page is displayed.

3 Observe information displayed on the **Manage Bundling Orders** page.

- The **Manage Bundling Orders** page is displayed, providing a table of bundling order information showing seven columns: **Bundling Order**, **User**, **Creation Date**, **Expiration Date**, **Media Type**, **Status**, and **Choose Bundling Order Action** (containing radio buttons for selecting an action to take and **Apply** buttons for implementing the selected actions).

4 To filter the list to display certain types of bundling orders only, click on the appropriate option button (i.e., **User**, **Media Type**, or **Status**) and then click to select the desired option from the option list.

- The selected choice is displayed in the option field.

5 Repeat Step 4 to select an additional filter, if applicable.

6 Click on the **Filter** button to implement the selected filter.

- A list is displayed showing subscriptions that meet the filter criteria only.

7 To cancel a particular bundling order first click on the **Cancel** radio button in the **Choose Bundling Order Action** column at the end of the row for the bundling order.

- The button is filled to indicate selection of the option.

8 To implement the selected action click on the **Apply** button in the **Choose Bundling Order Action** column for the bundling order.

- A confirmation message displays: ***Note: Any associated subscriptions will also be cancelled.* Are you sure you wish to cancel bundling order <*nnnnnn*>?**

9 Click on the appropriate button from the following selections:

- **Yes -** to confirm cancellation of the bundling order and associated subscriptions.
  - A confirmation message displays: **Bundling order *x* has been cancelled.**

- **No** - to abort cancellation of the bundling order.
  - The **Manage Bundling Orders** page is displayed.

10 Click on the **Return to bundling order list** link (if applicable).
- The **Manage Bundling Orders** page is displayed.

11 Repeat Steps 3 through 10 as necessary to cancel additional bundling orders.

Table 19.4-11. Use the Spatial Subscription Server GUI to Cancel a Bundling Order and Its Associated Subscriptions

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**Manage Bundling Orders** link	**single-click**
3	Observe information displayed on the **Manage Bundling Orders** page	**single-click**
4	Bundling order filter option (from the appropriate option list) (if applicable)	**single-click**
5	Repeat Step 4 (if applicable)	
6	**Filter** button (to implement the selected filter) (if applicable)	**single-click**
7	**Cancel** radio button (in the **Choose Bundling Order Action** column for the bundling order)	**single-click**
8	**Apply** button (in the **Choose Bundling Order Action** column for the bundling order)	**single-click**
9	**Yes** button	**single-click**
10	**Return to bundling order list** link (if applicable).	**single-click**
11	Repeat Steps 3 through 10 (as necessary)	

19.4.11 Use the Spatial Subscription Server GUI to Add a Bundling Order

To add a bundling order, a full-capability operator (only) can use the procedure that follows.

Table 19.4-12 presents the steps required to use the Spatial Subscription Server GUI to add a bundling order. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).

- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

NOTE: At various points in this procedure, you may encounter a security information warning. Unless you know of a specific potential danger that you must avoid, click on the **Continue submission** button when the warning is displayed.

2 Click on the **Manage Bundling Orders** link.

- The **Manage Bundling Orders** page is displayed, providing a table of bundling order information showing seven columns: **Bundling Order**, **User**, **Creation Date**, **Expiration Date**, **Media Type**, **Status**, and **Choose Bundling Order Action** (containing radio buttons for selecting an action to take and **Apply** buttons for implementing the selected actions).
- There are links on the page to **Add Bundling Order** and **Configure Defaults**.

3 Click on the **Add Bundling Order** link.

- The **Add Bundling Order** page is displayed.

4 Type the appropriate user ID in the **User ID** text entry box.

- The typed entry is displayed in the **User ID** field.

5 If the expiration date for the bundling order is different from the default (one year from the current date) type the appropriate date in the **Expiration Date** text entry box.

- The date should be entered in ***mm/dd/yyyy*** format

6 To select a **Media Type** option click on the appropriate choice (e.g., **scp**) from the option list.

7 Click on the **continue** button.

- A confirmation dialog box asks **Your present values have been entered. Continue?**

8 Click on the appropriate button from the following selections:

- **OK** - to confirm that the bundling order is to be added.
  - The GUI displays an **Add Bundling Order Detail** page that is appropriate for the selected **Media Type**.

- **Cancel**- to abort the process of adding a bundling order.
  - The **Add Bundling Order** page is displayed.
  - Return to Step 4.

9 Either type the appropriate data or click on the appropriate choice from the option list in the relevant fields (depending on the distribution medium selected) of the **Add Bundling Order Detail** page:

- **Email Address.**
- **User String.**
- **Distribution Priority.**
- **Shipping Information: Street1.**
- **Shipping Information: Street2.**
- **Shipping Information: Street3.**
- **Shipping Information: City.**
- **Shipping Information: State.**
- **Shipping Information: Country.**
- **Shipping Information: Zip Code.**
- **Shipping Information: Phone Number.**
- **Shipping Information: FAX Number.**
- **FTP Push Parameters: FTP Node.**
- **FTP Push Parameters: FTP Address.**
- **FTP Push Parameters: Password.**
- **FTP Push Parameters: Confirm Password.**
- **FTP Push Parameters: User String.**
- **FTP Push Parameters: Destination Directory.**
- **scp Distribution Information: User.**
- **scp Distribution Information: Host.**
- **scp Distribution Information: Password.**
- **scp Distribution Information: Retype Password.**
- **scp Distribution Information: Directory.**
- **Completion Criteria: Minimum Bundle Size.**
- **Completion Criteria: Minimum Granule Count.**
- **Completion Criteria: Maximum Bundle Age.**

NOTE: Required fields are identified by an asterisk on the **Add Bundling Order Detail** page.

10 Click on the **Add Bundling Order** button.

- A “Remember Values” Confirmation dialogue box is displayed.

11 If a **"Remember Values" Confirmation** dialogue box is displayed, click on the appropriate button from the following selections:
- **Yes**.
- **Never for this site**.
- **No**.

12 On the add bundling order confirmation page click on the appropriate button from the following selections:
- **OK** - to confirm that the bundling order is to be added.
  - A message is displayed confirming that "Bundling Order *x* was created" and there are links to **Create another Bundling Order** or **Return to Home Page**.
- **Cancel**- to abort the process of adding a bundling order.
  - The **Add Bundling Order** page is displayed.
  - Return to Step 4.

13 Click on the **Create another Bundling Order** link (if applicable).
- The **Add Bundling Order** page is displayed.

14 Repeat Steps 4 through 13 as necessary to add another bundling order.

Table 19.4-12. Use the Spatial Subscription Server GUI to Add a Bundling Order

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**Manage Bundling Orders** link	**single-click**
3	**Add Bundling Order** link	**single-click**
4	***userID*** (in the **User ID** text entry box)	**enter text**
5	***mm/dd/yyyy*** (in the **Expiration Date** text entry box) (if applicable)	**enter text**
6	**Media Type** option (from the **Media Type** option list)	**single-click**
7	**continue** button	**single-click**
8	**OK** button	**single-click**
9	***order*** options (in the relevant fields of the **Add Bundling Order Detail** page) (if applicable)	**enter text/single-click**
10	**Add Bundling Order** button	**single-click**
11	**Yes**, **Never for this site**, or **No** (as applicable) (in the **"Remember Values" Confirmation** dialogue box)	**single-click**
12	**OK** buttton	**single-click**
13	**Create another Bundling Order** link (if applicable).	**single-click**
14	Repeat Steps 4 through 13 as necessary	

19.4.12 Use the Spatial Subscription Server GUI to Update a Bundling Order

A full-capability operator (only) can use the procedure that follows to update a bundling order

Table 19.4-13 presents the steps required to use the Spatial Subscription Server GUI to update a bundling order. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).
- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

NOTE: At various points in this procedure, you may encounter a security information warning. Unless you know of a specific potential danger that you must avoid, click on the **Continue submission** button when the warning is displayed.

2 Click on the **Manage Bundling Orders** link.
- The **Manage Bundling Orders** page is displayed.

3 Observe information displayed on the **Manage Bundling Orders** page.
- The **Manage Bundling Orders** page is displayed, providing a table of bundling order information showing seven columns: **Bundling Order**, **User**, **Creation Date**, **Expiration Date**, **Media Type**, **Status**, and **Choose Bundling Order Action** (containing radio buttons for selecting an action to take and **Apply** buttons for implementing the selected actions).

4 To filter the list to display certain types of bundling orders only, click on the appropriate option button (i.e., **User**, **Media Type**, or **Status**) and then click to select the desired option from the option list.
- The selected choice is displayed in the option field.

5 Repeat Step 4 to select an additional filter, if applicable.

6 Click on the **Filter** button to implement the selected filter.
- A list is displayed showing subscriptions that meet the filter criteria only.

7 To update a particular bundling order first click on the **Update** radio button in the **Choose Bundling Order Action** column at the end of the row for the bundling order.
- The button is filled to indicate selection of the option.

8 To implement the selected action click on the **Apply** button in the **Choose Bundling Order Action** column for the bundling order.

- An **Update Bundling Order *x*** page is displayed.

9 To change the User ID (if applicable) type the User ID for the requesting user in the **User ID** text entry field.

- The typed entry is displayed in the **User Id** field.

10 To change the expiration date for the bundling order (if applicable) type the appropriate date in the **Expiration Date** text entry box.

- The date should be entered in ***mm/dd/yyyy*** format

11 To select a different **Media Type** option click on the appropriate choice (e.g., **CDROM**) from the option list.

12 Click on the **Update Bundling Order** button.

- A confirmation dialog box asks **Your present values have been entered. Continue?**

13 Click on the appropriate button from the following selections:

- **OK** - to confirm that the bundling order is to be updated.
  - The GUI displays an **Update Bundling Order *x* Detail** page that is appropriate for the selected **Media Type**.
- **Cancel**- to abort the process of updating the bundling order.
  - The **Update Bundling Order *x*** page is displayed.
  - Return to Step 9.

14 To change, add or delete bundling order data either type the appropriate data or click on the appropriate choice from the option list in the relevant fields (depending on the distribution medium selected) of the **Update Bundling Order *x* Detail** page:

- **Email Address.**
- **User String.**
- **Distribution Priority.**
- **Shipping Information: Street1.**
- **Shipping Information: Street2.**
- **Shipping Information: Street3.**
- **Shipping Information: City.**
- **Shipping Information: State.**
- **Shipping Information: Country.**
- **Shipping Information: Zip Code.**
- **Shipping Information: Phone Number.**

- **Shipping Information: FAX Number.**
- **FTP Push Parameters: FTP Node.**
- **FTP Push Parameters: FTP Address.**
- **FTP Push Parameters: Password.**
- **FTP Push Parameters: Confirm Password.**
- **FTP Push Parameters: User String.**
- **FTP Push Parameters: Destination Directory.**
- **scp Distribution Information: User.**
- **scp Distribution Information: Host.**
- **scp Distribution Information: Password.**
- **scp Distribution Information: Retype Password.**
- **scp Distribution Information: Directory.**
- **Completion Criteria: Minimum Bundle Size.**
- **Completion Criteria: Minimum Granule Count.**
- **Completion Criteria: Maximum Bundle Age.**

NOTE: Required fields are identified by an asterisk on the **Update Bundling Order *x* Detail** page.

15 Click on the **Update Bundling Order** button.
- A confirmation page is displayed.

16 On the update bundling order confirmation page click on the appropriate button from the following selections:
- **OK** - to confirm that the bundling order is to be updated.
  - A message is displayed confirming that "Bundling Order *x* was updated" and there are links to **Update another Bundling Order** or **Return to Home Page**.
- **Cancel**- to abort the process of adding a bundling order.
  - The **Manage Bundling Orders** page is displayed.
  - Return to Step 3.

17 Click on the **Update another Bundling Order** link (if applicable).
- The **Manage Bundling Orders** page is displayed.

18 Repeat Steps 3 through 17 as necessary to update another bundling order.

Table 19.4-13. Use the Spatial Subscription Server GUI to Update a Bundling Order

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**Manage Bundling Orders** link	**single-click**
3	Observe information displayed on the **Manage Bundling Orders** page	**read text**
4	Bundling order filter option (from the appropriate option list) (if applicable)	**single-click**
5	Repeat Step 4 (if applicable)	
6	**Filter** button (to implement the selected filter) (if applicable)	**single-click**
7	**Update** radio button (in the **Choose Bundling Order Action** column at the end of the row for the bundling order)	**single-click**
8	**Apply** button (in the **Choose Bundling Order Action** column at the end of the row for the bundling order)	**single-click**
9	***userID*** (in the **User ID** text entry box) (if applicable)	**enter text**
10	***mm/dd/yyyy*** (in the **Expiration Date** text entry box) (if applicable)	**enter text**
11	**Media Type** option (from the **Media Type** option list) (if applicable)	**single-click**
12	**Update Bundling Order** button	**single-click**
13	**OK** button	**single-click**
14	***order*** options (in the relevant fields of the **Update Bundling Order *x* Detail** page) (if applicable)	**enter text/single-click**
15	**Update Bundling Order** button	**single-click**
16	**OK** button	**single-click**
17	**Update another Bundling Order** link (if applicable)	**single-click**
18	Repeat Steps 3 through 17 (as necessary)	

19.4.13 Use the Spatial Subscription Server GUI to Configure Bundling Order Completion Criteria Default Values

The **Configure Completion Criteria Default Values** page on the **Spatial Subscription Server GUI** allows a full-capability operator to set or change values assigned to bundling order completion criteria. Limited-capability operators have read-only access to the page.

The following parameters are examples of the types of bundling order completion criteria parameters that the full-capability operator can modify:

- **Minimum Granule Count**.
- **Maximum Bundle Age (days)**.
- **Bundle Expiration Period (days)**.

- **Minimum Bundle Size (GB)** [for each type of distribution medium].

Table 19.4-14 presents the steps required to use the Spatial Subscription Server GUI to configure bundling order completion criteria default values. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).

- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

NOTE: At various points in this procedure, you may encounter a security information warning. Unless you know of a specific potential danger that you must avoid, click on the **Continue submission** button when the warning is displayed.

2 Click on the **Manage Bundling Orders** link.

- The **Manage Bundling Orders** page is displayed, providing a table of bundling order information showing seven columns: **Bundling Order**, **User**, **Creation Date**, **Expiration Date**, **Media Type**, **Status**, and **Choose Bundling Order Action** (containing radio buttons for selecting an action to take and **Apply** buttons for implementing the selected actions).
- There are links on the page to **Add Bundling Order** and **Configure Defaults**.

3 Click on the **Configure Defaults** link.

- The **Configure Completion Criteria Default Values** page is displayed.

4 Observe information displayed on the **Configure Completion Criteria Default Values** page.

- The **Configure Completion Criteria Default Values** page has columns containing the following types of information:
  - **Parameter.**
  - **Current Value.**
  - **Change to…** (containing text entry boxes for entering new values).
- The rows on the page indicate the current values of the following types of parameters:
  - **Minimum Granule Count.**
  - **Maximum Bundle Age (days).**
  - **Bundle Expiration Period (days).**
  - **8MM Minimum Bundle Size (GB).**
  - **CDROM Minimum Bundle Size (GB).**
  - **DLT Minimum Bundle Size (GB).**

- **DVD Minimum Bundle Size (GB).**
- **FtpPull Minimum Bundle Size (GB).**
- **FtpPush Minimum Bundle Size (GB).**
- **scp Minimum Bundle Size (GB).**

5 To change the value assigned to a parameter first type the new value in the **Change to…** text entry box at the end of the line for the appropriate parameter.
- The typed entry is displayed in the field.

6 Repeat Step 5 as necessary to change any additional parameters.

7 Click on the **Change Bundling Criteria** button.
- A confirmation page is displayed with the message "Please Confirm The Following Bundling Criteria Change" and the parameter(s) for which changes were entered with the entered value(s).

8 On the change bundling criteria confirmation page click on the appropriate button from the following selections:
- **OK** - to confirm that the bundling criteria are to be changed.
  - The confirmation page is closed and the **Current Value** column on the **Configure Completion Criteria Default Values** page reflects the change(s).
- **Cancel**- to abort the process of changing bundling criteria.
  - The confirmation page is closed and the entries in the **Current Value** column on the **Configure Completion Criteria Default Values** page are restored to their original values.

Table 19.4-14. Use the Spatial Subscription Server GUI to Configure Bundling Order Completion Criteria Default Values

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**Manage Bundling Orders** link	**single-click**
3	**Configure Defaults** link	**single-click**
4	Observe information displayed on the **Configure Completion Criteria Default Values** page	**read text**
5	***value*** (in the **Change to…** text entry box at the end of the line for the appropriate parameter)	**enter text**
6	Repeat Step 5 (as necessary)	
7	**Change Bundling Criteria** button	**single-click**
8	**OK** button	**single-click**

19.4.14 Use the Spatial Subscription Server GUI to View the Acquire and Notification Actions Being Processed

The **Spatial Subscription Server GUI** provides pages that can be used to keep track of current actions as the NSBRV processes Acquires and Notifications, and to track NSBRV performance. These capabilities are accessible through links on the **Spatial Subscription Server GUI Home Page**.

The **List Action Queue** link is used to view Acquire and Notification actions being processed by the NSBRV. The procedure that follows is applicable to both full-capability and limited-capability operators.

Table 19.4-15 presents the steps required to use the Spatial Subscription Server GUI to view the acquire and notification actions being processed. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).

- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

2 Click on the **Monitor Queues** link.

3 Click on the **List Action Queue** link.

- The **List Action Queue** page is displayed with a table listing acquire and notification actions that are being processed.

4 Observe information displayed on the **List Action Queue** page.

- The table on the **List Action Queue** page has columns containing the following types of information:
  - **Action Type.**
  - **Subscription Id.**
  - **User.**
  - **Collection.**
  - **Version.**
  - **Enqueue Time.**
  - **Dequeue Time.**
  - **Status.**
- The **Action Type** and **Subscription Id** column headers are links for sorting the list.
- There are option lists for filtering the table data by **Action Type**, **Subscription**, and/or **Status**.

5 To filter the list to display certain types of actions only, click on the appropriate option button and then click to select the desired option from the option list.
- The selected choice is displayed in the option field.

6 Repeat Step 5 to select an additional filter, if applicable.

7 Click on the **Filter** button to implement the selected filter.
- A list is displayed showing items that meet the filter criteria only.

8 Return to Step 4.

Table 19.4-15. Use the Spatial Subscription Server GUI to View the Acquire and Notification Actions Being Processed

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**Monitor Queues** link	**single-click**
3	**List Action Queue** link	**single-click**
4	Observe information displayed on the **List Action Queue** page	**read text**
5	Action queue filter option (from the appropriate option list) (if applicable)	**single-click**
6	Repeat Step 5 (if applicable)	
7	**Filter** button (to implement the selected filter) (if applicable)	**single-click**
8	Return to Step 4	

19.4.15 Use the Spatial Subscription Server GUI to View and Remove Failed Actions

The **List Failed Action** link is used to view and remove failed actions processed by the NSBRV. The full-capability operator can both view and remove failed actions. The limited-capability operator has read-only access to the **List Failed Action** page.

Table 19.4-16 presents the steps required to use the Spatial Subscription Server GUI to view and remove failed actions. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).

- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

2 Click on the **Monitor Queues** link.

3 Click on the **List Failed Action** link.

- The **List Failed Action** page is displayed with a table listing acquire and notification actions that are being processed.

4 Observe information displayed on the **List Failed Action** page.

- The table on the **List Failed Action** page has columns containing the following types of information:
  - **Priority.**
  - **ActionId.**
  - **ActionQueueId.**
  - **SubscriptionId.**
  - **granUR.**
  - **Remove Action.**
- The **Remove Action** column contains **Remove Action** buttons for removing failed actions.

5 To remove a failed action click on the **Remove Action** button at the end of the row for the action.

6 Return to Step 4.

Table 19.4-16. Use the Spatial Subscription Server GUI to View and Remove Failed Actions

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**Monitor Queues** link	**single-click**
3	**List Failed Action** link	**single-click**
4	Observe information displayed on the **List Failed Action** page	**read text**
5	**Remove Action** button (at the end of the row for the action) (if applicable)	**single-click**
6	Return to Step 4	

19.4.16 Use the Spatial Subscription Server GUI to View Statistics on Processing of Events and Actions by the NSBRV

The **List Statistics** link is used to review summary information concerning the processing of events and subscriptions. The procedure that follows is applicable to both full-capability and limited-capability operators.

Table 19.4-17 presents the steps required to use the Spatial Subscription Server GUI to view statistics on processing of events and actions by the NSBRV. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the Spatial Subscription Server GUI (refer to Section 19.4.1, **Launch the Spatial Subscription Server GUI**).

- The **Home Page** is the default display, offering links for access to Spatial Subscription Server function pages (i.e., **List Events**, **Manage Subscriptions**, **Manage Bundling Orders**, **Monitor Queues**, **Help**, and **End Session**).

2 Click on the **Monitor Queues** link.

3 Click on the **List Statistics** link.

- The **List Statistics** page is displayed.

4 Observe information displayed on the **List Statistics** page.

- The **List Statistics** page has a summary showing the number of **Subscribed Events Left to Dequeue**.
- The **List Statistics** page has a summary showing the number of **Matched Subscriptions Left to Dequeue**.
- The **List Statistics** page has a **Summary of the Processing Time for Subscriptions Evaulated against Events in the Event Queue** table that has columns containing the following types of information:
  - **ESDT Count.**
  - **ESDT Short Name.**
  - **ESDT VersionID.**
  - **ESDT Event Type.**
  - **MaxMetadataTime (ms).**
  - **AverageMetadataTime (ms).**
  - **MaxSubEvalTime (ms).**
  - **AverageSubEvalTime (ms).**
- The **List Statistics** page has a **Summary of the Processing Time for E-Mail Notification Actions in Action Queue** table that has columns containing the following types of information:
  - **Notification Count.**

  - **MaxNotifyTime (ms).**
  - **AverageNotifyTime (ms).**
- The **List Statistics** page has a **Summary of the Processing Time for Distribution Actions in Action Queue** table that has columns containing the following types of information:
  - **Acquire Count.**
  - **MaxAcquireTime (ms).**
  - **AverageAcquireTime (ms).**

Table 19.4-17. Use the Spatial Subscription Server GUI to View Statistics on Processing of Events and Actions by the NSBRV

Step	What to Do	Action to Take
1	Launch the Spatial Subscription Server GUI	Use procedure in Section 19.4.1
2	**Monitor Queues** link	**single-click**
3	**List Statistics** link	**single-click**
4	Observe information displayed on the **List Statistics** page	**read text**

19.4.17 Prepare Input Files for Use with the SSS CLI

The Spatial Subscription Server (SSS) Command Line Interface (CLI) utility is intended for full-capability operators only. Because it is a UNIX utility, the SSS CLI depends on standard UNIX permissions to restrict execution of the script to authorized users.

The full-capability operator can perform the following tasks using the Spatial Subscription Server (SSS) Command Line Interface (CLI):

- Viewing a subscription**.**
- Adding a new subscription.
- Updating a subscription.
- Deleting a subscription.

However, before updating a subscription or adding a new subscription, it is necessary to prepare an input file that is specified as an argument when using the SSS CLI.

When the operator uses the SSS CLI to view a subscription, the CLI creates a text file that the operator subsequently opens to view the subscription information. It is recommended that before updating a subscription using the SSS CLI the operator view the subscription first, which results in the creation of a text file that can be edited for use as input to the command for updating the subscription using the SSS CLI. In the same vein, before adding a new subscription, it would be useful to view a subscription that is similar to the one to be added, edit the resulting text file, and specify the edited file as an input to the command for adding the subscription.

As previously mentioned, before updating a subscription or adding a new subscription, it is necessary to prepare an input file that is specified as an argument when using the SSS CLI. Although it is possible to create the needed file from scratch, it is generally much easier to use the SSS CLI to view a similar subscription, edit the resulting text file, and specify the edited file as an input to either the Add or Update command (as applicable).

Physical media distributions for subscriptions are supported through the use of bundling orders. The simplest way to do this is to create a bundling order via the GUI and then "bundle" the subscription by specifying the bundling order ID. Alternatively, if a bundling order ID is not specified for a physical media distribution, a bundling order will automatically be created for the subscription; however, in this case, all of the required information for the bundling order (such as shipping information) must be specified in the input file for the subscription.

If an operator updates a bundled subscription without altering the bundling order ID, the bundling order will be updated along with the subscription.

Table 19.4-18 presents the steps required to prepare input files for use with the SSS CLI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Access a terminal window logged in to the APC Server host.
- Examples of APC Server host names include **e0acg11**, **g0acg01**, **l0acg02,** and **n0acg01**.
- For detailed instructions refer to Steps 1 through 5 of the **Launch Account Management Applications Using UNIX Commands** procedure (Section 19.1.1).

2 Type **cd** ***path*** then press **Return/Enter**.
- ***path*** is the directory path for the file to be created or edited (e.g., /home/cmops/subscriptions).
- The ***MODE*** will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 (for SSI&T).
  - TS2 (new version checkout).
- Note that the separate subdirectories under /usr/ecs apply to different operating modes.

3 Type **vi** ***filename*** then press **Return/Enter**.
- ***filename*** is the name of a file to be opened.
  - It may be either the name of an existing file (e.g., a subscription file ordered using the SSS CLI View command) or the name of a new file.

- For example:

  x0pls01{cmops}[10]->vi sub.109.txt

  SUBSCRIPTION=109
  USERNAME=mauser
  STATUS=Active

  […]

  "sub.109.txt" [New file]

  – Many lines have been deleted from the example.
- The file will specify the subscription information to be sent to the NSBRV database.
- Although this procedure has been written for the **vi** editor, any UNIX editor can be used to create the file.

4 Using vi editor commands create a file that specifies the relevant values to be sent to the NSBRV database.

- The text file consists of several lines of attribute-value pairs, with one attribute-value pair per line.
- Comments can be included in the file as long as each comment line starts with the # character.
- When preparing a file for updating a subscription, the number of the subscription to be updated must appear in the file [e.g., on the SUBSCRIPTION line of the file, as shown in the previous example].
  – The number of the subscription is irrelevant when adding a subscription. (The CLI ignores any subscription number in the file and assigns a new subscription number.)
- The following vi editor commands are useful:
  – **h** (move cursor left).
  – **j** (move cursor down).
  – **k** (move cursor up).
  – **l** (move cursor right).
  – **a** (append text).
  – **i** (insert text).
  – **r** (replace single character).
  – **x** (delete a character).
  – **dw** (delete a word).
  – **dd** (delete a line).
  – ***n*dd** (delete *n* lines).
  – **u** (undo previous change).
  – **Esc** (switch to command mode).

5 Press the **Esc** key.

6 Type **ZZ**.

- **vi** exits and the new or edited file is saved.
  - To exit **vi** without saving the new entries in the file type **:q!** then press **Return/Enter**.
- UNIX prompt is displayed.

Table 19.4-18. Prepare Input Files for Use with the SSS CLI

Step	What to Do	Action to Take
1	UNIX window (APC Server)	**single-click** or use procedure in Section 19.1.1
2	**cd *path***	**enter text; press Return/Enter**
3	**vi *filename***	**enter text; press Return/Enter**
4	Create a file that specifies the relevant values to be sent to the NSBRV database	**enter text**
5	**Esc** key	**press**
6	**ZZ**	**enter text**

19.4.18 View a Subscription Using the SSS CLI

When the operator uses the SSS CLI to view a subscription, the CLI creates a text file that the operator subsequently opens (typically using a UNIX text editor or viewer) to view the subscription information. The file created using the SSS CLI View command can be used as a template for preparing an input file to be used with either the SSS CLI Update command or Add command.

Table 19.4-19 presents the steps required to view a subscription using the SSS CLI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Access a terminal window logged in to the APC Server host.

- Examples of APC Server host names include **e0acg11**, **g0acg01**, **l0acg02,** and **n0acg01**.
- For detailed instructions refer to Steps 1 through 5 of the **Launch Account Management Applications Using UNIX Commands** procedure (Section 19.1.1).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/utilities** then press **Return/Enter**.

- Change directory to the directory containing the **SSS CLI** start-up script (i.e., EcNbSubscriptionCLIStart).
- The ***MODE*** will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 (for SSI&T).
  - TS2 (new version checkout).
- Note that the separate subdirectories under /usr/ecs apply to different operating modes.

3 Type **EcNbSubscriptionCLIStart *MODE* View *number*** then press **Return/Enter**.

- ***number*** is the subscription number to be viewed.
- For example:

  EcNbSubscriptionCLIStart OPS View 115

- The CLI creates an output file named sub.*number*.txt (where *number* is the subscription number) in the current directory.
  - For example:

    sub.115.txt

  - If the command did not appear to succeed (e.g., a message is displayed indicating that there is no subscription with the specified number), check the log file (i.e., EcNbSubscriptionCLI.log in the logs directory for the mode) to determine what went wrong.

4 Type **vi *filename*** then press **Return/Enter**.

- ***filename*** is the name of a file to be viewed.
- For example:

  x0pls01{cmops}[10]->vi sub.115.txt

  SUBSCRIPTION=115
  USERNAME=resuam
  STATUS=Active

  […]

  "sub.115.txt"

  - Many lines have been deleted from the example.
- Although this procedure has been written for the **vi** editor, any UNIX editor can be used to create the file.

5 Using vi editor commands observe the contents of the file.

- The file consists of several lines of attribute-value pairs, with one attribute-value pair per line.
- Comments in the file are identified by the **#** character at the beginning of each comment line.
- The following vi editor commands are useful:
  - **h** (move cursor left).
  - **j** (move cursor down).
  - **k** (move cursor up).
  - **l** (move cursor right).
  - **a** (append text).
  - **i** (insert text).
  - **r** (replace single character).
  - **x** (delete a character).
  - **dw** (delete a word).
  - **dd** (delete a line).
  - ***n*dd** (delete *n* lines).
  - **u** (undo previous change).
  - **Esc** (switch to command mode).

6 Press the **Esc** key.

7 Type **:q!** then press **Return/Enter**

- **vi** exits without saving any changes to the file.
- UNIX prompt is displayed.

Table 19.4-19. View a Subscription Using the SSS CLI

Step	What to Do	Action to Take
1	UNIX window (APC Server)	**single-click** or use procedure in Section 19.1.1
2	**cd /usr/ecs/*MODE*/CUSTOM/utilities**	**enter text; press Return/Enter**
3	**EcNbSubscriptionCLIStart *MODE* View *number***	**enter text; press Return/Enter**
4	**vi *filename***	**enter text; press Return/Enter**
5	observe the contents of the file	**read text**
6	**Esc** key	**press**
7	**:q!**	**enter text; press Return/Enter**

19.4.19 Add a New Subscription Using the SSS CLI

If a new subscription is to be added using the SSS CLI, the appropriate input file must have been prepared first so the file can be included in arguments that are specified when the SSS CLI is started. The SSS CLI script takes a file name as one of the arguments specified when entering the command to add or update a subscription.

If the operator were to view a similar subscription (using the SSS CLI View command), the CLI would create a text file to be viewed. That file could be edited to adapt it to the requirements of the new subscription. Then the operator could specify the edited file as an input to the SSS CLI Add command.

Table 19.4-20 presents the steps required to add a new subscription using the SSS CLI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Access a terminal window logged in to the APC Server host.
- Examples of APC Server host names include **e0acg11**, **g0acg01**, **l0acg02,** and **n0acg01**.
- For detailed instructions refer to Steps 1 through 5 of the **Launch Account Management Applications Using UNIX Commands** procedure (Section 19.1.1).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/utilities** then press **Return/Enter**.
- Change directory to the directory containing the SSS CLI start-up script (i.e., EcNbSubscriptionCLIStart).
- The ***MODE*** will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 (for SSI&T).
  - TS2 (new version checkout).
- Note that the separate subdirectories under /usr/ecs apply to different operating modes.

3 Type **EcNbSubscriptionCLIStart *MODE* Add *path/filename*** then press **Return/Enter**.
- ***path/filename*** is the name of a file containing data describing the new subscription.
- For example:

  EcNbSubscriptionCLIStart OPS Add /home/cmops/subscriptions/sub.109.txt
- The subscription number for the new subscription is displayed.
  - If the command did not appear to succeed, check the log file (i.e., EcNbSubscriptionCLI.log in the logs directory for the mode) to determine what went wrong.

Table 19.4-20. Add a New Subscription Using the SSS CLI

Step	What to Do	Action to Take
1	UNIX window (APC Server)	**single-click** or use procedure in Section 19.1.1
2	**cd /usr/ecs/*MODE*/CUSTOM/utilities**	**enter text; press Return/Enter**
3	**EcNbSubscriptionCLIStart *MODE* Add *path/filename***	**enter text; press Return/Enter**

19.4.20 Update a Subscription Using the SSS CLI

If a subscription is to be updated using the SSS CLI, the appropriate input file must have been prepared first so the file can be included in arguments that are specified when the SSS CLI is started. The SSS CLI script takes a file name as one of the arguments specified when entering the command to update a subscription.

It is recommended that before updating a subscription using the SSS CLI the operator view the subscription (using the SSS CLI View command), which results in the creation of a text file that can be edited for use as input to the command for updating the subscription using the SSS CLI. Then the operator would edit the text file to include the desired updates. The operator would specify the edited file as an input to the SSS CLI Update command.

Table 19.4-21 presents the steps required to update a subscription using the SSS CLI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Access a terminal window logged in to the APC Server host.
- Examples of APC Server host names include **e0acg11**, **g0acg01**, **l0acg02,** and **n0acg01**.
- For detailed instructions refer to Steps 1 through 5 of the **Launch Account Management Applications Using UNIX Commands** procedure (Section 19.1.1).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/utilities** then press **Return/Enter**.
- Change directory to the directory containing the SSS CLI start-up script (i.e., EcNbSubscriptionCLIStart).
- The ***MODE*** will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 (for SSI&T).
  - TS2 (new version checkout).
- Note that the separate subdirectories under /usr/ecs apply to different operating modes.

3 Type **EcNbSubscriptionCLIStart *MODE* Update *path/filename*** then press **Return/Enter**.

- ***path/filename*** is the name of a file containing data describing the updated subscription.
- For example:

  EcNbSubscriptionCLIStart OPS Update /home/cmops/subscriptions/sub.109.txt

- The subscription is updated.
  - If the command did not appear to succeed, check the log file (i.e., EcNbSubscriptionCLI.log in the logs directory for the mode) to determine what went wrong.

Table 19.4-21. Update a Subscription Using the SSS CLI

Step	What to Do	Action to Take
1	UNIX window (APC Server)	**single-click** or use procedure in Section 19.1.1
2	**cd /usr/ecs/*MODE*/CUSTOM/utilities**	**enter text; press Return/Enter**
3	**EcNbSubscriptionCLIStart *MODE* Update *path/filename***	**enter text; press Return/Enter**

19.4.21 Delete a Subscription Using the SSS CLI

When using the SSS CLI to delete a subscription, the operator must specify which subscription (number) is to be deleted.

Table 19.4-22 presents the steps required to delete a subscription using the SSS CLI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Access a terminal window logged in to the APC Server host.

- Examples of APC Server host names include **e0acg11**, **g0acg01**, **l0acg02,** and **n0acg01**.
- For detailed instructions refer to Steps 1 through 5 of the **Launch Account Management Applications Using UNIX Commands** procedure (Section 19.1.1).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/utilities** then press **Return/Enter**.

- Change directory to the directory containing the SSS CLI start-up script (i.e., EcNbSubscriptionCLIStart).
- The ***MODE*** will most likely be one of the following operating modes:
  - OPS (for normal operation).

- TS1 (for SSI&T).
- TS2 (new version checkout).

- Note that the separate subdirectories under /usr/ecs apply to different operating modes.

3 Type **EcNbSubscriptionCLIStart *MODE* Delete *number*** then press **Return/Enter**.

- ***number*** is the subscription number to be deleted.
- For example:

  EcNbSubscriptionCLIStart OPS Delete 325

- The CLI requests confirmation of the deletion.
  - If the command did not appear to succeed (e.g., no confirmation is requested), check the log file (i.e., EcNbSubscriptionCLI.log in the logs directory for the mode) to determine what went wrong.

4 Respond to the deletion confirmation message.

Table 19.4-22. Delete a Subscription Using the SSS CLI

Step	What to Do	Action to Take
1	UNIX window (APC Server)	**single-click** or use procedure in Section 19.1.1
2	**cd /usr/ecs/*MODE*/CUSTOM/utilities**	**enter text; press Return/Enter**
3	**EcNbSubscriptionCLIStart *MODE* Delete *number***	**enter text; press Return/Enter**
4	Respond to the deletion confirmation message	**enter text; press Return/Enter**

19.5 Using the ECS Order Tracking Tool

The ECS Order Tracking GUI provides a convenient tool to locate an order, either because a user wants to cancel it or for some other reason (e.g., a user wants to check on an order that has not been received, or it is necessary to delete one or more requests from an order). Table 19.5-1 provides an activity checklist for tasks using the ECS Order Tracking Tool.

Table 19.5-1. Use the ECS Order Tracking Tool - Activity Checklist

Order	Role	Task	Section	Complete?
1	User Services	Launch the ECS Order Tracking GUI	(P) 19.5.1	
2	User Services	Use the ECS Order Tracking GUI to Find and Review a User's Order and Request Information	(P) 19.5.2	
3	User Services	Use the ECS Order Tracking GUI to Cancel an Order or Request	(P) 19.5.3	
4	User Services	Troubleshooting: Check Log Files for ECS Order Tracking	(P) 19.5.4	

19.5.1 Launch the ECS Order Tracking GUI

Table 19.5-2 presents the steps required to launch the NBSRV GUI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the UNIX command shell prompt, type **setenv DISPLAY *clientname*:0.0** and then press the **Return/Enter** key.
- For ***clientname***, use either the local terminal/workstation IP address or its machine name.

2 Start the log-in to the MSS client server by typing **/tools/bin/ssh *hostname*** *(e.g.*, g0mss21, l0mss21, e0mss21, n0mss21) at the UNIX command shell prompt, and then press the **Return/Enter** key.
- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 3.
- If you have not previously set up a secure shell passphrase; go to Step 4.

3 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 5.

4 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.

5 To change to the directory containing the utility scripts to start Account Management GUIs, type **cd /usr/ecs/*MODE*/CUSTOM/utilities**, where ***MODE*** will likely be **TS1**, **TS2**, or **OPS**, and then press the **Return/Enter** key.
- The working directory is changed to **/usr/ecs/*MODE*/CUSTOM/utilities**.

6 Type **EcMsAcOrderGUIStart *MODE***, where ***MODE*** is **TS1**, **TS2**, or **OPS** (or other) as selected in Step 5, and then press the **Return/Enter** key.
- The **ECS Order Tracking** window is displayed.

Table 19.5-2. Launch the ECS Order Tracking GUI (1 of 2)

Step	What to Do	Action to Take
1	**setenv DISPLAY *clientname*:0.0**	**enter text; press Return/Enter**
2	**/tools/bin/ssh *hostname***	**enter text; press Return/Enter**
3	***Passphrase*** (or Step 4)	**enter text; press Return/Enter**

Table 19.5-2. Launch the ECS Order Tracking GUI (2 of 2)

Step	What to Do	Action to Take
4	***Password***	**enter text; press Return/Enter**
5	**cd /usr/ecs/*MODE*/CUSTOM/utilities**	**enter text; press Return/Enter**
6	**EcMsAcOrderGUIStart *MODE***	**enter text; press Return/Enter**

19.5.2 Use the ECS Order Tracking GUI to Find and Review a User's Order and Request Information

Table 19.5-3 presents the steps required to use the ECS Order Tracking GUI to find and review a user's order and request information. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the ECS Order Tracking GUI (refer to Procedure 19.5.1 Launch ECS Order Tracking GUI).

2 Click the selection button to the left of one of the **Query by:** options.
- The options are **User Name:**, **Order ID:**, **Request ID:**, **MTMGW Request:**, and **Order Type:**.
- The button appearance changes to depressed to indicate its selection, and the cursor moves to the first entry field associated with the selection. ***Note***: For the **Order Type:** option, the cursor moves to highlight a pull-down arrow at the end of the entry field.

3 Type a search criterion appropriate to the selected **Query by:** option (e.g., user's last name, order or request ID, Machine-to-Machine Gateway External Request ID), or, for the **Order Type:** option click on the pull-down arrow and click on the desired option.
- The typed or selected entry appears in the entry field.
- ***Note***: The search is case-sensitive.

4 If a selected **Query by:** option has a second entry field and it is desirable to enter information there to narrow the search further (i.e., a user's first name or a Machine-to-Machine Gateway User ID), click in that second field.
- The cursor moves to the clicked field.

5 To enter information in the selected second entry field, type a search criterion appropriate to the selected **Query by:** option (e.g., user's first name, Machine-to-Machine Gateway User ID).
- The typed entry appears in the entry field.

- ***Note***: The search is case-sensitive.

6 In the **Filter by Status:** area, click to select status options for the filter.
- Selection buttons for selected options indicate selection by the appearance of being depressed.
- ***Note***: All status options are selected by default. A click on the selection button for an option deselects it. A click on the **Deselect All** button deselects all options to permit selection of one or a few by clicks on the appropriate selection button(s). If all or some options are deselected, a click on the **Select All** button selects all options.

7 Press the **Return/Enter** key or click on the **Query Order** button.
- The order is displayed in the **Order List** box in the **ECS Data Order Tracking** screen.
- The **Order ID**, **Home DAAC**, **Order Date**, **Order Type**, **Order Source**, **Status**, **Description**, and **Start Date** are displayed.

8 If there are multiple requests, click on the order to highlight it in the **Order List** box, then click on the **Query Request** button.
- Every request number relating to the highlighted Order is displayed.
- The **Order ID**, **Request ID**, **Processing DAAC**, **Request Type**, **# Files**, **Size**, **Media**, **Format**, **Status**, **Ship Date**, and **Description** are displayed.

9 Click on the **Shipping Information** button.
- A **Shipping Information** window pops up to display information about the order, including the name of the user, order ID, shipping address, phone and fax numbers, and email address.

10 To close the **Shipping Information** window, click on the **Close** button.
- The **Shipping Information** window is closed.

Table 19.5-3. Use the ECS Order Tracking GUI to Find and Review a User's Order and Request Information (1 of 2)

Step	What to Do	Action to Take
1	Launch the ECS Order Tracking GUI	Use procedure in Section 19.5.1
2	Select **Query by:** option	**single-click**
3	Type or select search criterion	**enter text or click option**
4	Optional: Move cursor to second entry field	**single-click**
5	Optional: Type or select search criterion	**enter text**
6	Select status options for **Filter by Status:**	**click(s)**
7	Activate **Query Order** button (or press **Return/Enter**)	**single-click (or press key)**
8	Highlight order and list requests	**click-select and single-click**

Table 19.5-3. Use the ECS Order Tracking GUI to Find and Review a User's Order and Request Information (2 of 2)

Step	What to Do	Action to Take
9	Activate the **Shipping Information** button	**single-click**
10	Activate the **Close** button	**single-click**

19.5.3 Use the ECS Order Tracking GUI to Cancel an Order or Request

Table 19.5-4 presents the steps required to use the ECS Order Tracking GUI to cancel an order. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Find and review the order or request to be canceled (refer to Procedure 19.5.2 **Use the ECS Order Tracking GUI to Find and Review a User's Order and Request Information**).

2 If necessary, click on the order or the specific request to be canceled to highlight it.
- The selected item is highlighted.

3 To cancel a highlighted request, click on the **Delete Request** button.
- The request is deleted from the system.

4 To cancel a highlighted order, first click on the **Update Order** button.
- The Update dialog box is displayed.

5 In the **Update** dialog box, make sure the **Status** checkbox has a check in it (click in the checkbox if necessary).
- The **Status** checkbox displays a check mark.

6 Click on the pull-down arrow to the right of the **Status New Values** text field, hold the left mouse button and dragging to select the value "Canceled."
- The **Status New Values** text field displays **Canceled**.

7 Click on the **Update** button.
- The order status is changed to **Canceled**.

Table 19.5-4. Use the ECS Order Tracking GUI to Cancel an Order or Request

Step	What to Do	Action to Take
1	Find and review the order or request to be canceled	Use procedure in Section 19.5.2
2	Highlight the order or request to be deleted	**single-click**
3	To cancel highlighted request, activate the **Delete Request** button	**single-click**
4	To cancel a highlighted order, activate the **Update Order** button	**single-click**
5	In the **Update** dialog box, select **Status**	**single-click**
6	In the **Status New Values** field, select **Canceled**	**click and drag**
7	Activate **Update** button	**single-click**

19.5.4 Troubleshooting: Check Log Files for ECS Order Tracking

The ECS Order Tracking tool is part of the ECS System Management Support Subsystem (MSS), and uses database functions in that subsystem. If the tool cannot be launched, or does not function (e.g., cannot retrieve orders), you will need to ask the System Administrator to ensure that the Order Tracking Server is functioning properly. It may be necessary to have the Database Administrator check to ensure that there are no problems with the database.

It is also possible to receive error messages when using the GUI while it is apparently functioning normally. Error messages associated with the ECS Order Tracking tool are listed in Appendix A of the *Operations Tools Manual* (Document 609-CD-600-001).

Log files can often provide information that will identify possible sources of disruption in Order Tracking server function or communications, suggesting additional checks or actions that may help resolve the problem. Table 19.5-5 presents the steps required to check log files for ECS order tracking. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 To log in to the host for the server and log(s) to be examined, type **/tools/bin/ssh <*hostname*>** and then press the **Return/Enter** key.

- For **<*hostname*>**, use **<*x*>0mss21**, where **<*x*>** = **e** for EDC, **g** for GSFC, **l** for LaRC, or **n** for NSIDC.
- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 2.
- If you have not previously set up a secure shell passphrase; go to Step 3.

2 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 4.

- The prompt reflects the login to the selected host.

3 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.

- The prompt reflects the login to the selected host.

4 Type **cd /usr/ecs/<*MODE*>/CUSTOM/logs** and then press the **Return/Enter** key.

- The prompt reflects the change to directory **/usr/ecs/<*MODE*>/CUSTOM/logs**.

5 To view a server log, type **pg *filename*** and then press the **Return/Enter** key.

- ***filename*** refers to the account management log file to be reviewed (e.g., **EcMs AcOrderSrvr.ALOG**, **EcMsAcOrderSrvrDebug.log**).
- The first page of the log file is displayed; additional sequential pages can be displayed by pressing the **Return/Enter** key at the **:** prompt.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **more**, **tail**) can be used to review the log file.
- Typically, the **<*server*>Debug.log** captures more detailed information than the **<*server*>.ALOG**. However, for some servers (e.g., **SDSRV**), there may be significant detail in the **<*server*>.ALOG**. It is also important to note that the **DebugLevel** setting in the **<*server*>.CFG** file determines the level of detail captured in the **<*server*>Debug.log** (**0** is off, a setting of **1** captures status and errors, a setting of **2** captures major events, and a setting of **3** is a full trace recording of all activity). If the **DebugLevel** has been set to one of the lower levels during operations, the System Administrator may set it to **3** during troubleshooting.

6 Review the log file(s) to determine if there are any indications of connection problems or errors at start up.

- The **EcMsAcOrderSrvrDebug.log** file for the User Profile/User Registration server may contain an error message concerning **PF Init** error or problem (notify the System Administrator).
- The **EcMsAcOrderSrvr.ALOG** file may contain evidence of a Sybase error (e.g., **SybaseErrorCode1 =92014;SybaseErrorMesage1 ="*x*0mss21_srvr"** or **SybaseErrorCode2 =16;SybaseErrorMesage2 =""**) (notify the Database Administrator).

7 To exit the **pg** review of the log file, type **q** at the **:** prompt and then press the **Return/Enter** key.

Table 19.5-5. Check Log Files for ECS Order Tracking

Step	What to Do	Action to Take
1	**/tools/bin/ssh *hostname***	**enter text; press Return/Enter**
2	***passphrase*** (or Step 3)	**enter text; press Return/Enter**
3	***password***	**enter text; press Return/Enter**
4	**cd /usr/ecs/*MODE*/CUSTOM/logs**	**enter text; press Return/Enter**
5	**pg *filename***	**enter text; press Return/Enter**
6	Review log file	**read text**
7	To exit, type **q** at the **:** prompt	**enter text; press Return/Enter**

19.6 Using the Data Dictionary Maintenance Tool

Requests for ECS services may come from the EOS Data Gateway (EDG) Web Client of Version 0 (V0). For example, users, including those from the ASTER Ground Data System (GDS), will submit requests for data searches and product orders using the EDG Search and Order Tool. Requests for ECS products or services (e.g., Directory Search requests, Inventory Search requests, Browse requests, Product requests) are sent to the ECS V0 Gateway. To accommodate mapping of terminology between the ECS and the V0 system, the ECS V0 Gateway reads the ECS Data Dictionary containing the terminology mapping information, ensuring that the request can be directed to the appropriate science data server. A Data Dictionary Administrator builds the ECS Data Dictionary V0 System search parameters, ECS schema, and metadata. The V0 client must have ECS Valid terminology for searchable attributes (e.g., source, sensor, geophysical parameter, data set name, data center ID, campaign, processing level, geographical coordinates, and temporal intervals) in order to search ECS holdings.

Accordingly, upon establishment of a new ECS data set, valids for the data set must be made available to V0. EOSDIS V0 IMS has a two-week valids update cycle:

- Data centers (sites) submit their new valids, definitions, and/or package Object Description Language (ODL) file(s). An ODL file is a formatted ASCII text file that contains the keyword descriptions for the data sets.
- Valids ODL files are transferred to the V0 IMS using anonymous FTP.
- The IMS team acknowledges receipt of the new valids submission and runs a syntax checker on the files.
- The files are processed and the valids are tested.

More detailed information on the cycle and the update process may be obtained at http://harp.gsfc.nasa.gov/v0ims/valids/valids_procedures.html.

There is two-way interoperability with the ASTER GDS for product search and orders. This means that ASTER GDS users can search, browse, and order ECS products, and ECS users can search, browse, and order products available at GDS. Information is also exchanged concerning price estimates and order status. ASTER GDS access to ECS products and services is through the EROS Data Center (EDC). Therefore, all ECS collection information must be available at EDC. Furthermore, ECS must be able to use ASTER GDS dataset valids.

The Data Dictionary Maintenance Tool (DDMT) is an ECS tool to support management of ECS valids and mapping of ECS metadata to V0 attributes and values, as well as to ASTER GDS attributes and values. It supports import of ASTER GDS dataset valids, and it supports export of ECS dataset valids. Table 19.6-1 provides an activity checklist for tasks using the DDMT.

Table 19.6-1. Use the Data Dictionary Maintenance Tool - Activity Checklist

Order	Role	Task	Section	Complete?
1	User Services/ Science Data Specialist	Launch the Data Dictionary Maintenance Tool GUI	(P) 19.6.1	
2	User Services/ Science Data Specialist	Use the DDMT GUI to Export Valids	(P) 19.6.2	
3	User Services/ Science Data Specialist	Use the DDMT GUI to Import Valids	(P) 19.6.3	
4	User Services/ Science Data Specialist	Troubleshooting: Check Data Dictionary Server Log Files	(P) 19.6.4	

19.6.1 Launch the Data Dictionary Maintenance Tool GUI

Table 19.6-2 presents the steps required to launch the Data Dictionary Maintenance Tool GUI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the UNIX command shell prompt, type **setenv DISPLAY *clientname*:0.0** and then press the **Return/Enter** key.

- For ***clientname***, use either the local terminal/workstation IP address or its machine name.

2 Start the log-in to the interface server by typing **/tools/bin/ssh *hostname*** *(e.g.*, e0ins02, g0ins02, l0ins02, n0ins02) at the UNIX command shell prompt, and then press the **Return/Enter** key.

- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 3.
- If you have not previously set up a secure shell passphrase; go to Step 4.

3 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 5.

4 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.

5 To change to the directory containing the utility scripts to start Account Management GUIs, type **cd /usr/ecs/*MODE*/CUSTOM/utilities**, where ***MODE*** will likely be **TS1**, **TS2**, or **OPS**, and then press the **Return/Enter** key.

- The working directory is changed to **/usr/ecs/*MODE*/CUSTOM/utilities**.

6 Type **EcDmDdMaintenanceToolStart *MODE***, where ***MODE*** is **TS1**, **TS2**, or **OPS** (or other) as selected in Step 5, and then press the **Return/Enter** key.

- The **Data Dictionary Maintenance Tool** window is displayed.

Table 19.6-2. Launch the Data Dictionary Maintenance Tool GUI

Step	What to Do	Action to Take
1	**setenv DISPLAY *clientname*:0.0**	**enter text; press Return/Enter**
2	**/tools/bin/ssh *hostname***	**enter text; press Return/Enter**
3	***passphrase*** (or Step 4)	**enter text; press Return/Enter**
4	***password***	**enter text; press Return/Enter**
5	**cd /usr/ecs/*MODE*/CUSTOM/utilities**	**enter text; press Return/Enter**
6	**EcDmDdMaintenanceToolStart *MODE***	**enter text; press Return/Enter**

19.6.2 Use the DDMT GUI to Export Valids

Periodically, and as new products/ESDTs are added to ECS, information about the valid attributes and values for them must be made available to the V0 IMS and to ASTER GDS, so that the information can be used to search and order ECS data, including those new products/ESDTs. Table 19.6-3 presents the steps required to use the DDMT GUI to export valids. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **DDMT GUI** (refer to Procedure 19.6.1 **Launch the Data Dictionary Maintenance Tool GUI**).

2 Click on the **Export Valids File** tab.

- The Export **Valids File** screen is displayed.

3 Click on the **Selection Criteria . . .** button in the **1. Get list of collections** area.
- A **Database List (Export Collections)** dialog box is displayed

4 In the **Database List (Export Collections)** dialog box, click on the pull-down arrow to the right of the **Characteristic Type:** field.
- Criteria displayed in a drop-down list include: **Export Collection**, **Attribute**, **Instrument**, **Keyword**, **Platform**, **Sensor**, and **Information Manager**.

5 Click on **Export Collection** in the drop-down list.
- The selected item appears in the **Characteristic Type:** field.

6 In the **Database List (Export Collections)** dialog box, click on the pull-down arrow to the right of the **Characteristic Name:** field.
- A drop-down list of names is displayed.

7 Click on **Archive Center** in the drop-down list.
- The selected item appears in the **Characteristic Name:** field.

8 Click on the **Predicate:** option button and select **Is Equal To**.
- The selected option is displayed on the button.

9 Click in the **Value:** field.
- The cursor is displayed in the **Value:** field.

10 Type **<*Center*>**, where **<*Center*>** is the designation for your site (e.g., **GSFC**, **EDC**, **LARC**, **NSIDC**).
- The typed entry appears in the field.

11 Click on the **OK** button.
- The **Database List (Export Collections)** dialog box is closed and a list of **Collections** is displayed in the **2. Select collections to export** area of the **Export Valids File** screen.

12 Double click on one of the collections for which valids are to be exported.
- The selected collection is highlighted and **Export** is displayed in the **Status** column next to the highlighted selection.
- Note: Multiple collections may be selected by use of the **Shift** and/or **Control** keys. Contiguous items in the list may be selected by holding down the **Shift** key while double clicking on additional items. Non-contiguous items in the list may be selected by holding down the **Control** key while double clicking on an additional item.

13 Click in the **File name for export:** field in the **3. Export collections to file** area.
- The cursor moves to the **File name for export:** field.

14 Type the path to specify a directory and name for the export file to be saved.
- The typed entry is displayed in the **File name for export:** field.

15 Click on the **Save** button.
- An "error" dialog box is displayed with the message **The Query Succeeded for all the collections**, indicating that the export file was saved.

Table 19.6-3. Use the DDMT to Export Valids

Step	What to Do	Action to Take
1	Launch the Data Dictionary Maintenance Tool GUI	Use procedure in Section 19.6.1
2	Select the **Export Valids File** tab	**single-click**
3	Activate the **Selection Criteria . . .** button in the **1. Get list of collections** area	**single-click**
4	In the **Database List (Export Collections)** dialog box, use the pull-down arrow to display the **Characteristic Type:** list	**single-click**
5	From the drop-down list, select the desired characteristic type	**single-click**
6	In the **Database List (Export Collections)** dialog box, use the pull-down arrow to display the **Characteristic Name:** list	**single-click**
7	From the drop-down list, select **Archive Center**	**single-click**
8	Use the **Predicate:** option button to select **Is Equal To**	**click option**
9	Move the cursor to the **Value:** field	**single-click**
10	Type the designation for your site	**enter text**
11	Activate the **OK** button	**single-click**
12	Select collection(s) for which valids are to be exported	**double-click(s)**
13	Move cursor to the **File name for export:** field in the **3. Export collections to file** area	**single-click**
14	Specify path for the export file to be saved	**enter text**
15	Activate **Save** button	**single-click**

19.6.3 Use the DDMT GUI to Import Valids

The **Import Valids File** tab of the DDMT GUI is used for import of ASTER dataset valids. Table 19.6-4 presents the steps required to use the DDMT GUI to import valids. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the **DDMT GUI** (refer to Procedure 19.6.1, **Launch the Data Dictionary Maintenance Tool GUI**).

2 Click on the **Import Valids File** tab.
- The **Import Valids File** screen is displayed.

3 Under **Load Valids File.**, click in the **File Name:** field.
- The cursor is displayed in the **File Name:** field.

4 Type **<*validsfilename*>**.
- **<*validsfilename*>** is the full path for the file to be imported. It is possible to click on the **Browse . . .** button and click to select the file.
- The typed or selected entry is displayed in the **File Name:** field.

5 Click on the **Check** button.
- The system checks the syntax of the valids file and generates any collection messages.

6 Under **Save Syntax Error File.**, click in the **File Name:** field.
- The cursor is displayed in the **File Name:** field.

7 Type **<*errorfilename*>**.
- **<*errorfilename*>** is the full path for the file to be saved. It is possible to click on the **Browse . . .** button and click to select a file.

8 To save the statistics or warnings to the named statistics/warning file, click on the **Save** button.
- The file is saved.

9 To submit the collection to the Data Dictionary, click on the **Update** button.
- The collection is inserted.

10 Click on the **Map Attributes/Keywords** tab.
- The **Map Attributes/Keywords** screen is displayed.

11 Click on the **Update All Collections** button.
- The ECS collections are updated with the new mappings. (*Note*: This update may take several minutes.)

Table 19.6-4. Use the DDMT to Import Valids

Step	What to Do	Action to Take
1	Launch the Data Dictionary Maintenance Tool GUI	Use procedure in Section 19.6.1
2	Select the **Import Valids File** tab	**single-click**
3	Move cursor to **File Name:** field under **Load Valids File.**	**single-click**
4	Type the full path for the file to be imported (or select file using **Browse . . .** button).	**enter text (or click select)**
5	Activate the **Check** button	**single-click**
6	Move cursor to **File Name:** field under **Save Syntax Error File.**	**single-click**
7	Type the full path for the file to be saved (or select file using **Browse . . .** button).	**enter text (or click select)**
8	Activate the **Save** button	**single-click**
9	Activate the **Update** button	**single-click**
10	Select the **Map Attributes/Keywords** tab	**single-click**
11	Activate the **Update All Collections** button	**single-click**

19.6.4 Troubleshooting: Check Data Dictionary Server Log Files

The Data Dictionary Maintenance Tool (DDMT) is part of the ECS Data Management Subsystem (DMS), and uses database functions in that subsystem. If the tool cannot be launched, or does not function (e.g., cannot retrieve orders), you will need to ask the System Administrator to ensure that the Data Dictionary (DDICT) Server is functioning properly. It may be necessary to have the Database Administrator check to ensure that there are no problems with the database.

It is also possible to receive error messages when using the GUI while it is apparently functioning normally. Error messages associated with the DDMT are listed in Appendix A of the *Operations Tools Manual* (Document 609-EMD-001).

Log files can often provide information that will identify possible sources of disruption in Data Dictionary server function or communications, suggesting additional checks or actions that may help resolve the problem. The procedure for checking a log file starts with the assumption that the operator has logged in to ECS. Table 19.6-5 presents the steps required to launch the Data Dictionary Maintenance Tool GUI. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 To log in to the host for the server and log(s) to be examined, type **/tools/bin/ssh <*hostname*>** and then press the **Return/Enter** key.

- For **<*hostname*>**, use **e0ins02** at EDC, **g0ins02** at GSFC, **l0ins02** at LaRC, and **n0ins02** at NSIDC.
- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 2.
- If you have not previously set up a secure shell passphrase; go to Step 3.

2 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 4.

- The prompt reflects the login to the selected host.

3 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.

- The prompt reflects the login to the selected host.

4 Type **cd /usr/ecs/<*MODE*>/CUSTOM/logs** and then press the **Return/Enter** key.

- The prompt reflects the change to directory **/usr/ecs/<*MODE*>/CUSTOM/logs**.

5 To view a server log, type **pg *filename*** and then press the **Return/Enter** key.

- ***filename*** refers to the account management log file to be reviewed (e.g., **EcDm DictServer.ALOG**, **EcDmDictServerDebug.log**).
- The first page of the log file is displayed; additional sequential pages can be displayed by pressing the **Return/Enter** key at the **:** prompt.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **more**, **tail**) can be used to review the log file.
- Typically, the **<*server*>Debug.log** captures more detailed information than the **<*server*>.ALOG**. However, for some servers (e.g., **SDSRV**), there may be significant detail in the **<*server*>.ALOG**. It is also important to note that the **DebugLevel** setting in the **<*server*>.CFG** file determines the level of detail captured in the **<*server*>Debug.log** (**0** is off, a setting of **1** captures status and errors, a setting of **2** captures major events, and a setting of **3** is a full trace recording of all activity). If the **DebugLevel** has been set to one of the lower levels during operations, the System Administrator may set it to **3** during troubleshooting.

6 Review the log file(s) to determine if there are any indications of connection problems or errors at start up.

- The **EcDmDictServerDebug.log** file for the User Profile/User Registration server may contain an error message concerning **PF Init** or some other error or problem (notify the System Administrator).
- The **EcDmDictServer.ALOG** file may contain evidence of a Sybase error (e.g., **SybaseErrorCode1 =92014;SybaseErrorMesage1 ="*x*0ins01_srvr"** or **SybaseErrorCode2 =16;SybaseErrorMesage2 =""**) (notify the Database Administrator).

7 To exit the **pg** review of the log file, type **q** at the **:** prompt and then press the **Return/Enter** key.

Table 19.6-5. Check Data Dictionary Server Log Files

Step	What to Do	Action to Take
1	**/tools/bin/ssh *hostname***	**enter text; press Return/Enter**
2	***Passphrase*** (or Step 3)	**enter text; press Return/Enter**
3	***Password***	**enter text; press Return/Enter**
4	**cd /usr/ecs/*MODE*/CUSTOM/logs**	**enter text; press Return/Enter**
5	**pg *filename***	**enter text; press Return/Enter**
6	Review log file	**read text**
7	To exit, type **q** at the **:** prompt	**enter text; press Return/Enter**

19.7 (EDC Only) Creating and Managing ASTER Data Acquisition Requests

At the EROS Data Center (EDC), User Services may receive requests from users for assistance with the ASTER Data Acquisition Request (DAR) Tool or the On-Demand Form Request Manager, ECS client tools used in reference to ASTER data products and services. It is essential, therefore, that EDC User Services representatives be familiar with the tools, and be able to perform the functions necessary to create and submit a DAR, to create and submit a query to the XAR database, and to create requests for on-demand production of ASTER products.

The ASTER DAR tool permits authorized users to submit DARs, or requests for scheduling data acquisitions by the Advanced Spaceborne Thermal Emissions and Reflection (ASTER) Radiometer. The requests are submitted through the ECS client to the ASTER Ground Data System (GDS), located in Japan. The ASTER GDS controls scheduling of the ASTER instrument and provides the collected data as level 1A and level 1B data to the EDC. Table 19.7-1 provides an activity checklist for tasks using the ASTER DAR Tool.

Table 19.7-1. Use the ASTER DAR Tool - Activity Checklist

Order	Role	Task	Section	Complete?
1	User Services/ Science Data Specialist	Launch the ASTER DAR Tool	(P) 19.7.1	
2	User Services/ Science Data Specialist	Use the ASTER DAR Tool to Prepare and Submit an ASTER Data Acquisition Request	(P) 19.7.2	

19.7.1 Launch the ASTER DAR Tool

The ASTER DAR Tool is a web-based application. Table 19.7-2 presents the steps required to launch the ASTER DAR Tool. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 At the UNIX command shell prompt, type **setenv DISPLAY *clientname*:0.0** and then press the **Return/Enter** key.
- For ***clientname***, use either the local terminal/workstation IP address or its machine name.

2 Start the log-in to the client server by typing **/tools/bin/ssh e0ins02** at the UNIX command shell prompt, and press the **Return/Enter** key.
- If you receive the message, **Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?** type **yes** ("**y**" alone does not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 3.
- If you have not previously set up a secure shell passphrase; go to Step 4.

3 If a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears, type your ***Passphrase*** and then press the **Return/Enter** key. Go to Step 5.

4 At the **<*user@remotehost*>'s password:** prompt, type your ***Password*** and then press the **Return/Enter** key.

5 Type **netscape** and then press the **Return/Enter** key.
- The **Netscape** browser window is displayed.

6 Click in the **Netsite:** field on the Netscape window.

- The cursor is displayed in the **Netsite:** field and its contents are highlighted to indicate that typing will replace them.

7 Type the entry for the ASTER DAR Tool (ADT) Uniform Resource Locator (URL) (http://e0ins02u.ecs.nasa.gov:10400/) directly into the **Netsite:** field, and then press the **Return/Enter** key.

- An ASTER DAR Tool - Netscape window is displayed with the ASTER DAR Tool Welcome page.

8 Click on the **Launch the ASTER DAR Tool** link at the bottom of the page.

- A Java Console dialog box with scrolling information is displayed.
- A dialog box is displayed with **Username:** and **Password:** fields.
- ***Note***: If you have not loaded the latest Java plugin for your browser, you will be prompted to do so. Download the plugin and follow the instructions. On UNIX, run <(sh plugin_file_name.sh) on the plugin file and answer the questions. Once the plugin is installed, restart the browser.

9 Click on the **Username:** field in the log-in dialog box.

- The cursor is displayed in the **Username:** field.

10 Type **<*DAAC_login_name*>**.

- The typed entry is displayed in the **Username:** field.
- ***Note***: An ECS DAAC account username and password allowing submission of a DAR must be created prior to performing this procedure. As an alternative, it is possible to access the ASTER DAR tool as "ECSGuest" to explore how most of the screens work, but it will not be possible to submit a DAR or receive a DAR ID.

11 Click on the **Password:** field in the log-in dialog box.

- The cursor is displayed in the **Password:** field.

12 Type **<*DAAC_password*>.**

- Asterisks are displayed in the **Password:** field.

13 Click the **OK** button or press the **Return/Enter** key.

- An ASTER DAR tool "Welcome to the Data Acquisition Tool" dialog is displayed, with introductory information to the user. If the login is as "ECSGuest," the information indicates that submission of a DAR is not authorized, and information is given on how to apply for authorization.

14 Click on the **OK** button in the "Welcome" dialog box.

- The dialog box is removed.

- A large new window, **The ASTER DAR Tool** window, is displayed, with the **Organizer** tab as the default, showing a list of folders and the names of any previously saved or submitted DARs.

Table 19.7-2. Launch the ASTER DAR Tool

Step	What to Do	Action to Take
1	**setenv DISPLAY *clientname*:0.0**	**enter text; press Return/Enter**
2	**/tools/bin/ssh e0ins02**	**enter text; press Return/Enter**
3	***Passphrase*** (or Step 4)	**enter text; press Return/Enter**
4	***Password***	**enter text; press Return/Enter**
5	**netscape**	**enter text; press Return/Enter**
6	Move cursor to **Netsite:** field	**single-click**
7	**http://e0ins02u.ecs.nasa.gov:10400/**	**enter text; press Return/Enter**
8	Activate **Launch the ASTER DAR Tool** link	**single-click**
9	Move the cursor to the **Username:** field	**single-click**
10	Type ***<DAAC_login_name>***	**enter text**
11	Move the cursor to the **Password:** field	**single-click**
12	Type ***<DAAC_password>***	**enter text**
13	Activate the **OK** button (or press **Return/Enter** key	**single-click (or press key)**
14	Activate the **OK** button in the "Welcome" dialog box	**single-click**

19.7.2 Use the ASTER DAR Tool to Prepare and Submit an ASTER Data Acquisition Request

Table 19.7-3 presents the steps required to use the ASTER DAR Tool to prepare and submit an ASTER Data Acquisition Request. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch the ASTER DAR Tool (refer to Procedure 19.7.1 **Launch the ASTER DAR Tool**).

2 Click on the **Create/Edit DAR** tab.

- The **Create/Edit DAR** functions are displayed, with the **General** nested tab displayed as default and **Untitled DAR** showing as the default in the **DAR Title:** field.

3 Highlight the title **Untitled DAR** in the **DAR Title:** field and type a name for the DAR to be created (***Note***: It is a good idea to incorporate the current date in the name, e.g., **JDARC/O_<*date*>**).

- The typed title appears in the **DAR Title:** field.

4 Click on the **Science Classification:** option button and click-select the classification appropriate for the DAR.

- ***Note***: The appropriate classification should be provided by the scientist for whom the DAR is being created.
- The selected option is displayed on the **Science Classification:** button.

5 Click in the **Science Objective:** field.

- The cursor is displayed in the **Science Objective:** field.

6 Type a science objective.

- ***Note***: Information to be entered in this field should be obtained from the scientist for whom the DAR is being created.
- The typed information appears in the field.

7 Click on the **Maximum Cloud Coverage (%):** option button and click-select the desired value.

- The selected value (***Note***: obtained from the scientist for whom the DAR is being created) is displayed on the option button.

8 Click on the option button for **Day/Night Settings:** and click-select the desired setting.

- The selected setting (***Note***: obtained from the scientist for whom the DAR is being created) is displayed on the option button.

9 Click on the **Yes** or **No** selection button to indicate the **Avoid Clouds Flag:** preference.

- The selection (***Note***: obtained from the scientist for whom the DAR is being created) is indicated by the filled appearance of the selected button.

10 Click on the option button for **Telescope Selection:** and click-select the desired mode.

- The selection (***Note***: obtained from the scientist for whom the DAR is being created) is displayed on the option button.

11 If desired (as specified by the scientist for whom the DAR is being created), click on the **Show Gain Settings** check box and use the revealed option buttons to change any specified gain settings for the **VNIR** and **SWIR** telescopes.

- Option buttons are displayed for **VNIR** and **SWIR** telescopes and any selected options are displayed on the option buttons.

12 Click on the **Update DAR** >>> button at the bottom of the window.

- A dialog box is displayed with a field for naming the new DAR, and showing **<*Name*>** as the default name, where **<*Name*>** is the name specified for the **DAR Title:** in Step 3.

13 Click on the **OK** button of the **New Name** dialog box.

- ***Note*** If desired, the name may be changed by editing the **New Name:** field before clicking on the **OK** button.
- The **New Name** window is removed and the parameters are saved.
- ***Note***: The new values of parameters may be observed by clicking on the **Primary Attribute** toggle icon in the **DAR Summary** window on the right side of the form.

14 Click on the **Spatial** nested tab.

- The **Spatial** nested tab is displayed with a map showing no designated areas of interest (AOIs).
- The **Pan the map** button is displayed in the depressed position. ***Note***: A button name is displayed when the cursor is moved over the button; the **Pan the map** button is the one with the hand icon.

15 If desirable or necessary to pan the map, move the cursor to a spot on the map to be designated as the center point for the map and click the left mouse button.

- The map is updated to bring the designated point to the center. During the update, the **Stop update** button indicates map rotation, and may be clicked to stop the update and leave the current center point unmoved.
- ***Note***: This step may be repeated as necessary to center the map at a desired point.

16 Click on the **Select Area of Interest (AOI) coordinates using the map** button.

- ***Note***: A button name is displayed when the cursor is moved over the button. The **Select Area of Interest (AOI) coordinates using the map** button is the one with the irregularly-shaped polygon icon.
- The button is displayed in the depressed position and the cursor changes to the crosshairs shape when moved into the map area.

17 Add points to the map by clicking sequentially on the map to form a polygon.

- The clicked points are displayed on the map, connected with red lines.

18 Click on the **Edit Area of Interest (AOI) coordinate table** button (just below the **Select Area of Interest (AOI) coordinates using the map** button).

- An **Area of Interest (AOI)** dialog box is displayed with lat/long coordinates entered for the points selected in Step 17.
- ***Note***: An AOI may be created with precise coordinates by entering the coordinates in the **Area of Interest (AOI)** box instead of clicking the points on the map.

19 Click on the **Update DAR** >>> button.

- The changed spatial parameters are updated in the DAR Summary display area under the **Spatial** heading.

20 Click on the **Temporal** nested tab
- The **Temporal** nested tab is displayed.

21 In the **DAR Lifetime:** area, highlight one of the numbers in the **Start:** field and use the arrow keys or type an entry to specify a desired number; then do the same for other numbers in the **Start:** field until the desired beginning date is identified.
- ***Note***: The fields represent Month, Day, and Year.
- The Start: date is displayed as entered.

22 In the **DAR Lifetime:** area, highlight one of the numbers in the **End:** field and use the arrow keys or type an entry to specify a desired number; then do the same for other numbers in the **End:** field until the desired ending date is identified.
- ***Note***: The fields represent Month, Day, and Year.
- The **End** date is displayed as entered.

23 Click on the first **Repeat Interval (Note 1)** field and use the arrow buttons or type an entry to change the number to the desired number of days for the repeat interval. If the field hours are to be changed (not normally used, as stated in Note 1 on the window), click in the second **Repeat Interval (Note 1)** field and use the arrow buttons or type an entry to change the number to the desired number of hours for the repeat interval.
- The **Repeat Interval (Note 1)** field displays the entered number(s).

24 Click on the first **Acquisition Window (Note 1)** field and use the arrow buttons or type an entry to indicate the desired number of days for the length of the window. If the field hours are to be changed (not normally used, as stated in Note 1 on the window), click in the second **Acquisition Window (Note 1)** field and use the arrow buttons or type an entry to indicate the desired number of hours for the length of the window.
- The **Acquisition Window (Note 1)** field displays the entered number(s).

25 Click on the **Update DAR** >>> button.
- The changed spatial parameters are updated in the DAR Summary display area under the **Temporal** heading.

26 If the scientist for whom the DAR is being created has specified coverage options, click on the **Coverage** nested tab.
- The **Coverage** nested tab is displayed.

27 Click on any selection button(s) necessary to indicate the scientist's preference(s) for coverage options.
- Any selection is indicated by the filled appearance of the selected button.
- ***Note***: It is necessary to specify the **Yes** selection for **Multi-Temporal Observations:** if the scientist wants complete coverage of the AOI for each acquisition window specified on the **Temporal** nested tab.

28 Click on the **Update DAR** >>> button.

- The changed spatial parameters are updated in the DAR Summary display area under the **Coverage** heading.

29 If the scientist specifies a telescope look angle or an acceptable sun elevation constraint for the DAR, click on the **Geometry** nested tab and enter the specified values.

- The **Geometry** nested tab displays the specified values.

30 Click on the **Update DAR** >>> button.

- The changed spatial parameters are updated in the DAR Summary display area under the **Geometry** heading.

31 If the scientist specifies any need and justification for special treatment for the DAR, click on the **Priority** nested tab and specify the treatment and justification.

- The **Priority** nested tab displays the specified information.

32 Click on the **Update DAR** >>> button.

- The changed spatial parameters are updated in the DAR Summary display area under the **Priority** heading.

33 On the **Create/Edit DAR** tab, click on the **Submit DAR** >>> button.

- A confirmation dialog box is displayed with the information that "The DAR is about to be submitted to GDS."

34 To confirm the DAR submit action, click on the **Yes** button in the warning box.

- The confirmation dialog box is removed.
- The ASTER reply **DAR ID** dialog box is displayed.

35 Click on the **OK** button in the **DAR ID** dialog box.

- The **DAR ID** dialog box is removed and the **ASTER DAR Tool** window is displayed as the active window.
- The user receives email confirming that the DAR was received and containing a subscription ID.

36 To exit from the **ASTER DAR Tool**, select the **Netscape** window; then follow menu path **File→Exit**.

- The **ASTER DAR Tool** windows and the browser window are removed.

Table 19.7-3. Use the ASTER DAR Tool to Prepare and Submit an ASTER Data Acquisition Request (1 of 2)

Step	What to Do	Action to Take
1	Launch the ASTER DAR Tool	Use procedure in Section 19.7.1
2	Select **Create/Edit DAR** tab	**single-click**
3	Replace **Untitled DAR** with a name for the DAR	**drag cursor (highlight); enter text**
4	Use **Science Classification:** option button to select appropriate classification	**click option**
5	Move the cursor to the **Science Objective:** field	**single-click**
6	Type a science objective	**enter text**
7	Use the **Maximum Cloud Coverage (%):** option button to select a value for maximum cloud coverage	**click option**
8	Use the **Day/Night Settings:** option button to select a Day/Night setting	**click option**
9	Select **Yes** or **No** for **Avoid Clouds Flag:**	**single-click**
10	Use the **Telescope Selection:** option button to select a telescope mode	**click option**
11	Optional: **Show Gain Settings** and select options	**single-click**; **click options**
12	Activate **Update DAR >>>** button	**single-click**
13	Activate **OK** button in **New Name** dialog box	**single-click**
14	Select **Spatial** nested tab	**single-click**
15	To pan the map, select new center point	**single-click**
16	Select **Select Area of Interest (AOI) coordinates using the map** mode	**single-click**
17	Add points to form a polygon on the map	**sequential clicks**
18	Optional: Select **Edit Area of Interest (AOI) coordinate table** mode	**single-click**
19	Activate **Update DAR >>>** button	**single-click**
20	Select **Temporal** nested tab	**single-click**
21	In the **DAR Lifetime:** area, replace number(s) in the **Start:** field with value(s) to designate the desired beginning date	**drag cursor (highlight); enter text**
22	In the **DAR Lifetime:** area, replace number(s) in the **End:** field with value(s) to designate the desired ending date	**drag cursor (highlight); enter text**
23	Type a value in the **Repeat Interval (Note 1)** field to designate the desired number of days for the repeat interval (or use the arrow buttons)	**enter text**
24	Type a value in the **Acquisition Window (Note 1)** field to indicate the desired number of days for the length of the window (or use the arrow buttons)	**enter text**

Table 19.7-3. Use the ASTER DAR Tool to Prepare and Submit an ASTER Data Acquisition Request (2 of 2)

Step	What to Do	Action to Take
25	Activate **Update DAR >>>** button	**single-click**
26	Select **Coverage** nested tab	**single-click**
27	Use selection button(s) to indicate the scientist's preference(s) for coverage options.	**click(s)**
28	Activate **Update DAR >>>** button	**single-click**
29	Select **Geometry** nested tab and enter any specified data	**single-click; enter values**
30	Activate **Update DAR >>>** button	**single-click**
31	Select **Priority** nested tab and enter any specified data to indicate treatment and justification	**single-click; enter text**
32	Activate **Update DAR >>>** button	**single-click**
33	On the **Create/Edit DAR** tab, activate the **Submit DAR>>>** button	**single click**
34	Activate the **Yes** button in the confirmation warning	**single-click**
35	Activate the **OK** button in the **DAR ID** dialog box	**single-click**
36	In the **Netscape** window, follow menu path **File→Exit**	**clicks**

19.8 On-Demand Product Requests

Users can use an HTML interface to submit requests for the creation of ASTER high-level products, including, if the user is authorized, Digital Elevation Models (DEMs), and non-standard Level 1B products. For those users who need the authorization, it is granted using the User Registration GUI as part of the user registration process. To provide these on-demand products, the EOS Data Gateway and the Planning, Data Processing, and System Management Subsystems of ECS at the EROS Data Center (EDC) include specific support capabilities.

- EOS Data Gateway (EDG), which is the data search and order tool, is configured to collect the user-specified parameters for the ASTER on-demand request.
- Planning (PLS) provides a server, the On-Demand Product Request Manager (ODPRM), for creating and queuing on-demand production requests.
- Data Processing (DPS) updates the status for high-level processing of on-demand requests.
- System Management Subsystem (MSS) includes on-demand requests in its Order Tracking Database and Data Order Tracking Tool.

User Services at EDC may be called upon to assist users in use of the EDG for submitting on-demand processing requests, and to use the Data Order Tracking Tool to provide the status of on-demand product requests or cancel them. Section 19.3.1 of the 611 Document addressed the use of the EDG tool in searching and ordering data. To create an on-demand processing request, a

user uses the EDG to conduct a search for appropriate input data (e.g., AST_L1B granules); any appropriate granules for which on-demand processing is available will show the higher-level data products among the ordering options. On the results listing, the user selects one or more granules for which on-demand processing is desired to obtain a higher-level data product and adds the granule(s) to the "shopping cart." When the user accesses ordering options, the listed options include higher-level products that may be produced from the initially located granule. Table 19.8-1 provides an activity checklist for the task of creating an on-demand product request.

Table 19.8-1. Creating On-Demand Product Requests - Activity Checklist

Order	Role	Task	Section	Complete?
1	User Services/ Science Data Specialist	Use the EDG for Submitting an ASTER On-Demand Request	(P) 19.8.1	

19.8.1 Use the EDG for Submitting an ASTER On-Demand Request

Table 19.8-2 presents the steps required to use the EDG for Submitting an ASTER On-Demand Request. If you are already familiar with the procedure, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedure:

1 Launch Netscape, access the EDG tool, and conduct a search for the desired input data to be processed to generate a higher-level data product (see procedure **Search and Order Data Using the EDG Search and Order Tool**, section 19.3.1, Steps 1 – 21).

2 When the results of the search provide one or more appropriate granules, click in the selection checkbox to the left of any desired granule.
- The checkbox is filled to indicate its selection.

3 Click on the **Add selections to cart** button.
- The **Data Quality Summary** window is displayed with a description of the data type for the selected granule.

4 Click on the **Continue to Shopping Cart** button.
- The **Shopping Cart: Step 1: Choose Ordering Options** window is displayed.

5 Click on the **Choose Options** link in the **Order Options** column next to the desired granule.
- A list of ordering options is displayed, including options for higher-level data products that may be produced from the selected granule.

6 Click on the desired option specifying the product and distribution media type.
- The window displays a list of specific media for the higher-level data granule and related granules.

7 Click on the selection box(es) for any desired media type(s)
- The checkbox is filled to indicate its selection.

8 Enter any mandatory information to specify required processing/ordering options.
- The fields display entered information.

9 Click on the **Ok! Accept my choice & return to the shopping cart!** button.
- The **Shopping Cart: Go to Step 2: Order Form** window is displayed.

10 Complete and submit the order using standard procedures (see procedure **Search and Order Data Using the EDG Search and Order Tool**, section 19.3.1, Steps 29 – 38).
- The **order** is submitted and an **Order Submitted!** confirmation screen is displayed.

Table 19.8-2. Use the EDG for Submitting an ASTER On-Demand Request

Step	What to Do	Action to Take
1	Launch Netscape and the EDG; search for desired input data for higher-level product	Use Steps 1 – 21 of procedure in Section 19.3.1
2	In results listing, select desired granule	**single-click**
3	Activate **Add selections to cart** button	**single-click**
4	Activate **Continue to Shopping Cart** button	**single-click**
5	Select **Choose Options** link	**single-click**
6	Select product and distribution media type	**single-click**
7	Use checkboxes to indicate desired media type(s)	**click(s)**
8	Specify processing/ordering options	**click**; **enter text**
9	Activate **Ok! Accept my choice & return to the shopping cart!** Button	**single-click**
10	Complete and submit the order normally	Use Steps 29-38 of procedure in Section 19.3.1