

10. Metadata Administration

Every science data product generated and archived by the system must be described to the system by metadata that are put into an inventory and then used to retrieve and distribute the data to users of the system. The Earth Science Data Model, described in document 420-EMD-001, Release 7 Implementation Earth Science Data Model, organizes the metadata into groups of related attributes and services to be performed on the data products. These "core" attributes are necessary to identify, interpret and perform services on granules and collections. The Data Model also provides for "product-specific" attributes (PSAs), i.e., attributes which are unique to a specific data product.

The smallest aggregation of data that is independently described and inventoried in the system is referred to as a data granule. Granules are organized into logical groupings called collections in which the granule metadata varies principally by time or location, called single-type collections.

Every collection is described by an Earth Science Data Type (ESDT) and is made known to the system by adding the type to ECS. This means that the parameter values in the ESDT descriptor file must be added to the appropriate databases in the ECS system

Metadata administration includes creating and updating ESDTs. Collections may be modified and updated over time. Collection-level metadata can be updated by updating the ESDT. Granule-level metadata can be updated manually (i.e., not as a result of an operation such as subsetting, which modifies the science data content of a granule) by setting the Quality Assurance flags and explanations. Procedures for updating these flags are provided in Chapter 15, Quality Assurance.

10.1 ESDT Descriptor Files

The primary task in establishing a collection is providing the core and product-specific metadata attribute values. This is done by creating an Earth Science Data Type (ESDT) descriptor file. The descriptor file is also used to specify the data services that are available for granules that belong to the collection. The descriptor file is the means by which a collection is made known to the ESDT Maintenance Service.

The ESDT descriptor is composed of the following information:

- Collection level metadata attributes with values contained in the descriptor.
- Granule level metadata attributes whose values are supplied primarily by the Product Generation Executives (PGEs) during runtime.
- Valid values and permitted ranges for all product-specific attributes.
- List of services for all the granules in the collection and events that trigger responses throughout the system.

The services that apply to a collection are specified in the ESDT descriptor file. Product-specific services, such as subsetting or a product-specific acquire, require executable code to enact those

services. This code is contained in the Ingest and Order Manager Server software. After the ESDT descriptor file has been generated it must be installed using the ESDT Maintenance Service before the first data granule can be inserted. During this installation process, information from the ESDT Descriptor File is propagated to the Inventory Database and the Spatial Subscription Server Database, all of which must be operating during the ESDT installation process.

10.1.1 Steps in Generating a Descriptor File

ESDTs for Distributable Product

These are the typical steps used in generating a descriptor file:

1. Identify desired collection-level metadata attributes.
 - For permanent and interim files use only the minimum attributes.
 - For distributable products identify all applicable attributes. This will involve reading appropriate documentation and interacting with the data provider.
2. Identify granule-level attributes.
 - If a sample metadata configuration file is available from the data provider, use this.
3. Check “valids” (allowable metadata values) for core attributes (write CCR if new valids are required).
4. Check PSAs (register PSAs if new).
5. Use custom built scripts and a text editor to generate the descriptor file.
6. Verify the descriptor file as outlined in Section 10.1.2.
7. Check descriptor files into ClearCase.

10.1.2 Verifying Descriptor Files

1. Run the PERL script "update.pl", following the instructions in the script prologue.
 - This script makes sure that the inventory metadata attributes are all listed as event qualifiers in the EVENT group.
2. Run the PERL script esdtQC.pl following the instructions in the script prologue.
 - This script checks for more than 30 common descriptor file errors.
3. Make any necessary corrections in response to errors issued.
4. Rerun the PERL script esdtQC.pl.
5. Repeat Steps 3 and 4 until there are no errors.

6. Run the testodl utility to ensure that there are no errors in the ODL structure for the descriptor file.
7. Make any necessary corrections in response to errors issued.
8. Rerun the testodl utility.
9. Repeat Steps 9 and 10 until there are no errors.

10.2 Preparation of Earth Science Data Types

An ESDT goes through pre-operational life cycle steps starting with an analysis of the collection's need and continuing through development and operational installation. This process involves actions by the Data Provider or User in addition to EMD. The procedures are detailed in Software Development (SD) Project Instruction SD-038 ESDT Creation, Testing, Maintenance and Integration at http://dmserver.hitc.com/EMD_PAL/index.html).

10.2.1 Definitions

Archive - A File Type indicating granules will be inserted to Data Server for long-term storage and acquisition for distribution.

Full - A level of metadata coverage intended for data products that are produced within the system.

Collection - A related group of data granules.

Granule - The smallest data element that is identified in the inventory tables.

Interim - A File Type indicating granules are temporarily stored in support of product generation.

Intermediate - A level of metadata coverage intended for contemporaneous data products that are not produced within the system.

Limited - A level of metadata coverage intended for heritage data products brought into the system for distribution

Minimal - A level of metadata coverage sufficient to uniquely identify a collection or granule.

Permanent - A File Type indicating static or semi-static granules that are used only as inputs in product generation.

Product Specific Attributes - Attributes that are defined by the data provider in support of searching for specific granules

Valid - An allowable metadata value.

10.2.2 Process

1. Need Analysis

- The baseline list of science ESDTs and their services is controlled by the ESDIS CCB. This baseline was established through an analysis of the system Functional and Performance Requirements Specification, the Technical Baseline established from inputs from the Ad Hoc Working Group on Production, and meetings with the individual data providers to define the basic requirements of each ESDT.
 - The basic requirements are:
 - Data Provider File Designation,
 - File Type (Permanent, Interim, Archive)
 - Level of Metadata Coverage (Minimal, Limited, Intermediate, Full)
 - For new ESDTs not currently in the development baseline, the result of the Need Analysis forms the basis for approving the inclusion of the ESDT into the system. This is accomplished through the CCR process.
2. ESDT Specification
- This step results in a set of specifications extending the results of the needed analysis and providing the information needed to implement an ESDT. This step is executed only if the ESDT has been included in the baseline. The roles and responsibilities for developing the specification are as above.
 - The specifications must include:
 - ShortName and VersionID of the ESDT
 - A list of the metadata attributes needed, valids, and any constraints on attributes.
 - A list and specification of the services needed (e.g., specification of the INSERT, SEARCH, ACQUIRE and SUBSCRIPTION semantics).
3. ESDT Generation
- Once the ESDT Specification has been developed and the applicable attributes identified, the necessary metadata has to be gathered, the metadata values checked against the valid values and the product-specific attributes (PSA) need to be checked against the list of PSAs that are already defined (see Figure 10.2-1).
 - Once the collection-level metadata and granule-level attributes have been checked, then the descriptor file is generated and testing and validation of the ESDT performed. This process is further elaborated in the sections below.
 - For a one-of-a-kind, distributable product with Full metadata coverage, this process can take up to six weeks to accomplish. For a related group of products with identical services, much of the Descriptor File of the first ESDT can be reused, and the cycle time for preparing subsequent ESDTs in the related group is much less.

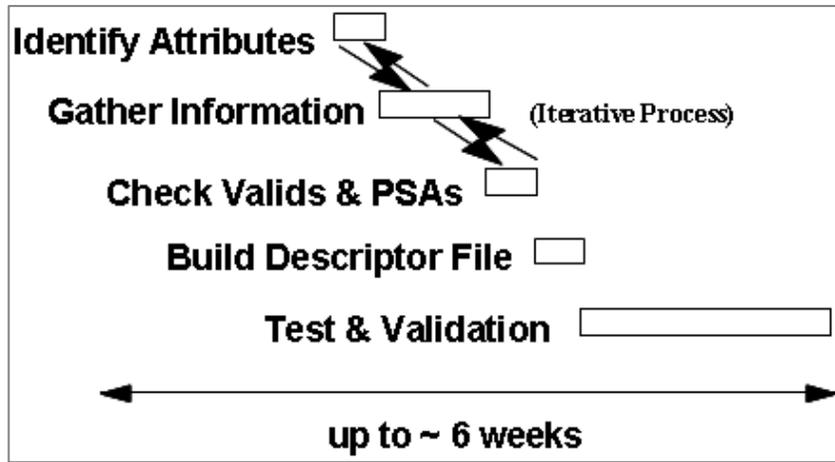


Figure 10.2-1. Steps in ESDT Development

10.3 Metadata Population

10.3.1 Collection-Level Metadata

A majority of the attributes in the Data Model apply to all the granules in the collection. These are known as collection-level attributes. There can be both core and product-specific collection-level attributes, defined once prior to establishing the collection.

Collection-level metadata is input either a text editor or a custom built script.

10.3.2 Granule-Level Metadata

The attributes in the Data Model that can vary on a granule-by-granule basis are known as granule-level attributes. There can be both core and product-specific granule-level attributes.

Granule-level metadata are specified and populated using the Metadata Configuration File (MCF). The MCF is derived from information contained in the ESDT descriptor file and is delivered by ESDT Maintenance Service for use by the Ingest Subsystem. The MCF specifies how the searchable metadata attributes will be populated in the Inventory database. For data products generated within the system, the science software or Product Generation Executive (PGE) interacts with the MCF using metadata tools contained in the Science Data Processing Toolkit. Through this process values are set for metadata attributes specified in the "source" MCF, such as the temporal or spatial coverage of each granule. These values are then inserted into a "target" MCF at PGE run time. The MCF is used in a similar manner for data entering the system through the Data Pool Ingest.

Procedures for entering data into the system through Data Pool Ingest are described in Chapter 13, Ingest. Each data granule consists of one or more physical files. Accompanying each granule is a metadata record; i.e., an ASCII file containing the granule-level attributes and

their values in ODL. Only one metadata record is allowed per granule, i.e., no sub-granule records are allowed, and no metadata records are shared between granules.

10.3.3 Product-Specific Metadata

Product-specific metadata can be at both the granule level and the collection level. Product-specific metadata may (at the data provider's election) be contained in the Inventory Database tables, in which case it will be searchable by the system. There is also a provision to store product-specific metadata within granules that is available only when the granule has been ordered and delivered. This is termed archive metadata and is specified in a separate ODL group in the MCF.

In the granule metadata, the core attribute that is available to store product-specific metadata is called ParameterValue. The metadata describing this attribute is specified by the data provider through the AdditionalAttributes class at the collection-level. The units of measure, range, accuracy, and resolution for this are specified in the PhysicalParameterDetails class, also at the collection-level.

Product-specific metadata at the collection level is specified at the time the other collection level metadata attributes values are defined. At the granule-level, product-specific metadata is defined in the MCF. In both cases, a list of valid values and permitted ranges are specified in the ESDT data dictionary.

10.4 ESDT Maintenance

The ESDT Maintenance functionality is accomplished by using the ESDT Maintenance GUI which provides the DAAC staff with functionality to view, update or remove installed ESDTs and to install new ESDTs.

The process of maintaining ESDTs will continue to rely on the ODL descriptors as the starting point. As part of an Update ESDT operation, changes to the descriptor will be propagated to the XML representation of the descriptor as well as an ESDT descriptor specific schema.

Figure 10.4-1 illustrates the ESDT descriptor files utilized in ECS and the components that generate them:

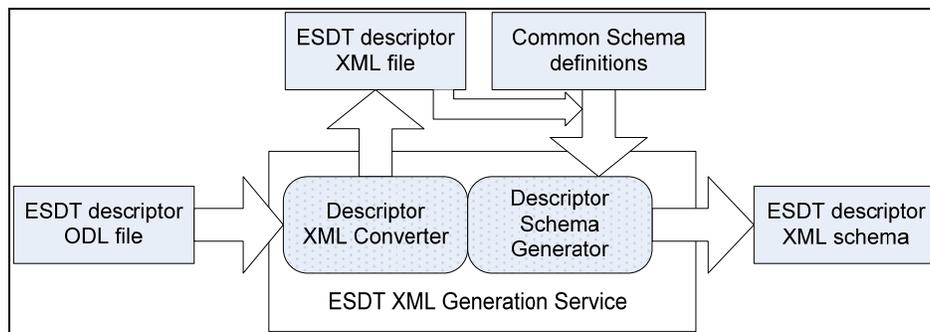


Figure 10.4-1. ESDT Descriptor File Transformations in ECS

The original ESDT descriptor ODL file is converted to its XML representation by the Descriptor XML Converter. This conversion occurs when an **Add ESDT** or **Update ESDT** or **View ESDT** process is selected from the ESDT Maintenance GUI.

The ESDT descriptor XML file is used to generate the descriptor XML schema.

The ESDT Descriptor XML file, together with a set of Common Schema Definitions file are used as input to the Descriptor Schema Generator which produces the ESDT descriptor XML schema. The schema is used for validating the granule XML metadata file. The Common Schema Definitions file contains definitions for all elements that are used by the supported ESDTs as well as the hierarchical relationships in which they can appear.

The Descriptor XML Converter and the Descriptor Schema Generator are part of the ESDT Descriptor XML Generation Service since they both produce descriptor related XML (the ESDT descriptor XML file and the ESDT specific schema respectively).

Figure 10.4-2 illustrates the high-level functionality flow that is provided by the ESDT Maintenance GUI for adding a new ESDT or updating an existing ESDT:

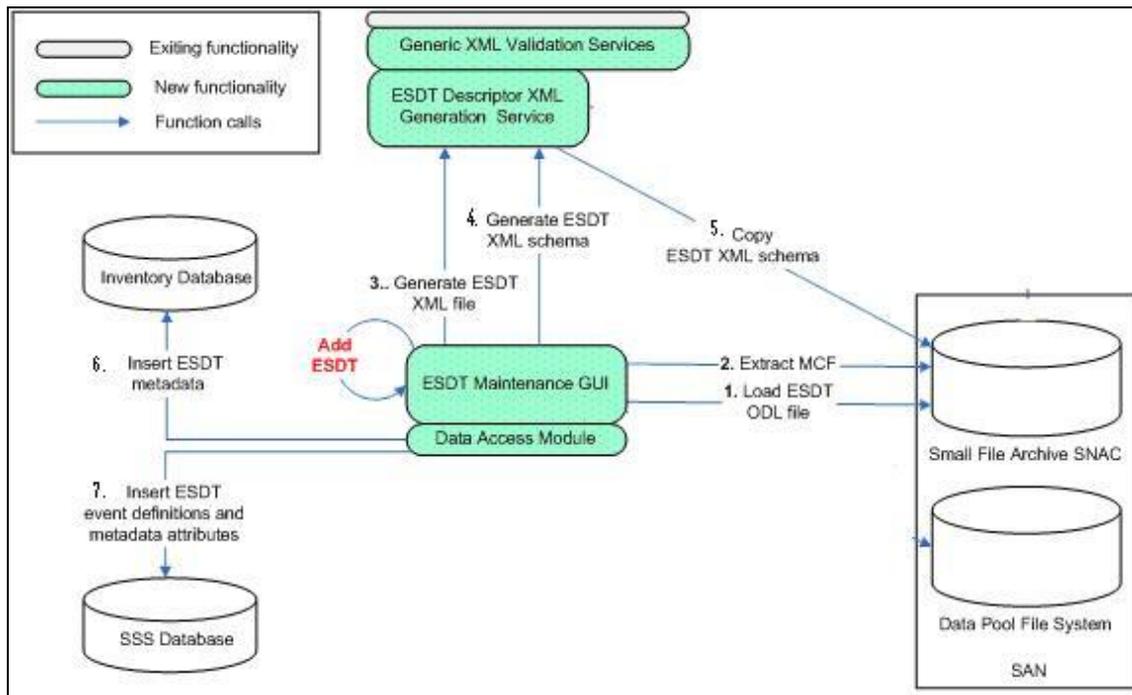


Figure 10.4-2. Adding/Updating an ESDT using the ESDT Maintenance GUI

The following functionality flow is used when an ESDT is added or updated using the ESDT Maintenance GUI.:

1. An ESDT ODL file from the location specified in the ESDT Maintenance GUI configuration file is loaded. The directory will contain all the descriptor related files.

2. The Metadata Configuration File (MCF) is extracted from the descriptor ODL file and placed in the ESDT specific directory in the Small File Archive.
3. The ESDT descriptor XML file is generated. The ESDT Descriptor XML generation service contains the Descriptor XML Converter and the Descriptor Schema Generator modules.
4. The ESDT specific schema is generated, using the ESDT descriptor XML file produced in the previous step.
5. The generated ESDT descriptor XML schema is copied to the Small Archive File ESDT specific directory.
6. The ESDT collection metadata is inserted in the Inventory database.
7. The ESDT collection event definitions and metadata attributes that can be used to qualify subscriptions in the Spatial Subscription Server database are inserted.

Figure 10.4-3 illustrates the high-level functionality flow that is provided by the ESDT Maintenance GUI for removing an existing ESDT from the system:

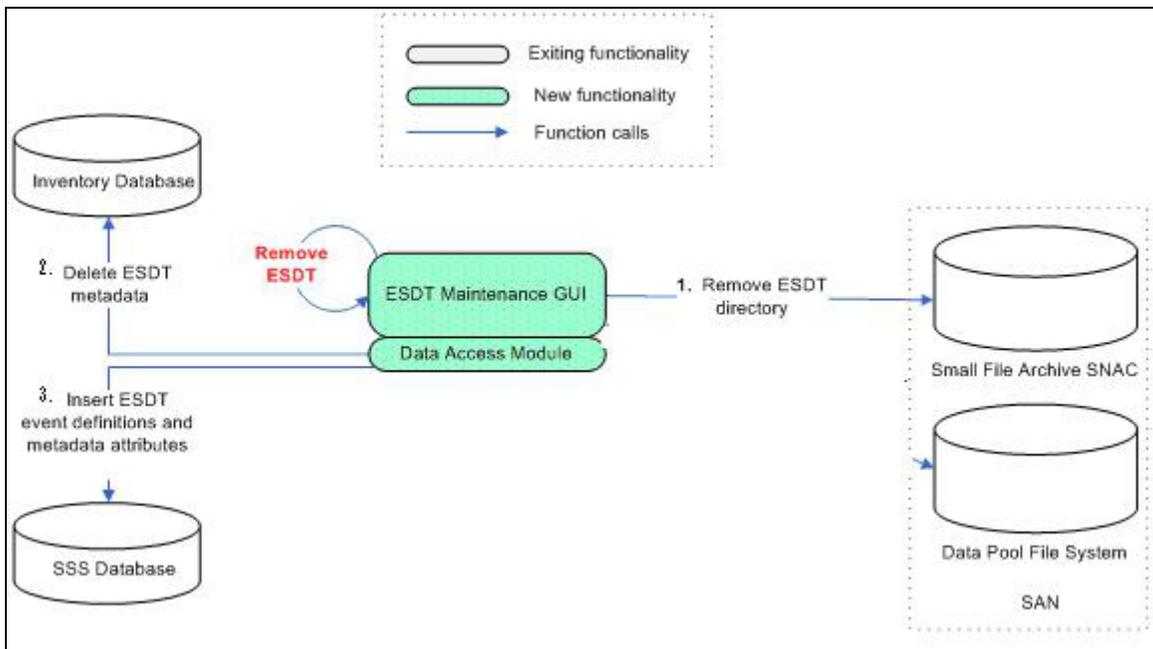


Figure 10.4-3. Removing an ESDT using the ESDT Maintenance GUI

The following functionality flow is used when an ESDT is removed:

1. ESDT specific files (ODL, MCF, XML schema, ESDT metadata directory <shortname.VersionID>) are removed.
2. The ESDT collection metadata from the Inventory database is deleted.
3. ESDT collection event definitions and metadata attributes from the Spatial Subscription Server database are deleted.

Note: Removal of an ESDT is not allowed if granules are present in the Inventory or DataPool. In addition, there can not be a Subscription on the ESDT within the Spatial Subscription Server. The appropriate Granule Deletion scripts must be run, if necessary, and all subscriptions removed before removing an ESDT.

Table 10.4-1 provides an activity Checklist for ESDT Maintenance.

Table 10.4-1. ESDT Maintenance - Activity Checklist

Order	Role	Task	Section
1	Database Admin	Launching the ESDT Maintenance GUI	(P) 10.4.1.1
2	Database Admin	Filter the ESDT List Page	(P) 10.4.1.2
3	Database Admin	View XML or ODL ESDT Descriptor Information	(P) 10.4.1.3
4	Database Admin	Re-generate an MCF or Schema	(P) 10.4.1.4
5	Database Admin	Remove an ESDT	(P) 10.4.1.5
6	Database Admin	Install/Update an ESDT	(P) 10.4.1.6
7	Database Admin	Update BMGT Configuration Files	(P) 10.4.1.7
8	Database Admin	Cleanup Failed ESDTs	(P) 10.4.1.8

10.4.1 Launching the ESDT Maintenance GUI

ESDT maintenance is accomplished by accessing the ESDT Maintenance GUI and is restricted to a single Database Username. This Username is configured in the ESDT Maintenance GUI Configuration file.

The ESDT Maintenance GUI will only allow for one authenticated session at a time. This is to prevent situations where multiple operators may perform conflicting actions. The time-out for authenticated sessions is configured in the Web application settings and is configurable via ECS Assist.

Note: The ESDT Maintenance GUI is configured to time out after 2 Minutes. You will need to log back into the GUI after each time out occurs.

10.4.1.1 Launching the ESDT Maintenance GUI

- 1 Access a terminal window logged in to a host (e.g., the Operations Workstation or Sun external server) that has access to the **Firefox** web browser.
 - Examples of Linux external server host names include e4spl01 or n4spl01.
- 2 Type **firefox &** then press **Return/Enter**.
 - 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 Mozilla Firefox web browser is displayed.
- 3 If a bookmark has been created for the **ESDT Maintenance GUI**, select the appropriate bookmark from those listed on the browser's Bookmarks pull-down window.
 - The **Login:** prompt is displayed.
- 4 If no bookmark has been created for the **ESDT Maintenance GUI**, type **http://host:port** in the browser's **Location (Go To)** field then press **Return/Enter**.
 - For example: `http://f4dpl01.hitc.com:28000/ESDTMaint/`
 - The Login: prompt is displayed with the username configured for the GUI (see Figure 10.4-4)

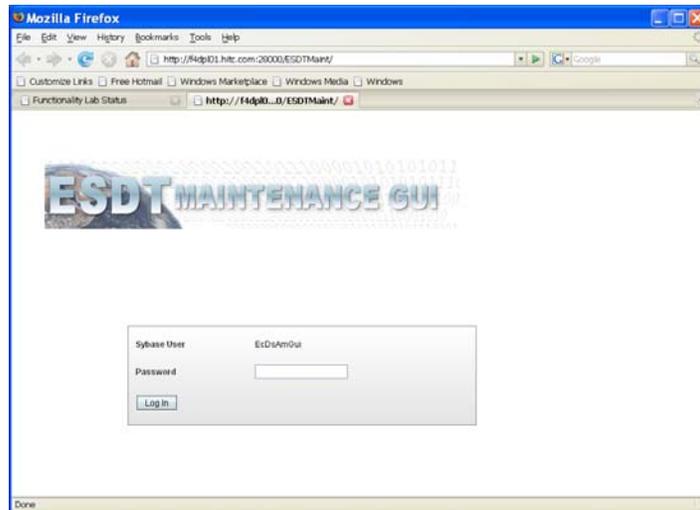


Figure 10.4-4. ESDT Maintenance GUI Log-in Screen

- 6 Type the appropriate password in the **Password** box of the security Login prompt.

- 7 Click on the **Log In** button:
 - The **Installed ESDT** page is displayed (see Figure 10.4-5).

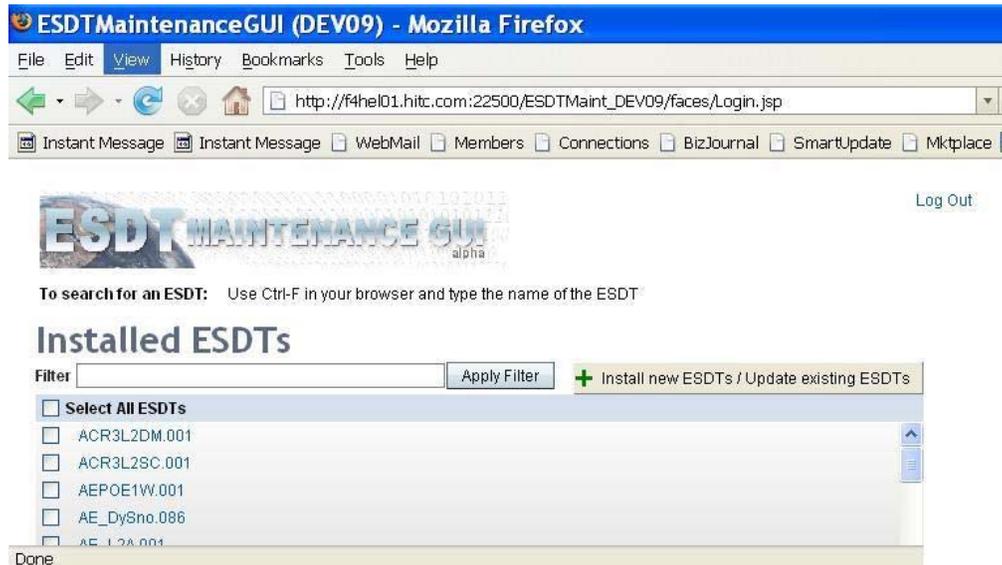


Figure 10.4-5. Installed ESDT Page

The ESDT List page lists all of the currently installed ESDTs. From this page, the operator can perform the following actions:

- Search for an ESDT by using the browser's built-in search function.
- View the ODL and XML descriptor information for a specific ESDT.
- Generate MCFs for one or more ESDTs.
- Generate Schemas for one or more ESDTs.
- Delete one or more ESDTs.
- Navigate to the ESDT installation/update page.

The ESDT List page includes a filter that can be applied to the list of ESDTs. This is useful for selecting particular types of ESDTs for bulk action (i.e., deletion, and MCF or ESDT Schema generation). This is a simple text search and will search ESDT Short Names. As shown in the example below, *MODIS* would return any ESDT with the MODIS anywhere in the name. The search is also case-insensitive.

10.4.1.2 Filter the ESDT List Page

- 1 Log in to the **ESDT Maintenance GUI**.
 - The **Installed ESDT** page is displayed.

2. In the **Filter** box, enter the desired filter to be applied to the ESDT List.
3. Select **Apply Filter** button.
 - The ESDT List will display the filtered ESDTs list as requested.

10.4.1.3 View XML or ODL ESDT Descriptor Information

1. Log in to the **ESDT Maintenance GUI**.
 - The **Installed ESDT** page is displayed.
2. In the list of **Installed ESDT**, click on the desired ESDT name.
 - The XML Descriptor Information page (see Figure 10.4-6) is displayed.

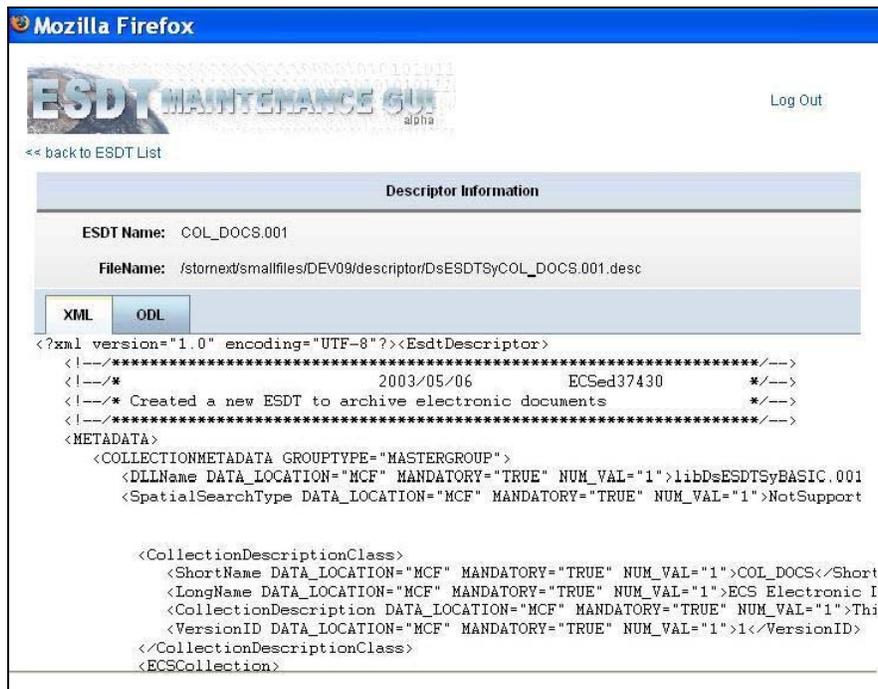


Figure 10.4-6. XML Descriptor Information Page

3. To display the Descriptor Information in ODL, click on the ODL button.
 - The Descriptor Information page is displayed in ODL format.

During the initial install of an ESDT, the MCF and Schema files are generated from the descriptor file and copied to the Small Archive File ESDT specific directory. Certain situations (such as a corrupted MCF or Schema file) may require that these files be re-generated.

10.4.1.4 Re-generate an MCF or Schema

- 1 Log in to the **ESDT Maintenance GUI**.
 - The **Installed ESDT** page is displayed (see Figure 10.4-5).
- 2 Select the ESDT(s) that require a re-generation of the MCF or Schema.
 - A check mark is displayed in the box next to the selected ESDT.
- 3 Scroll to the bottom of the **Installed ESDT** list, click on the **Generate MCFs** or **Generate ESDT Schema** button.
 - The MCF or Schema files stored in the Small File Archive will be used to re-generate the MCF or ESDT Schema.

Note: This action requires that the Data Pool Ingest Processing Service be restarted.

When an ESDT is removed, the following pre-conditions must be satisfied:

- All granules for this ESDT must not be present in the Inventory or DataPool. The Granule Deletion script must be run.
- The Data Pool collection for that ESDT must be removed using the Data Pool Maintenance GUI
- All subscriptions on the ESDT must be removed.

10.4.1.5 Remove an ESDT

1. Verify that Granules for the selected ESDT(s) have been removed from the Inventory and Data Pool.
2. Verify Subscriptions for the selected ESDT(s) have been removed.
3. Log in to the **ESDT Maintenance GUI**.
 - The **Installed ESDT** page is displayed (see Figure 10.4-5).
4. Select the ESDT(s) that are to be deleted.
 - A check mark is displayed in the box next to the selected ESDT.
3. Scroll to the bottom of the **Installed ESDT** list, click on the **Delete selected ESDTs** button.
 - The ESDT specific files (ODL, MCF, and XML schema) are removed.
 - The ESDT Descriptor XML (ShortName, VersionID) directory on the file system where granules are stored is removed.
 - The ESDT collection metadata from the Inventory database is deleted.
 - The ESDT collection event definitions and metadata attributes from the SSS database is deleted.

Note: This action requires that the Data Pool Ingest Processing Service be restarted.

The operator can install a new or update an existing ESDTs from the ESDT Maintenance GUI.. On the List ESDT page of the ESDT Maintenance GUI, the operator selects the **Install new ESDTs/Update existing** button which displays a list **ESDTs to be installed**. The operator can review the file list and select the ESDTs to be installed or updated by checking the boxes for each ESDT. There are buttons to select the following descriptor files in the list: **all**, **none**,

installed, uninstalled and **failed** ESDTs. Selection of these buttons will select all ESDTs in the category selected. Desired descriptors can be individually selected by clicking on the box next to the descriptor.

An operator performs installation or update on ESDTs by first selecting one, some, or all of the Descriptor files. Then the **Proceed with installation/update** button is used to perform installation or an update on the selected Descriptor file name. The column on the right contains the current status of an ESDT.

If the installation or update completes successfully for all ESDTs, the installation files will be removed from this list, and a message will be displayed at the top of the screen indicating the success.

If the installation or update did not succeed for one or more ESDTs, a general error message will be displayed at the top of the screen. A table at the top displays detailed error information next to each ESDT that failed.

If an error is encountered during the installation or update (e.g., a validation error), the installation for that particular ESDT will fail. Installation of the other ESDTs will continue processing until the selected list is completed. As ESDTs are successfully installed or updated, the descriptor files are removed from the installation source directory. Any remaining files in the list would be those that could not be installed due to an error or those that were not selected for processing.

Note: In order for products associated with this ESDT to be exported to ECHO, the following BMGT config files need to be updated:

- EcBmBMGTGroup.xml
- EcBmBMGTSpatialEsds.xml

10.4.1.6 Install/Update an ESDT

- 1 Log in to the **ESDT Maintenance GUI**.
 - The **ESDT List** page is displayed.
- 2 Select the **Install new ESDTs/Update existing ESDTs** button.
 - The **ESDTs to be Installed, Updated, or that have Failed** page is displayed (see Figure 10.4-7).

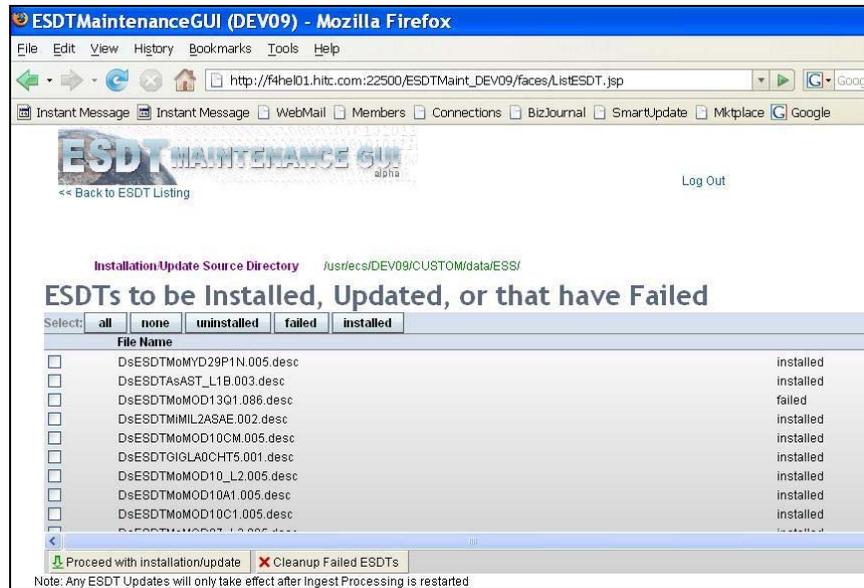


Figure 10.4-7. ESDTs to be Installed, Updated, or that Have Failed Page

- 3 Click on the box(es) next to the desired descriptor file(s).
 - A check is displayed in the box.

Note: The five categories displayed above the list of descriptor files can be used if applicable (i.e. **all** - if you want all descriptor files selected; **uninstalled** - if you want all uninstalled descriptor files selected; **failed** - if you want all failed descriptor files selected; **Installed** - if you want all installed descriptor files selected).
- 4 Select the **Proceed with installation/update** button.
 - A message is displayed (see Figure 10.4-8) indicating the number of descriptors successfully installed and the installation files will be removed from the install list.
 - If the installation is not successful, a message is displayed at the top of the page, indicating the number of descriptors that failed to be installed along with the associated error.

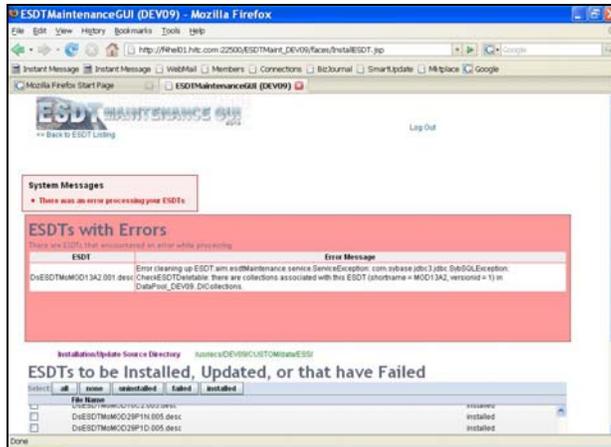


Figure 10.4-8. ESDTs Failure Screen

Note: This action requires that the Data Pool Ingest Processing Service be restarted.

10.4.1.7 Update BMGT Configuration Files

- 1 Log on to the host where BMGT is installed (e.g., **x40ml01**).
- 2 Type the following:
 - `cd /usr/ecs/OPS/CUSTOM/cfg`
- 3 Edit the `EcBmBMGTGroup.xml` by entering the following edit commands:
 - **vi EcBmBMGTGroup.xml**
- 4 Following `<name>groupName</name>`, enter the following information for the ESDT added in procedure 10.4.1.6:


```

<ESDT>
<ShortName>short name of the ESDT</ShortName>
<VersionID>VersionId of the ESDT</VersionID>
<CollExport>Y</CollExport>
<GranExport>Y</GranExport>
</ESDT>
      
```
- 5 Exit the editor by typing **Ctrl Z**.
- 6 If the `EcBmBMGTspatialEsdts.xml` has not been already configured for the `ShortName` of the newly installed ESDT, the following 4 lines need to be added by entering the following edit commands:
 - **vi EcBmBMGTspatialEsdts.xml**

- 7 Following `</spatialesdts>`, enter the following information for the ESDT added procedure in procedure 10.4.1.6:
`<SP_ESDT>`
`<ShortName>ShortName of the Esdt </ShortName>`
`<SpatialRep>SpatialRep as decided by the science team</SpatialRep>`
`</SP_ESDT>`
 - 8 Exit the editor by typing **Ctrl Z**.
-

If an error is encountered during the installation or update (e.g., a validation error), the installation for that particular ESDT will fail. Installation of the other ESDTs will continue processing until the selected list is completed. As ESDTs are successfully installed or updated, the descriptor files are removed from the installation source directory. Any remaining files in the list would be those that could not be installed due to an error or those that were not selected for processing. In cases when fatal error has occurred, the ESDT will be marked as failed in the list of **ESDTs to be Installed**. After reviewing the error, the operator will be able to initiate recovery for the failed ESDT by using the **Cleanup Failed ESDTs** command.

10.4.1.8 Cleanup Failed ESDTs

- 1 Log in to the **ESDT Maintenance GUI**.
 - The **ESDT List** page is displayed.
 - 2 Select the **Install new ESDTs/Update existing ESDTs** button.
 - The **ESDTs to be Installed** page is displayed.
 - 3 Click on the box(es) next to the desired descriptor file(s) to be recovered.
 - A check is displayed in the box.
 - 4 Select the **Cleanup Failed ESDTs** button.
 - For each ESDT selected, (i.e., incomplete installation), any Descriptors, MCFs, and Schema present in the Small File Archive is removed.
 - The ESDT is removed from the Inventory Database.
 - The temporary backup descriptors, MCFs, and schema files are restored and information from the restored descriptor file is place in the Inventory Database.
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11. Bulk Metadata Generation Tool

11.1 BMGT Overview

The Bulk Metadata Generation Tool (BMGT) is an ECS component that is used to generate an external representation of the ECS metadata holdings. This external representation consists of a number of distinct data products that describes both the current state of the metadata holdings, as well as changes to that state (such as the insert, update, and deletion of collections and granules).

While the data products produced by the BMGT are generally ingested back into the ECS system so that value added providers may search, and order (or subscribe to) these products, the BMGT is also responsible for directly exporting the products to the EOS Clearing House (ECHO).

In general use, the BMGT is designed to be fully automatic. Running periodically, (with a frequency of once per hour up to once per day), BMGT will automatically generate the required products and export them to ECHO, as well as make them available for archiving via Data Pool Ingest. Additional BMGT tasks may be initiated as a result of other actions, such as Data Pool Cleanup. Alternatively, the operator may explicitly request BMGT to generate one or more products based on collection and/or granule selection criteria.

The metadata files sent to ECHO will be formatted in XML and will be compressed/consolidated into a single file for delivery using the UNIX compression utility zip. Currently, the exported files include the following:

- Collection metadata (ECSMETC-) files following the BMGTCollectionMetadata.dtd
- Granule metadata (ECSMETG-) files following the BMGTGranuleMetadata.dtd
- Granule QA update (ECSMETU-)files following the BMGTUpdateMetadata.dtd
- Bulk Browse (ECSBBR-) data files following the BMGTBrowseMetadata.dtd
- Bulk URL (ECSMETU-) files following the BMGTUpdateMetadata.dtd
- ECS browse files referenced in the ECSBBR files.

The following diagram (see Figure 11.1-1) shows the high level context in which the BMGT operates.

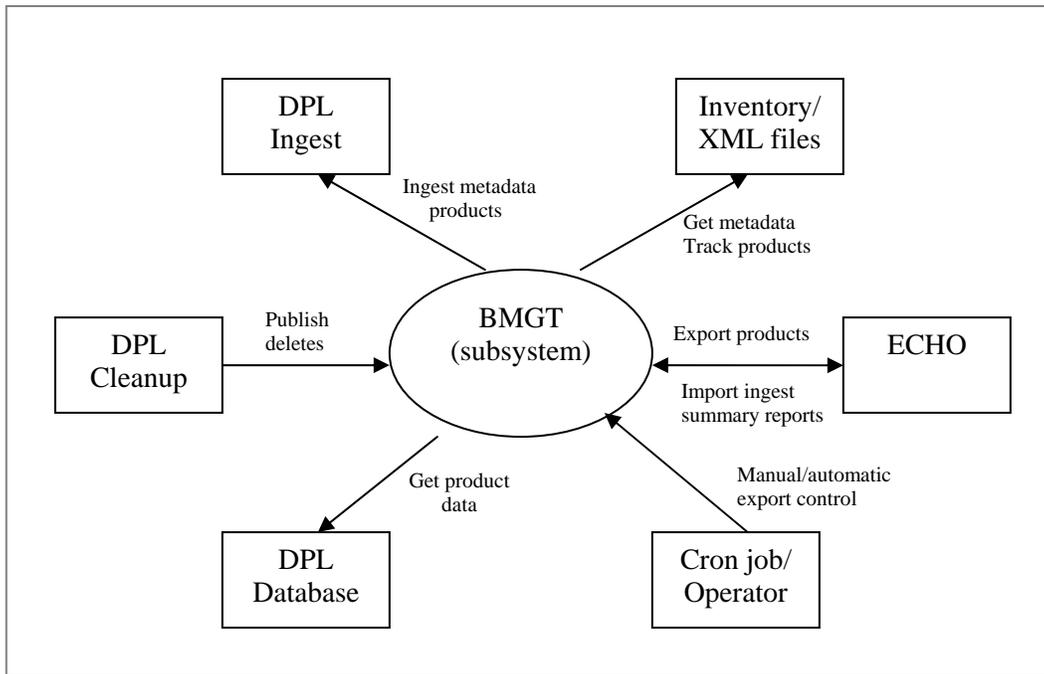


Figure 11.1-1. BMGT Context diagram

A BMGT export cycle can be initiated in one of three ways.

- **Automatically:** Based on its configuration and cron job setup, BMGT itself decides that it is time to initiate an export cycle. The Automatic Export process is responsible for selecting which Automatic export to run and populating export cycles to the BMGT database.
- **Manually:** This happens when the operator explicitly tells the BMGT to initiate an export cycle. This is handled by the Manual Export Process, which provides a large number of options for generating the export package. The Manual Export process is responsible for verifying that a manual cycle can be run and initiating the manual export generation.
- **Cleanup:** When Data Pool Cleanup is run, it will trigger the BMGT to produce an export package to ECHO. The idea here is to notify ECHO as quickly as possible of the removal of granules from the Data Pool. The Data Pool Cleanup Script has been modified to create a Cleanup Export Cycle at the end of its execution. BMGT Monitor will automatically poll the BMGT database looking for the Cleanup Export Cycle. BMGT will automatically export the package to ECHO. The frequency of the

polling is defaulted to 30 seconds but can be changed via configuration parameters found using the BMGT GUI. Data Pool Cleanup will not be permitted to actually remove any granules until the BMGT Monitor has picked up and initiated the requested Cleanup Export Cycle.

NOTE: There are collection level metadata values that cannot be automatically updated in ECHO. They include but are not limited to:

- Spatial search type - granule spatial representation
- Short Name/Version
- Long Name

Modifying the above collection level metadata values will require ECHO to drop the collection which means all granules in the ECHO inventory for that collection will be need to be deleted. In this circumstance, all historical granules for that collection will have to be re-exported to ECHO.

Table 11.1-1 provides an activity Checklist for BMGT.

Table 11.1-1. BMGT - Activity Checklist

Order	Role	Task	Section
1	Archive Technician	Launching the BMGT GUI	(P) 11.2.1.1
2	Archive Technician	Monitoring Recent Packages	(P) 11.2.2.1
3	Archive Technician	Cancelling Recent Packages	(P) 11.2.3.1
4	Archive Technician	Reviewing Failed Packages	(P) 11.2.4.1
5	Archive Technician	Reviewing ReExport Queue	(P) 11.2.5.1
6	Archive Technician	Changing Global Tuning Configuration Parameters	(P) 11.2.6.1
7	Archive Technician	Reviewing Error Tuning Configuration	(P) 11.2.7.1
8	Archive Technician	BMGT Manual Mode	(P) 11.3.1
9	Archive Technician	BMGT ReExport Queue	(P) 11.4.1
10	Archive Technician	BMGT Automatic Mode	(P) 11.5.1

11.2 BMGT GUI

The BMGT GUI allows the operator to monitor the export of BMGT packages (Automatic, Manual, and Cleanup). The primary purpose of the GUI is to provide the operator with a list of recent packages and their status. In addition, the operator will use it to configure various BMGT tuning parameters, such as the length of an Automatic cycle and the availability of the FTP service. Since it is possible for errors to occur during the FTP process, the third function of the GUI is to display the status of BMGT FTP service and the global FTP alerts.

11.2.1 BMGT GUI Functions

After a successful login, the user is presented with a navigation panel on the left-hand side of the screen, consisting of the following items:

- Home Page
- Monitoring
 - Recent Packages
 - Recent Failed Packages Only
 - ReExportQueue
- Configuration
 - Global Tuning
 - Error Tuning

The GUI provides DAAC staff with the following functions:

- Display BMGT export processes that are currently in progress
- Monitor the status of the BMGT FTP service that exports products to ECHO
- Allows the operator to suspend/resume FTP of products to ECHO
- List the N most recent export packages and view detail information about them, where N is configurable by the DAAC staff
- Cancel an export package that is currently being transmitted to ECHO or waiting for transmission
- List the N most recently completed packages which resulted in errors and view detail information about them
- List all items queued for reExport by BMGT and view detail information about them
- Allows the operator to display a formatted ingest summary report of the contents of the report returned from ECHO
- View and change BMGT Global Tuning configuration parameters, except for configuration items such as collection group/collection mapping that must be specified in XML configuration files. Changing the BMGT runtime configuration parameters will be restricted to DAAC staff that is logged in as BMGT administrator
- View BMGT Error Tuning Page which provides a reference to all of the possible error codes that could be returned from ECHO in response to a package, and the BMGT response to each error. Since some of the responses are meant for specific scenarios, and would not necessarily work in others, this configuration is not meant to be changed by DAAC staff.
- Display global alerts upon a configured number of BMGT FTP to ECHO failures

11.2.1.1 Launching the BMGT GUI

- 1 Access a terminal window logged in to a host (e.g., the Operations Workstation or Sun external server) that has access to the Mozilla Firefox web browser.
 - Examples of Linux external server host names include e4dpl01, l4dpl01 or n4dpl01.
- 2 Type **firefox &** then press **Return/Enter**.
 - 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 Mozilla Firefox web browser is displayed.
- 3 If a bookmark has been created for the **BMGT GUI**, select the appropriate bookmark from those listed on the browser's Bookmarks pull-down window.
 - The **Login:** prompt is displayed.
 - The Login page (see Figure 11.2-1) allows the operator to log in, either as an Administrator (with the ability to configure global tuning parameters) or a read-only Operator. The Administrator login requires a password, while the Operator login does not.

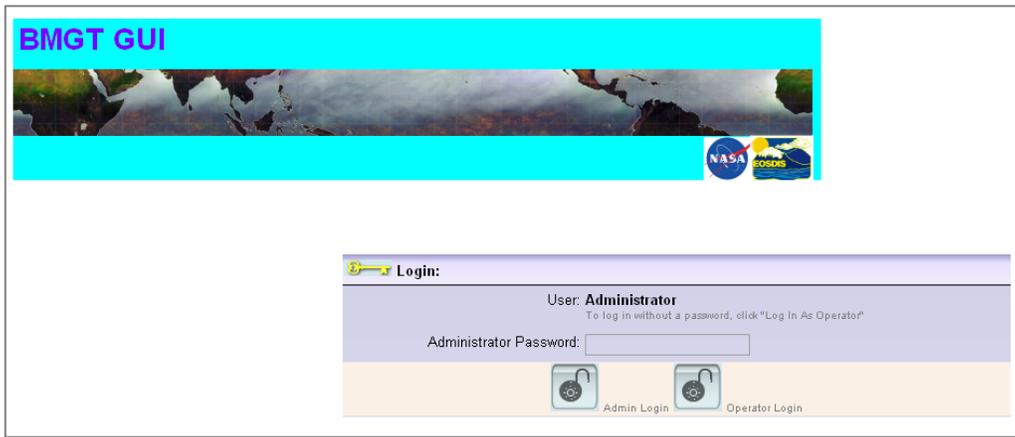


Figure 11.2-1. BMGT Login Page

- 4 If no bookmark has been created for the **BMGT GUI**, enter the URL in the Address window and click on the **Go** or press the **Return/Enter** button.
 - For example: <http://x4dpl01.hitc.com:24320/BmgtGui/EcBmBmgtGuiLogin.faces>.
 - The Login: prompt is displayed.
- 5 If you are logging in as the **User: Administrator**, enter the appropriate password in the **Administrator Password** box.

- 6 Click on the **Admin Login** button.
 - The **BMGT GUI Home** page (see Figure 11.2-2) is displayed.

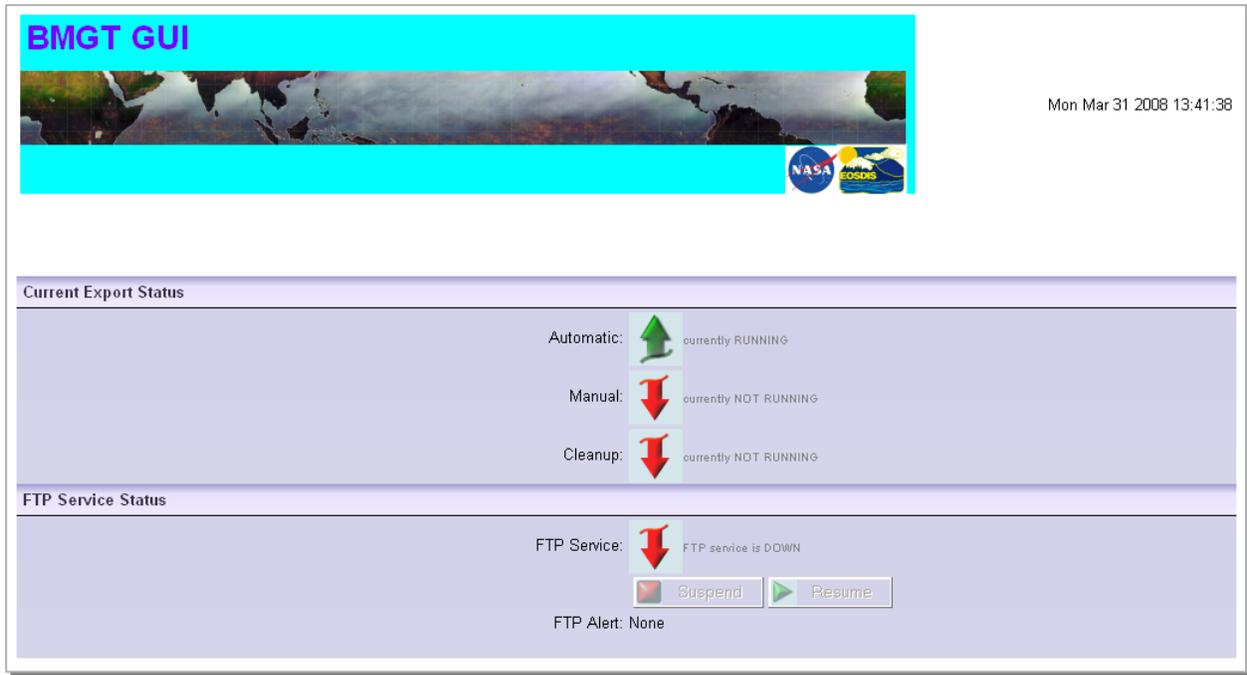


Figure 11.2-2. BMGT GUI Home Page

- 7 If you are logging in as an operator no password is required, just click on the **Operator Login** button.
 - The **BMGT GUI Home** (read only) page is displayed.

The **BMGT GUI Home** Page provides an overview of the current system status, including any global alerts.

The first section shows whether or not the **Automatic**, **Manual**, or **Cleanup** mode is currently running.

The second section displays the current state of the BMGT FTP service. There may be three states for this service:

- The FTP service is down. This state corresponds to a red arrow pointing down. In this case, the Suspend and Resume buttons are both disabled.
- The FTP service is up and active. This state corresponds to a green arrow pointing up and a green “Active” light; the operator is allowed to manually suspend the FTP service.

- The FTP service is up and suspended by operator. This state corresponds to a green arrow pointing up and a red “Suspended” light; the operator can manually resume the service.

Additionally, this section displays the existence or absence of a global FTP alert. A single alert may be pending due to FTP errors; in this case, the FTP Alert line will show the alert description.

11.2.2 Monitoring Recent Packages

The **Recent Packages** page provides a listing of *N* most recent packages and their status (the number is configurable on the Global Tuning page).

The listing consists of the following columns:

- **Cycle ID:** A unique cycle ID. (Clicking on the underlined link will bring up the Package Details screen, discussed below.)
- **Package ID:** A unique package ID.
- **Export Type:** Automatic, Manual, or Cleanup, corresponding to the type of the cycle in which the package was generated.
- **Status:** The current status of the package, with the values defined in S_BGT_01250.
- **Last Status Update:** The date a time of the last change in the status of the package.
- **Coverage From:** The initial time point covered by the package.
- **Coverage To:** The last time point covered by the package.

The **Cancel Package** button allows the operator to select individual packages and cancel them if they are not yet in a terminal state. The cancellation process applies to FTP transmission only (rather than product generation). The **Cancel Package** button cancels all packages whose checkboxes are currently selected; the checkboxes appear only in those cases when the package can be cancelled.

11.2.2.1 Monitoring Recent Packages

- 1 Login to the BMGT GUI.
 - The **BMGT GUI Home** page is displayed.
- 2 Click on the **Monitoring** link from the navigation panel.
- 3 Select **Recent Packages** from the navigation panel.
 - The **Recent Packages** page (see Figure 11.2-3) is displayed.

BMGT GUI Thu Dec 4 2008 15:46:03

Recent Packages



Showing 1 - 20 Of 175 Page Size: 20

Cycle ID	Package ID	Export Type	Status	Last Status Update	Coverage From	Coverage To
1775		AUTOMATIC	NEW	2008-12-04 00:05:07.8	2008-12-04 23:00:00.0	2008-12-05 00:00:00.0
1774		AUTOMATIC	NEW	2008-12-04 00:05:07.8	2008-12-04 22:00:00.0	2008-12-04 23:00:00.0
1773		AUTOMATIC	NEW	2008-12-04 00:05:07.8	2008-12-04 21:00:00.0	2008-12-04 22:00:00.0
1772		AUTOMATIC	NEW	2008-12-04 00:05:07.8	2008-12-04 20:00:00.0	2008-12-04 21:00:00.0
1771		AUTOMATIC	NEW	2008-12-04 00:05:07.8	2008-12-04 19:00:00.0	2008-12-04 20:00:00.0
1770		AUTOMATIC	NEW	2008-12-04 00:05:07.8	2008-12-04 18:00:00.0	2008-12-04 19:00:00.0
1769		AUTOMATIC	NEW	2008-12-04 00:05:07.8	2008-12-04 17:00:00.0	2008-12-04 18:00:00.0
1768		AUTOMATIC	NEW	2008-12-04 00:05:07.8	2008-12-04 16:00:00.0	2008-12-04 17:00:00.0
1767		AUTOMATIC	NEW	2008-12-04 00:05:07.8	2008-12-04 15:00:00.0	2008-12-04 16:00:00.0
1766		AUTOMATIC	NEW	2008-12-04 00:05:07.8	2008-12-04 14:00:00.0	2008-12-04 15:00:00.0
1765		AUTOMATIC	NEW	2008-12-04 00:05:07.8	2008-12-04 13:00:00.0	2008-12-04 14:00:00.0
1764		AUTOMATIC	NEW	2008-12-04 00:05:07.8	2008-12-04 12:00:00.0	2008-12-04 13:00:00.0
1763	1761	AUTOMATIC	EXPORTED	2008-12-04 15:15:36.9	2008-12-04 11:00:00.0	2008-12-04 12:00:00.0
1762	1760	AUTOMATIC	EXPORTED	2008-12-04 15:14:36.66	2008-12-04 10:00:00.0	2008-12-04 11:00:00.0
1761	1759	AUTOMATIC	EXPORTED	2008-12-04 15:13:36.406	2008-12-04 09:00:00.0	2008-12-04 10:00:00.0
1760	1758	AUTOMATIC	EXPORTED	2008-12-04 15:12:36.19	2008-12-04 08:00:00.0	2008-12-04 09:00:00.0
1759	1757	AUTOMATIC	EXPORTED	2008-12-04 15:11:35.966	2008-12-04 07:00:00.0	2008-12-04 08:00:00.0
1758	1756	AUTOMATIC	EXPORTED	2008-12-04 15:10:35.746	2008-12-04 06:00:00.0	2008-12-04 07:00:00.0
1757	1755	AUTOMATIC	EXPORTED	2008-12-04 15:09:35.55	2008-12-04 05:00:00.0	2008-12-04 06:00:00.0
1756	1754	AUTOMATIC	EXPORTED	2008-12-04 15:08:35.346	2008-12-04 04:00:00.0	2008-12-04 05:00:00.0

Package in one of the three states: TRANSFERRING, PACKAGE_RETRANSMIT, or WAITING_TO_RETRANSMIT, is considered as cancelable, and a checkbox is displayed at the left of the cycle ID corresponding to the package.

<input type="checkbox"/> 1467	MANUAL	<input checked="" type="checkbox"/> WAITING_TO_RETRANSMIT	2008-02-12 17:22:09.553	2008-02-11 16:03:03.676	2008-02-11 16:20:00.0
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Figure 11.2-3. Recent Package Page

4. To see detailed information about a given package, click on the desired **Cycle ID xxx**.
 - The **Package Details: Package xxx** (see Figure 11.2-4) is displayed.

Package Details: Package 1683

Audit Trail Information

Package ID: 1683
 Cycle ID: 1681
 Export Type: AUTOMATIC
 Status: COMPLETE_WITH_ERRORS
 Browse Files Transferred Percent: 100.0
 Last Status Update: 2008-12-04 15:17:29.803
 Coverage From: 2008-12-01 12:00:00.0
 Coverage To: 2008-12-01 13:00:00.0
 Retry Count: 0
 Metadata Generation Started On: 2008-12-01 13:09:10.41
 Metadata Generation Ended On: 2008-12-01 13:09:21.756
 Transmission Started On: 2008-12-04 13:49:33.863
 Transmission Ended On: 2008-12-04 13:49:34.526
 External Clearinghouse: ECHO

The Ingest Summary Report was received on 2008-12-04 15:17:29.26 from the clearinghouse ECHO and can be found here: http://x4dp01.<daac_ext>:sprot-//datapool/DEV06/user/FS1/BMGT/Reports/Archive/Isr_1681_1228421839.xml

[Click to view formatted Ingest Report.](#)

Ingest Summary Statistics

Statistics Type	Inserts	Updates	Deletions	Rejections	Errors Ignored	Errors ReExported	Errors Not Handled
Browse	6	0	0	4	0	0	4
Collection	0	0	0	0	0	0	0
Granule	7	0	0	3	2	0	1

Product Information

Product Type	Group	Product Status	Inserts	Updates	Deletes	Skipped
VIS	DEFAULT	COMPLETED	0	0	0	0
URL	DEFAULT	COMPLETED	0	0	0	0

Figure 11.2-4. Package Details Page

- The Package Details page contains **Audit Trail Information**, **Ingest Summary Statistics** (if available) and **Product Information**.

5. To see the **Formatted Ingest Summary Report**, click on the **view formatted ingest report** link

- The Formatted Ingest Summary Report Page (see Figure 11.2-5) is displayed.

ECHO Ingest Details: Package 1683, Cycle 1681						
Overview						
[hide processing totals]						
PROCESSING TOTALS						
Statistics Type	Deleted	Inserted	Processed	Rejected	Replaced	Updated
CollectionProcessingTotals	0	0	0	0	0	0
GranuleProcessingTotals	0	0	0	0	0	0
BrowseProcessingTotals	0	0	0	0	0	0
EDFGMOST.200833612.200833613.2008336130910.001.001.001683.XML:						
[hide processing totals]						
PROCESSING TOTALS						
Statistics Type	Deleted	Inserted	Processed	Rejected	Replaced	Updated
CollectionProcessingTotals	0	0	0	0	0	0
GranuleProcessingTotals	0	0	0	0	0	0
BrowseProcessingTotals	0	0	0	0	0	0
[hide file errors]						
FILE ERRORS						
INPUT_ADAPTER_DTD_VALIDATION				The file failed DTD validation.		
EDFBMOST.200833612.200833613.2008336130910.001.001.001683.XML:						
[hide processing totals]						
PROCESSING TOTALS						
Statistics Type	Deleted	Inserted	Processed	Rejected	Replaced	Updated
CollectionProcessingTotals	0	0	0	0	0	0
GranuleProcessingTotals	0	0	0	0	0	0
BrowseProcessingTotals	0	0	0	0	0	0

Figure 11.2-5. Formatted Ingest Summary Report Page

11.2.3 Canceling Recent Packages

From the **Recent Packages** page, the **Cancel Package** button allows the operator to select individual packages and cancel them if they are not yet in a terminal state. The cancellation process applies to FTP transmission only (rather than product generation). The **Cancel Package** button cancels all packages whose checkboxes are currently selected; the checkboxes appear only in those cases when the package can be cancelled.

11.2.3.1 Cancelling Recent Packages

- 1 Login to the BMGT GUI.
 - The **BMGT GUI Home** page is displayed.
- 2 Click on the **Monitoring** link from the navigation panel.
- 3 Select **Recent Packages** from the navigation panel.

- The **Recent Packages** page is displayed.
- 4 Click on the box next to “non-terminal” packages to be cancelled.
- A check is placed in the box.
- 5 Click on the **Cancel Package** button.
- The status of the selected package(s) becomes CANCELING, and, upon successfully canceling, the status will be changed to CANCELLED.
-

11.2.4 Reviewing Failed Packages

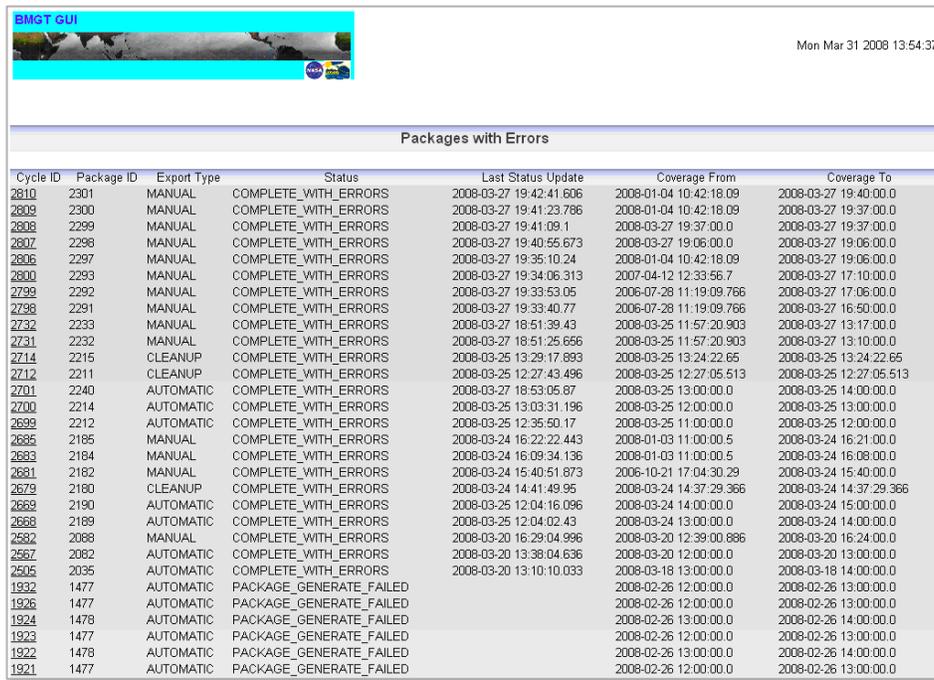
The Failed Packages page shows a listing of *N* most recent packages which resulted in an error. The list columns are identical to those on the general Recent Packages page. The following additional detailed information is accessible from the Package Details page and can be viewed by clicking the underlined link of a failed package.

This detailed information includes:

- A summary of general package information, as presented on the Monitoring screens
- Information about the package’s Ingest Summary Report, including the download link for the report
- The contents of a package, broken down by Product Type and Group
 - **Browse:** Multiple groups allowed per package; Inserts/Updates/Deletes applicable
 - **Granule:** Multiple groups allowed per package; Inserts/Updates/Deletes applicable
 - **Collection:** Multiple groups allowed per package; Inserts/Updates/Deletes applicable
 - **QA:** Multiple groups allowed per package; Inserts/Updates/Deletes applicable
 - **Valid:** Only one allowed per package (not group-based); Inserts only
 - **BulkURL:** Only one allowed per package (not group-based); Inserts/Deletes/Updates applicable)

11.2.4.1 Reviewing Failed Packages

- 1 Login to the BMGT GUI.
 - The **BMGT Home** page is displayed.
- 2 Click on the **Monitoring** link from the navigation panel.
- 3 Select **Failed Packages** from the navigation panel.
 - The **Failed Package** page (see Figure 11.2-6) is displayed.



Cycle ID	Package ID	Export Type	Status	Last Status Update	Coverage From	Coverage To
2810	2301	MANUAL	COMPLETE_WITH_ERRORS	2008-03-27 19:42:41.606	2008-01-04 10:42:18.09	2008-03-27 19:40:00.0
2809	2300	MANUAL	COMPLETE_WITH_ERRORS	2008-03-27 19:41:23.786	2008-01-04 10:42:18.09	2008-03-27 19:37:00.0
2808	2299	MANUAL	COMPLETE_WITH_ERRORS	2008-03-27 19:41:09.1	2008-03-27 19:37:00.0	2008-03-27 19:37:00.0
2807	2298	MANUAL	COMPLETE_WITH_ERRORS	2008-03-27 19:40:55.673	2008-03-27 19:06:00.0	2008-03-27 19:06:00.0
2806	2297	MANUAL	COMPLETE_WITH_ERRORS	2008-03-27 19:35:10.24	2008-01-04 10:42:18.09	2008-03-27 19:06:00.0
2800	2293	MANUAL	COMPLETE_WITH_ERRORS	2008-03-27 19:34:06.313	2007-04-12 12:33:56.7	2008-03-27 17:10:00.0
2799	2292	MANUAL	COMPLETE_WITH_ERRORS	2008-03-27 19:33:53.05	2006-07-28 11:19:09.766	2008-03-27 17:06:00.0
2798	2291	MANUAL	COMPLETE_WITH_ERRORS	2008-03-27 19:33:40.77	2006-07-28 11:19:09.766	2008-03-27 16:50:00.0
2732	2233	MANUAL	COMPLETE_WITH_ERRORS	2008-03-27 18:51:39.43	2008-03-25 11:57:20.903	2008-03-27 13:17:00.0
2731	2232	MANUAL	COMPLETE_WITH_ERRORS	2008-03-27 18:51:25.656	2008-03-25 11:57:20.903	2008-03-27 13:10:00.0
2714	2215	CLEANUP	COMPLETE_WITH_ERRORS	2008-03-25 13:29:17.893	2008-03-25 13:24:22.65	2008-03-25 13:24:22.65
2712	2211	CLEANUP	COMPLETE_WITH_ERRORS	2008-03-25 12:27:43.496	2008-03-25 12:27:05.513	2008-03-25 12:27:05.513
2701	2240	AUTOMATIC	COMPLETE_WITH_ERRORS	2008-03-27 18:53:05.87	2008-03-25 13:00:00.0	2008-03-25 14:00:00.0
2700	2214	AUTOMATIC	COMPLETE_WITH_ERRORS	2008-03-25 13:03:31.196	2008-03-25 12:00:00.0	2008-03-25 13:00:00.0
2699	2212	AUTOMATIC	COMPLETE_WITH_ERRORS	2008-03-25 12:35:50.17	2008-03-25 11:00:00.0	2008-03-25 12:00:00.0
2685	2185	MANUAL	COMPLETE_WITH_ERRORS	2008-03-24 16:22:22.443	2008-01-03 11:00:00.5	2008-03-24 16:21:00.0
2683	2184	MANUAL	COMPLETE_WITH_ERRORS	2008-03-24 16:09:34.136	2008-01-03 11:00:00.5	2008-03-24 16:08:00.0
2681	2182	MANUAL	COMPLETE_WITH_ERRORS	2008-03-24 15:40:51.873	2006-10-21 17:04:30.29	2008-03-24 15:40:00.0
2679	2180	CLEANUP	COMPLETE_WITH_ERRORS	2008-03-24 14:41:49.95	2008-03-24 14:37:29.366	2008-03-24 14:37:29.366
2669	2190	AUTOMATIC	COMPLETE_WITH_ERRORS	2008-03-25 12:04:16.096	2008-03-24 14:00:00.0	2008-03-24 15:00:00.0
2668	2189	AUTOMATIC	COMPLETE_WITH_ERRORS	2008-03-25 12:04:02.43	2008-03-24 13:00:00.0	2008-03-24 14:00:00.0
2662	2088	MANUAL	COMPLETE_WITH_ERRORS	2008-03-20 16:29:04.996	2008-03-20 12:39:00.886	2008-03-20 16:24:00.0
2657	2082	AUTOMATIC	COMPLETE_WITH_ERRORS	2008-03-20 13:38:04.636	2008-03-20 12:00:00.0	2008-03-20 13:00:00.0
2505	2035	AUTOMATIC	COMPLETE_WITH_ERRORS	2008-03-20 13:10:10.033	2008-03-18 13:00:00.0	2008-03-18 14:00:00.0
1932	1477	AUTOMATIC	PACKAGE_GENERATE_FAILED		2008-02-26 12:00:00.0	2008-02-26 13:00:00.0
1926	1477	AUTOMATIC	PACKAGE_GENERATE_FAILED		2008-02-26 12:00:00.0	2008-02-26 13:00:00.0
1924	1478	AUTOMATIC	PACKAGE_GENERATE_FAILED		2008-02-26 13:00:00.0	2008-02-26 14:00:00.0
1923	1477	AUTOMATIC	PACKAGE_GENERATE_FAILED		2008-02-26 12:00:00.0	2008-02-26 13:00:00.0
1922	1478	AUTOMATIC	PACKAGE_GENERATE_FAILED		2008-02-26 13:00:00.0	2008-02-26 14:00:00.0
1921	1477	AUTOMATIC	PACKAGE_GENERATE_FAILED		2008-02-26 12:00:00.0	2008-02-26 13:00:00.0

Figure 11.2-6. Failed Packages Page

- 4 Click on the underscored **Cycle ID** link.
 - The **Failed Package Details** (see Figure 11.2-7) is displayed.

Package Details: Package 2240						
Audit Trail Information						
Package ID: 2240 Cycle ID: 2701 Export Type: AUTOMATIC Status: COMPLETE_WITH_ERRORS Last Status Update: 2008-03-28 10:12:55.036 Coverage From: 2008-03-25 13:00:00.0 Coverage To: 2008-03-25 14:00:00.0 Retry Count: 0 Metadata Generation Started On: 2008-03-27 16:51:12.02 Metadata Generation Ended On: 2008-03-27 16:51:18.443 Transmission Started On: 2008-03-27 18:53:03.506 Transmission Ended On: 2008-03-27 18:53:05.87 External Clearinghouse: ECHO						
The Ingest Summary Report was received on 2008-03-27 19:02:41.21 from the clearinghouse ECHO and can be found here: http://fdp01.hitc.com:24324/BMGT_DEV01/Reports/Archive/report-526EF805-6DC2-516D-2190-FF5EB4D6AAD7.xml						
Ingest Summary Statistics						
Statistics Type	Inserts	Updates	Deletions	Rejections		
Browse	0	0	0	0		
Collection	0	0	0	0		
Granule	0	0	0	3		
Product Information						
Product Type	Group	Product Status	Inserts	Updates	Deletes	Skipped
BBR	AMSR	COMPLETED	0	0	0	0
METU	AMSR	COMPLETED	0	0	0	0

Figure 11.2-7. Failed Package Details Page

11.2.5 Reviewing ReExport Queue

The ReExport Queue page provides a list of all items queued for reExport by BMGT.

The listing consists of the following columns:

- **Cycle ID:** A unique cycle ID. (Clicking on the underlined link will bring up the Package Details screen, discussed below.)
- **Type:** Science Granule (SC) or Browse (BR)
- **Collection:** Grouping of granules
- **Version ID:** Version of ECS collections
- **DbID:** The unique ID which identifies the granule
- **Error Code:** Error returned from ECHO

The Remove Re-Export Actions button allows the operator to remove an item that is queued for reExport by BMGT. The **Remove Re-Export Actions** button removes all items whose checkboxes are currently selected.

11.2.5.1 Reviewing ReExport Queue

- 1 Login to the BMGT GUI.
 - The **BMGT Home** page is displayed.
- 2 Click on the **Monitoring** link from the navigation panel.
- 3 Select **ReExport Queue** from the navigation panel.
 - The **ReExport Queue** page (see Figure 11.2-8) is displayed.

BMGT GUI
Mon Oct 6 2008 11:58:48

ReExport Queue

Show / Hide Filters

Showing 1 - 9 Of 9 Page Size: 20

<input type="checkbox"/>	Cycle ID	Type	Collection	Version ID	DbID	Error Code
<input type="checkbox"/>	1333	SC	MOD29P1D	5	22735	GRANULE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8081	BROWSE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8153	GRANULE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8156	BROWSE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8158	GRANULE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8165	GRANULE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8175	BROWSE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8182	BROWSE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8183	BROWSE_NOT_EXISTS

Remove Re-Export Actions

Figure 11.2-8. ReExport Queue Page

- 4 Click on the “Show/Hide Filters” icon (a green magnifying glass) at the top left of the page and then specifying a filter value for one of the columns.
 - The **ReExport Queue Page showing filter** (see Figure 11.2-9) is displayed.

BMGT GUI Mon Oct 6 2008 12:02:09

ReExport Queue



Show / Hide Filters

Filter Criteria

dbID:

Type: SHOW ALL

Collection:

CycleId:

Error Code:

Showing 1 - 9 Of 9 Page Size: 20

<input type="checkbox"/>	Cycle ID	Type	Collection	Version ID	DbID	Error Code
<input type="checkbox"/>	1333	SC	MOD29P1D	5	22735	GRANULE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8081	BROWSE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8153	GRANULE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8156	BROWSE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8158	GRANULE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8165	GRANULE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8175	BROWSE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8182	BROWSE_NOT_EXISTS
<input type="checkbox"/>	1334	SC	MOD29P1D	5	8183	BROWSE_NOT_EXISTS

Figure 11.2-9. ReExport Queue Page showing filter

11.2.6 Global Tuning Parameters

The Global Tuning page lists various BMGT configuration parameters. The list is a three-column table with the parameter name, description, and value. Clicking the **Apply Changes** button saves the current (possibly changed) values of all the parameters; the Reset button reverts to the default values. Checkboxes next to each value prevent accidental modifications.

The fields on the **Global Tuning** page are enabled only if the current user is the Administrator, and include the ability to change Admin Password. The fields are disabled if the current user is not the Administrator. Table 11.2-1 contains a description of the parameters that can be updated using the BMGT GUI.

Table 11.2-1. BMGT Configuration/Global Parameters (1 of 3)

Parameter Name	Description	Default Value
ADMIN_PASSWORD	The BMGT GUI administrator password. Note that this is stored in the database in encrypted form. When the password is changed on the BMGT GUI, the GUI will automatically encrypt the password before storing it.	xxxxxxx
AUTOMATIC_CYCLE_LENGTH_HRS	The length of the currently configured automatic export cycle, measured in hours. The BMGT does not need to be restarted if this value is changed, but note that the new value will not apply until the next day. Valid values are 1,2,3,4,6,8,12,24.	24
AUTOMATIC_CYCLE_RETRY_INTERVAL_MINS	The time interval, measured in minutes, between retries of a failed automatic export cycle. Recommend values in the range 30 to 60 minutes.	60
BMGT_PDR_POLLING_DIRECTORY	The DPL Ingest polling directory into which BMGT PDRs will be placed.	
BMGT_PDR_POLLING_HOST	The fully qualified host name where the DPL Ingest polling location is configured.	
CLEANUP_OLD_CYCLES_DAYS	Number of days before a package's audit trail information can be cleaned up.	10
DATABASE_RETRY_COUNT	The number of attempts that should be made to execute a database command.	5
DATABASE_RETRY_INTERVAL_SECS	The time, measured in seconds, between retries of a database command.	30
DATA_CENTER_ID	Value to use in generated METG, BBR xml for the DataCenterId value	
DESC_FILE_DIR	The directory where ESDT descriptor files are located.	
DISPLAY_MAX_PACKAGES	Determines how many recent packages will be displayed on the GUI Monitoring page.	100
DTD_LOC	The DTD host and port. This is the root URL where all of the DTDs can be found. The DTD file name will be appended after this value.	
EMAIL_HOST	The SMTP mail server full qualified host name that will be used to send emails.	

Table 11.2-1. BMGT Configuration/Global Parameters (2 of 3)

Parameter Name	Description	Default Value
FTP_HOST_NAME	The name of the ECHO host to which export packages will be pushed, and Ingest Summary Reports will be pulled. This may be either a hostname, or an IP address. The BMGT does not need to be restarted for changes to this value to take effect.	
FTP_PASSWORD	The encrypted password that will be used to authenticate the log in to the ECHO host. The BMGT does not need to be restarted for changes to this value to take effect	xxxxxxx
FTP_PULL_DIRECTORY	The directory on the ECHO host from which Ingest Summary reports will be pulled. The BMGT does not need to be restarted for changes to this value to take effect.	
FTP_PUSH_DIRECTORY	The directory on the ECHO host into which the package files will be placed. The BMGT does not need to be restarted for changes to this value to take effect.	
FTP_RETRY_INTERVAL_MINS	The time interval, measured in minutes, between retries of a failed FTP export operation.	5
FTP_USERNAME	The user name that will be used to log in to the ECHO host. The BMGT does not need to be restarted for changes to this value to take effect.	
GENERAL_PKG_FILE	Absolute path for GENERAL Package file name, used to retrieve CollectionPackage information.	
GENERATOR_CHECK_INTERVAL_SECS	Determines how frequently the BMGT checks the database for new packages to generate. Recommend values in range 30 to 300 seconds.	30
GROUPS_CONFIG_FILE	The absolute path of the ESDT group configuration file.	
INGEST_SUMMARY_RPT_ARCHIVE	The directory on the local host in which the ECHO Ingest Summary Reports will be archived.	
INGEST_SUMMARY_RPT_DIR	The temporary directory on the local host into which the BMGT will place ECHO Ingest Summary Report files for processing.	
INGEST_SUMMARY_RPT_URL	The URL where the ECHO Ingest Summary Report files can be downloaded.	
MAX_DATA_SKIPPED	The maximum number of data-related errors that the BMGT may encounter when generating an export package before the package will fail.	10
MAX_FTP_PACKAGE_INTERVAL_HRS	The maximum number of hours that may pass before a warning email is sent if an export package has not started transferring to ECHO.	12

Table 11.2-1. BMGT Configuration/Global Parameters (3 of 3)

Parameter Name	Description	Default Value
MAX_SIZE_ECSBBR	The maximum number of browse inserts/deletes allowed for ECSBBR files. Export products larger than this will have their output split into multiple files.	200
MAX_SIZE_ECSMETG_KB	The maximum size for ECSMETG files, measure in KB. Export products larger than this will have their output split into multiple files.	
MAX_SIZE_ECSMETU	The maximum number of updated granules that may be allowed per ECSMETU file. Export products larger than this will have their output split into multiple files.	10000
MAX_WAIT_FOR_INGEST_REPORT_HRS	Maximum number of hours to wait for an Ingest Summary Report from ECHO before issuing a warning email to the DAAC operator that the expected report has not arrived.	72
MISR_PROCESSING	Indicates whether MISR processing is enabled. Reserved for use by ASDC. Do not change this configuration parameter while the system is running.	Y
MONITOR_CHECK_INTERVAL_SECS	This determines how frequently the BMGT checks for completed export packages. Recommend values in the range 60 to 300 seconds. This will also determine how often BMGT checks for Cleanup Export Packages requested by DataPool Cleanup.	120
NOTIFICATION_EMAIL_ADDRESS	Email address(es) that will be used to send alerts or error notifications to. Multiple addresses may be provided by separating them with white space.	
NUM_RETRIES_FOR_ALERT	The number of ECHO FTP retries that will trigger an alert.	5
PACKAGER_RETRY_INTERVAL_MINS	The time interval, measured in minutes, between retries of a failed attempt to package up the export product files.	60
PRODUCT_ROOT_DIRECTORY	The root directory under which the temporary package directories will be created. These are used to store the product/package files for ingest or export.	
SPATIAL_ESDT_FILE	The absolute path for the BMGT Spatial ESDTs' configuration file	
SPECIAL_CASE_FILE	The absolute path for the special case file name, used to retrieve cost estimate information for collections.	
STYLESHEET_DIR	The absolute path for the location of Collection and Granule style sheets.	
TEMP_DESC_DIR	Temporary directory for writing XML descriptor files to retrieve collection metadata.	

11.2.6.1 Changing Global Tuning Configuration Parameters

- 1 Login to the BMGT GUI as the system administrator.
 - The BMGT **GUI Home** page is displayed.
- 2 Click on the **Configuration** link from the navigation panel.
- 3 Select **Global Tuning** from the navigation panel.
 - The Global Tuning page (see Figure 11.2-10) is displayed.

Global Tuning		
Main BMGT Parameters		
Parameter Name	Description	Value
ADMIN_PASSWORD	The BMGT GUI administrator password. Note that this is stored in the database in encrypted form. When the password is changed on the BMGT GUI, the GUI will automatically encrypt the password before storing it.	●●●●●●●● <input type="checkbox"/>
FTP_PASSWORD	The encrypted password that will be used to authenticate the log in to the ECHO host. The BMGT does not need to be restarted for changes to this value to take effect.	●●●●●●●● <input type="checkbox"/>
AUTOMATIC_CYCLE_LENGTH_HRS	The length of the currently configured automatic export cycle, measured in hours. The BMGT does not need to be restarted if this value is changed, but note that the new value will not apply until the next day. Valid values are 1,2,3,4,6,8,12,24.	4 <input type="checkbox"/>
AUTOMATIC_CYCLE_RETRY_INTERVAL_MINS	The time interval, measured in minutes, between retries of a failed automatic export cycle. Recommend values in the range 30 to 80 minutes.	10 <input type="checkbox"/>
BMGT_PDR_POLLING_DIRECTORY	The DPL Ingest polling directory into which BMGT PDRs will be placed.	/usr/ecs/DEV01/CUSTC <input type="checkbox"/>
BMGT_PDR_POLLING_HOST	The fully qualified host name where the DPL Ingest polling location is configured.	LOCAL <input type="checkbox"/>
CLEANUP_OLD_CYCLES_DAYS	Number of days before a package's audit trail information can be cleaned up.	8 <input type="checkbox"/>
DATA_CENTER_ID	Value to use in generated MET@.BBR.xml for the DataCenterId value	EDF <input type="checkbox"/>
DESC_FILE_DIR	The directory where ESDT descriptor files are located.	/stomext/smallfiles/DEV <input type="checkbox"/>
DISPLAY_MAX_PACKAGES	Determines how many recent packages will be displayed on the GUI Monitoring page.	10 <input type="checkbox"/>
DTD_LOC	The DTD host and port. This is the root URL where all of the DTDs can be found. The DTD file name will be appended after this value.	http://f4dpi01.hitc.com:2 <input type="checkbox"/>
EMAIL_HOST	The SMTP mail server full qualified host name that will be used to send emails.	f4eil01.hitc.com <input type="checkbox"/>
FTP_HOST_NAME	The name of the ECHO host to which export packages will be pushed, and Ingest Summary Reports will be pulled. This may be either a hostname, or an IP address. The BMGT does not need to be restarted for changes to this value to take effect.	ftp.ext.ray.com <input type="checkbox"/>
FTP_PULL_DIRECTORY	The directory on the ECHO host from which Ingest Summary reports will be pulled. The BMGT does not need to be restarted for changes to this value to take effect.	AETD1/reports <input type="checkbox"/>
FTP_PUSH_DIRECTORY	The directory on the ECHO host into which the package files will be placed. The BMGT does not need to be restarted for changes to this value to take effect.	AETD1/data <input type="checkbox"/>
FTP_RETRY_INTERVAL_MINS	The time interval, measured in minutes, between retries of a failed FTP export operation.	5 <input type="checkbox"/>

Figure 11.2-10. Global Tuning Page (1 of 2)

- 4 Click on the **Value** box of the parameter to be changed.
 - A flashing input cursor is displayed.
- 5 Enter the desired parameter update.
 - Change is displayed in the **Value** box.
- 6 Click on the checkbox next to the **Value** box.
 - A check is placed in the checkbox.

- 7 Scroll to the bottom of the Global Parameter page and select the **Apply Changes** button.
- Changes will be saved for the parameters which have had their checkboxes checked. Unintentional changes to other parameters will not be saved.

Note: Most configuration changes made through the Global Tuning Page do not take effect until all BMGT servers are re-started. The exception is the **FTP_PUSH_USERNAME** and **FTP_PUSH_PASSWORD** input which are applied when the **Apply Change** button selected.

The screenshot displays the Global Tuning Page interface. On the left is a navigation menu with options: Home, Monitoring, Recent Packages, Failed Packages, Configuration, and Global Tuning. Below the menu, it shows the user is logged in as 'Operator' and under mode 'DEV07'. The main area contains a list of parameters with their descriptions and input fields. At the bottom, there are two buttons: 'Apply Changes' (with a green checkmark icon) and 'Cancel Changes' (with a red X icon).

Parameter Name	Description	Value
GENERATOR_CHECK_INTERVAL_SECS	Determines how frequently the BMGT checks the database for new packages to generate. Recommend values in range 30 to 300 seconds.	300
GROUPS_CONFIG_FILE	The absolute path of the ESDT group configuration file.	/usr/ecs/DEV07/CUSTC
INGEST_SUMMARY_RPT_ARCHIVE	The directory on the local host in which the ECHO Ingest Summary Reports will be archived.	/datapool/DEV07/user/f
INGEST_SUMMARY_RPT_DIR	The temporary directory on the local host into which the BMGT will place ECHO Ingest Summary Report files for processing.	/datapool/DEV07/user/f
INGEST_SUMMARY_RPT_URL	The URL where the ECHO Ingest Summary Report files can be downloaded.	
MAX_DATA_SKIPPED	The maximum number of data-related errors that the BMGT may encounter when generating an export package before the package will fail.	10
MAX FTP PACKAGE INTERVAL_HRS	The maximum number of hours that may pass before a warning email is sent if an export package has not started transferring to ECHO.	12
MAX_SIZE_ECSBRR	The maximum number of browse inserts/deletes allowed for ECSBRR files. Export products larger than this will have their output split into multiple files.	200
MAX_SIZE_ECSMETG_KB	The maximum size for ECSMETG files, measure in KB. Export products larger than this will have their output split into multiple files.	2000
MAX_SIZE_ECSMETU	The maximum number of updated granules that may be allowed per ECSMETU file. Export products larger than this will have their output split into multiple files.	10000
MAX_WAIT_FOR_INGEST_REPORT_HRS	Maximum number of hours to wait for an Ingest Summary Report from ECHO before issuing a warning email to the DAAC operator that the expected report has not arrived.	72
MISR_PROCESSING	Indicates whether MISR processing is enabled. Reserved for use by ASDC. Do not change this configuration parameter while the system is running.	<input checked="" type="checkbox"/>
MONITOR_CHECK_INTERVAL_SECS	This determines how frequently the BMGT checks for completed export packages. Recommend values in the range 60 to 300 seconds.	600
NOTIFICATION_EMAIL_ADDR	Email address(es) that will be used to send alerts or error notifications to. Multiple addresses may be provided by separating them with whitespace.	labuser@f4eil01.hitc.cof
NUM_RETRIES_FOR_ALERT	The number of ECHO FTP retries that will trigger an alert.	5
PACKAGER_RETRY_INTERVAL_MINS	The time interval, measured in minutes, between retries of a failed attempt to package up the export product files.	60
PRODUCT_ROOT_DIRECTORY	The root directory under which the temporary package directories will be created. These are used to store the product/package files for ingest or export.	/datapool/DEV07/user/f
SPATIAL_ESDT_FILE	The absolute path for the BMGT Spatial ESDT's configuration file	/usr/ecs/DEV07/CUSTC
SPECIAL_CASE_FILE	The absolute path for the special case file name, used to retrieve const estimate information for collections.	/usr/ecs/DEV07/CUSTC
STYLESHEET_DIR	The absolute path for the location of Collection and Granule style sheets.	/usr/ecs/DEV07/CUSTC
TEMP_DESC_DIR	Temporary directory for writing XML descriptor files to retrieve collection metadata.	/usr/ecs/DEV07/CUSTC

Figure 11.2-11. Global Tuning Page (2 of 2)

11.2.7 Error Tuning Configuration

The Error Tuning Page provides a reference to all of the possible error codes that could be returned from ECHO in response to a package, and the BMGT response to each error. The BMGT Monitor server is responsible for parsing errors from Ingest Summary Reports, and performing the appropriate action. The list is a four-column table with the Error Type, Error Code, Description and Configured Response. Table 11.2-2 contains a description of the BMGT Error Configuration.

Table 11.2-2. BMGT Error Configuration (1 of 7)

Error Type	Error Code	Description	Configured Response
COLLECTION	ADDITIONAL_ATTRIBUTE_DUPLICATE_NAMES	The names of the additional attributes given must be unique	NO_OBJECT_REEXPORT
GRANULE	ADDITIONAL_ATTRIBUTE_INVALID_NAMES	The additional attributes given must be a subset of their associated collections Additional Attributes by Name	NO_OBJECT_REEXPORT
COLLECTION	ALG_PACKAGE_DUPLICATE_NAMES	The names of the algorithm packages given must be unique.	NO_OBJECT_REEXPORT
COLLECTION	ASSOCIATED_DIF_DUPLICATE_NAMES	The names of the associated DIFs given must be unique.	NO_OBJECT_REEXPORT
BROWSE	BROWSE_NOT_EXISTS	The browse image indicated does not exist.	REEXPORT_OBJECT
GRANULE	BROWSE_NOT_EXISTS	The browse image indicated does not exist.	REEXPORT_OBJECT
COLLECTION	CAMPAIGN_DUPLICATE_NAMES	The short names of the campaigns given must be unique.	NO_OBJECT_REEXPORT
GRANULE	CAMPAIGN_DUPLICATE_NAMES	The names of the campaigns given must be unique.	NO_OBJECT_REEXPORT
GRANULE	CAMPAIGN_INVALID_NAMES	The campaigns given must be a subset of their associated collection campaigns by Name.	NO_OBJECT_REEXPORT

Table 11.2-2. BMGT Error Configuration (2 of 7)

Error Type	Error Code	Description	Configured Response
COLLECTION	COLLECTION_ASSOCIATION_DUPLICATE_NAMES	The names of the collection associations given must be unique.	NO_OBJECT_REEXPORT
COLLECTION	COLLECTION_NOT_EXISTS	The collection indicated does not exist.	IGNORE_ERROR
GRANULE	COLLECTION_REF_INVALID	The referenced parent collection does not exist.	NO_OBJECT_REEXPORT
COLLECTION	CONTACT_ROLE_DUPLICATE_NAMES	The names of the contact roles given must be unique.	NO_OBJECT_REEXPORT
COLLECTION	CSDT_DESCRIPTION_DUPLICATE_NAMES	The names of the CSDT descriptions given must be unique.	NO_OBJECT_REEXPORT
JOB	DATA_FILE_INVALID	An input file in the job was invalid. This only applies to BMGT providers.	REGENERATE_PACKAGE
COLLECTION	DELETE_ADDL_ATTR_WITH_GR_REF	Additional attributes with child granule references cannot be deleted.	NO_OBJECT_REEXPORT
COLLECTION	DELETE_CAMPAIN_WITH_GR_REF	Campaigns with child granule references cannot be deleted.	NO_OBJECT_REEXPORT
COLLECTION	DELETE_INSTRUMENT_WITH_GR_REF	Instrument with child granule references cannot be deleted.	NO_OBJECT_REEXPORT
COLLECTION	DELETE_INSTR_CHAR_WITH_GR_REF	Instrument characteristics with child granule references cannot be deleted.	NO_OBJECT_REEXPORT
COLLECTION	DELETE_PLATFORM_WITH_GR_REF	Platforms with child granule references cannot be deleted.	NO_OBJECT_REEXPORT
COLLECTION	DELETE_SENSOR_CHAR_WITH_GR_REF	Sensor characteristics with child granule references cannot be deleted.	NO_OBJECT_REEXPORT
COLLECTION	DELETE_SENSOR_WITH_GR_REF	Sensors with child granule references cannot be deleted.	NO_OBJECT_REEXPORT

Table 11.2-2. BMGT Error Configuration (3 of 7)

Error Type	Error Code	Description	Configured Response
JOB	DUPLICATE_SEQUENCE_NUMBER	Indicates that the sequence number is less than the last sequence number and it is therefore a duplicate.	DUPLICATE_PACKAGE
BROWSE	FILE_NAME_DUPLICATES	Browse image file names must be unique.	NO_OBJECT_REEXPORT
BROWSE	FILE_SIZE_INVALID	The file size supplied does not match the actual image file size.	NO_OBJECT_REEXPORT
FILE	FILE_TYPE_INDETERMINABLE	Ingest was unable to determine what kind of file this was.	REGENERATE_PACKAGE
FILE	FULL_SCHEMA	The file failed full schema validation. This is more restrictive than structural validation.	NO_OBJECT_REEXPORT
GRANULE	GRANULE_NOT_EXISTS	The granule indicated does not exist.	REEXPORT_OBJECT
COLLECTION	GRANULE_TEMPORAL_INVALID	Collection temporal information cannot be deleted or modified when it invalidates temporal information for existing granules.	NO_OBJECT_REEXPORT
BROWSE	IMAGE_FILE_NOT_SUPPLIED	browse image file is required but was not found or supplied.	NO_OBJECT_REEXPORT
FILE	INPUT_ADAPTER_DATE_TIME_INVALID	Ingest was unable to parse an input time in the file.	REGENERATE_PACKAGE
FILE	INPUT_ADAPTER_DTD_VALIDATION	The file failed DTD validation.	REGENERATE_PACKAGE
FILE	INPUT_ADAPTER_INVALID_XPATH	The input adapter encountered an invalid XPath in a partial metadata update file.	REGENERATE_PACKAGE
FILE	INPUT_ADAPTER_UNEXPECTED_CONTENT	The input adapter encountered something that was not expected.	REGENERATE_PACKAGE

Table 11.2-2. BMGT Error Configuration (4 of 7)

Error Type	Error Code	Description	Configured Response
COLLECTION	INSTRUMENT_CHARACTERISTIC_DUPLICATE_NAMES	The names of the instrument characteristics given must be unique.	NO_OBJECT_REEXPORT
GRANULE	INSTRUMENT_CHARACTERISTIC_INVALID_NAMES	The names of the instrument characteristics given must be a subset of their associated collections characteristics.	NO_OBJECT_REEXPORT
COLLECTION	INSTRUMENT_DUPLICATE_NAMES	The names of the instruments given must be unique.	NO_OBJECT_REEXPORT
GRANULE	INSTRUMENT_INVALID_NAMES	The names of the instruments given must be a subset of their associated collections instruments.	NO_OBJECT_REEXPORT
COLLECTION	LONG_NAME_VERSION_DUPLICATE_NAMES	The combination of long name and version id must be unique per provider.	NO_OBJECT_REEXPORT
JOB	MANIFEST_CORRUPT	Indicates that the manifest file was corrupt and not readable.	RETRY_PACKAGE
JOB	MANIFEST_MISSING	Indicates that the manifest file was not found in the package.	RETRY_PACKAGE
GRANULE	MEASURED_PARAMETER_DUPLICATE_NAMES	The names of the measured parameters given must be unique.	NO_OBJECT_REEXPORT
COLLECTION	MODIFY_GRANULE_SPATIAL_REP	Granule Spatial Representation cannot be modified.	NO_OBJECT_REEXPORT
COLLECTION	ONLINE_ACCESS_DUPLICATE_URLS	The URLs of the online access urls given must be unique.	NO_OBJECT_REEXPORT
GRANULE	ONLINE_ACCESS_URL_DUPLICATE_URLS	The names of the online access URLs given must be unique.	NO_OBJECT_REEXPORT

Table 11.2-2. BMGT Error Configuration (5 of 7)

Error Type	Error Code	Description	Configured Response
GRANULE	OPERATION_MODES_INVALID_NAMES	The names of the operation modes given must be a subset of their associated collections operation modes.	NO_OBJECT_REEXPORT
JOB	OPERATOR_DELETED	Indicates that the job was deleted by an operator and therefore did not complete processing.	REGENERATE_PACKAGE
BROWSE	OUT_OF_DATE	last update date of the browse image is prior to the existing records date.	NO_OBJECT_REEXPORT
COLLECTION	OUT_OF_DATE	The last update date of the collection is prior to the existing records date.	NO_OBJECT_REEXPORT_CONTACT_ECHO
GRANULE	OUT_OF_DATE	The last update date of the granule is prior to the existing records date.	NO_OBJECT_REEXPORT
JOB	PACKAGE_CORRUPT	Indicates that the package was corrupt and not readable at the zip level.	RETRY_PACKAGE
JOB	PACKAGE_FILES_EXTRA	Indicates that extra files were in the package that was not listed in the manifest.	RETRY_PACKAGE
JOB	PACKAGE_FILES_MISSING	Indicates that required files were missing from the package.	RETRY_PACKAGE
JOB	PACKAGE_TOO_LARGE	Indicates that the package contains too many files to be processed.	RETRY_PACKAGE_CONTACT_ECHO
GRANULE	PARTIAL_ADD_FIELD_NO_CHANGE	No changes were found in the referenced field for update.	NO_OBJECT_REEXPORT_CONTACT_ECHO
GRANULE	PARTIAL_ADD_UPDATE_TARGET_FIELD_INVALID	The referenced update target field does not exist for the specified element.	NO_OBJECT_REEXPORT_CONTACT_ECHO

Table 11.2-2. BMGT Error Configuration (6 of 7)

Error Type	Error Code	Description	Configured Response
GRANULE	PARTIAL_ADD_UPDATE_TARGET_INVALID	The referenced update target does not exist.	NO_OBJECT_REEXPORT
GRANULE	PARTIAL_ADD_UPDATE_TARGET_NO_CHANGE	No changes were found in the referenced update target.	NO_OBJECT_REEXPORT_CONTACT_ECHO
GRANULE	PARTIAL_DELETE_FIELD_INVALID	The referenced field for deletion does not exist.	NO_OBJECT_REEXPORT_CONTACT_ECHO
COLLECTION	PLATFORM_CHARACTERISTIC_DUPLICATE_NAMES	The names of the platform characteristics given must be unique.	NO_OBJECT_REEXPORT
COLLECTION	PLATFORM_DUPLICATE_NAMES	The names of the platforms given must be unique.	NO_OBJECT_REEXPORT
GRANULE	PLATFORM_INVALID_NAMES	The names of the platforms given must be a subset of their associated collections platforms by Name.	NO_OBJECT_REEXPORT
ITEM	SCHEMA_VALIDATION_ERROR	This is returned whenever the item failed schema validation.	NO_OBJECT_REEXPORT_CONTACT_ECHO
COLLECTION	SENSOR_CHARACTERISTIC_DUPLICATE_NAMES	The names of the sensor characteristics given must be unique.	NO_OBJECT_REEXPORT
GRANULE	SENSOR_CHARACTERISTIC_INVALID_NAMES	The names of the sensor characteristics given must be a subset of their associated collections characteristics.	NO_OBJECT_REEXPORT
COLLECTION	SENSOR_DUPLICATE_NAMES	The names of the sensors given must be unique.	NO_OBJECT_REEXPORT
GRANULE	SENSOR_INVALID_NAMES	The names of the sensors given must be a subset of their associated collections sensors.	NO_OBJECT_REEXPORT

Table 11.2-2. BMGT Error Configuration (7 of 7)

Error Type	Error Code	Description	Configured Response
COLLECTION	SHORT_NAME_VERSION_DUPLICATE_NAMES	The combination of short name and version id must be unique per provider.	NO_OBJECT_REEXPORT
COLLECTION	SPATIAL_INVALID	The collections spatial region is invalid	NO_OBJECT_REEXPORT
GRANULE	SPATIAL_INVALID	The granules spatial region is invalid.	NO_OBJECT_REEXPORT
GRANULE	SPATIAL_REPRESENTATION_INVALID	The granule spatial representation must match the granule spatial representation specified in the parent collection	NO_OBJECT_REEXPORT
FILE	STRUCTURAL_SCHEMA	The file failed structural schema validation. This checks that the elements that appear are correctly named and in the right order. It ignores type validation.	NO_OBJECT_REEXPORT
GRANULE	TEMPORAL_INVALID_DATE_RANGE	The temporal given must be in the range of its collections temporal.	NO_OBJECT_REEXPORT

11.2.7.1 Reviewing Error Tuning Configuration

-
- 1 Login to the BMGT GUI as the system administrator.
 - The BMGT **GUI Home** page is displayed.
 - 2 Click on the **Configuration** link from the navigation panel.
 - 3 Select **Error Tuning** from the navigation panel.

The Error Tuning page (see Figure 11.2-12) is displayed



Thu Dec 4 2008 15:36:35

Error Tuning			
BMGT Error Configurations			
Error Type	Error Code	Description	Configured Response
COLLECTION	ADDITIONAL_ATTRIBUTE_DUPLICATE_NAMES	The names of the additional attributes given must be unique.	NO_OBJECT_REEXPORT
GRANULE	ADDITIONAL_ATTRIBUTE_INVALID_NAMES	The additional attributes given must be a subset of their associated collection's Additional Attributes by Name.	NO_OBJECT_REEXPORT
COLLECTION	ALG_PACKAGE_DUPLICATE_NAMES	The names of the algorithm packages given must be unique.	NO_OBJECT_REEXPORT
COLLECTION	ASSOCIATED_DIF_DUPLICATE_NAMES	The names of the associated DIFs given must be unique.	NO_OBJECT_REEXPORT
BROWSE	BROWSE_NOT_EXISTS	The browse image indicated does not exist.	REEXPORT_OBJECT
COLLECTION	CAMPAIGN_DUPLICATE_NAMES	The short names of the campaigns given must be unique.	NO_OBJECT_REEXPORT
GRANULE	CAMPAIGN_DUPLICATE_NAMES	The names of the campaigns given must be unique.	NO_OBJECT_REEXPORT
GRANULE	CAMPAIGN_INVALID_NAMES	The campaigns given must be a subset of their associated collection's campaigns by Name.	NO_OBJECT_REEXPORT
COLLECTION	COLLECTION_ASSOCIATION_DUPLICATE_NAMES	The names of the collection associations given must be unique.	NO_OBJECT_REEXPORT
COLLECTION	COLLECTION_NOT_EXISTS	The collection indicated does not exist.	IGNORE_ERROR
GRANULE	COLLECTION_REF_INVALID	The referenced parent collection does not exist.	NO_OBJECT_REEXPORT
COLLECTION	CONTACT_ROLE_DUPLICATE_NAMES	The names of the contact roles given must be unique.	NO_OBJECT_REEXPORT
COLLECTION	CSDT_DESCRIPTION_DUPLICATE_NAMES	The names of the CSDT descriptions given must be unique.	NO_OBJECT_REEXPORT
JOB	DATA_FILE_INVALID	An input file in the job was invalid. This only applies to BMGT providers.	REGENERATE_PACKAGE
COLLECTION	DELETE_ADDL_ATTR_WITH_GR_REF	Additional attributes with child granule references cannot be deleted.	NO_OBJECT_REEXPORT

Figure 11.2-12. Error Tuning Page

- 4 Since some of the responses are meant for specific scenarios, and would not necessarily work in others, this configuration is not meant to be changed by DAAC staff. The following responses can be used by BMGT to handle an error from ECHO:
- **NO_OBJECT_REEXPORT:**
This is the default response, and is the response used for almost all errors. An error mapped to this response will always cause an email to be sent to the email address (set in 'NOTIFICATION_EMAIL_ADDR' in the Global Tuning Page), and the cycle for which the Ingest Summary Report was received will have its status set to "COMPLETE_WITH_ERRORS". The email will detail all errors encountered in the current Ingest Summary Report.
 - **DUPLICATE_PACKAGE:**
Identical to NO_OBJECT_REEXPORT.

- **NO_OBJECT_REEXPORT_CONTACT_ECHO:**
This is the same as NO_OBJECT_REEXPORT except that the email will contain a message recommending that the DAAC operator contact ECHO to diagnose the problem.
 - **REEXPORT_OBJECT:**
BMGT will determine whether the error can be handled by simply reexporting a science or browse granule to ECHO. If this is the case, it will add the relevant granule(s) to the BMGT ReExport Queue, set the cycle status to "COMPLETE_WITH_WARNINGS", and send an email to the configured notification address. The contents of the ReExport Queue can then be re-exported to ECHO manually by the DAAC operator. Otherwise, the error will either be ignored, or will be handled by the NO_OBJECT_REEXPORT policy.
 - **IGNORE_COMPLETELY:**
BMGT will simply ignore an error mapped to this policy, and the cycle will remain as if the summary report contained no errors.
 - **IGNORE_ERROR:**
BMGT will determine whether the error can be ignored based on the type of error and the state of the affected granules in ECS. If the error can be ignored, the cycle status will be the same as if the summary report contained no errors. If not, the error will be handled by the NO_OBJECT_REEXPORT policy.
 - **IGNORE_ERROR_CONTACT_ECHO:**
Same as IGNORE_ERROR, except the email, if any, contains a message recommending that the DAAC staff contact ECHO to diagnose the problem.
 - **RETRY_PACKAGE:**
Causes the package to be retransmitted to ECHO, and an email to be sent to the configured notification address.
 - **RETRY_PACKAGE_CONTACT_ECHO:**
Same as RETRY_PACKAGE, except the email contains a message recommending that the DAAC staff contact ECHO to diagnose the problem.
 - **REGENERATE_PACKAGE:**
Causes the metadata products to be regenerated, packaged, and transmitted to ECHO, and an email to be sent to the configured email address.
 - **REGENERATE_PACKAGE_CONTACT_ECHO:**
Same as REGENERATE_PACKAGE, except the email contains a message recommending that the DAAC staff contact ECHO to diagnose the problem.
-

11.3 BMGT Manual Mode

The BMGT manual preprocessor provides an interface through which the operator can initiate an export of ECS metadata through BMGT. Unlike a normal ‘AUTOMATIC’ instantiation of BMGT, which exports metadata in response to changes, or ‘events’, a ‘MANUAL’ BMGT run will export the current metadata for an operator provided set of granules and collections. An operator is able to specify which metadata products are desired, rather than retrieving all of them. An operator is also able to use the Manual Preprocessor to re-run a previous AUTOMATIC export that has failed. Once the Manual Preprocessor is run, the desired products will be created by the BMGT Generator server. These products can be exported to ECHO and/or ingested into ECS, or neither of these depending on what that operator specifies. The Manual Preprocessor is meant primarily for reconciling ECS and ECHO metadata or for other situations where the normal, automatic export of BMGT metadata is not sufficient. The Manual Preprocessor does not prevent the Operator from exporting duplicate metadata to ECHO. The Operator is responsible for specifying options carefully to minimize the risk and for consulting with ECHO when exporting data outside of the normal sequence.

Table 11.3-1 contains a listing/description of the arguments used by the Manual Export Script.

Table 11.3-1. Manual Export Command Line Arguments (1 of 4)

Option	Notes	Description
GENERAL OPTIONS		
--help -h	Overrides all other options	Display a detailed help page.
--mode <MODE>	Required	Run in ECS mode <MODE>.
PRODUCT OPTIONS		
--metg	Requires one or more SELECTION CRITERIA options	Generate an ECSMETG(granule metadata) product. URL and visibility products will also be generated as well where appropriate (ie. --url is implied and does not need to be specified explicitly).
--metv	Requires --noexport	Generate an ECSMETV(valids) product.
--metc	requires --collections or --collectionfile	Generate an ECSMETC(collection metadata) product.

Table 11.3-1. Manual Export Command Line Arguments (2 of 4)

--bbr	requires one or more SELECTION CRITERIA options	Generate an ECSBBR(browse) product. The BBR product generated will contain any browse granules explicitly specified by the SELECTION CRITERIA options, as well as browse files associated with any granules specified by those options. Browse linkages to science files will also be generated. If a METG is being generated for an associated science granule, it will include the linkage, otherwise the linkage will be recorded in a METU file.
--url	requires one or more SELECTION CRITERIA options	Generate a BULKURL(DataPool public URL) product.
Option	Notes	Description
RUN TYPE		
--delete	requires one or more SELECTION CRITERIA options	Generate deletion metadata. If this option is omitted, insertion metadata will be generated. Granules and collections being processed in a deletion cycle must be either physically or logically deleted. Similarly, granules and collections specified for a normal insert cycle must currently exist in ECS. If a granule is physically deleted from the archive, it must be explicitly specified (with the --granules or --granulefile option) by geoid rather than dbid.
SELECTION CRITERIA		
--collections -c <shortname.versionID>[,<shortname.versionID>,...]		Generate metadata for collection <shortname.versionID>. Multiple collections can be specified, separated by a comma and no space.
--collectionfile --cf <filename>		Same as --collections , but specifies a file which contains one or more collections. The collections can be on one or multiple lines and must be separated either by newlines or whitespace.
--granules -g <ID>[,<ID>,...]		Where <ID> is either a dbid or a geoid in the form: <SC/BR>:<SHORTNAME>.<VERSIONID>:<DBID> Generate metadata for the listed granules. Multiple granules can be specified, separated by a comma and no space.
--granulefile --gf <filename>		Same as --granules , but specifies a file which contains one or more dbids and/or geoids. The ids can be on one or more lines and must be separated either by newlines or whitespace.
--group -p <groupName>[,<groupName>,...]		Generate metadata for the collections and/or granules in the specified group(s).
--groupfile --pf <filename>		Generate metadata for the collections and/or granules in the group(s) listed in the specified file.

Table 11.3-1. Manual Export Command Line Arguments (3 of 4)

--starttime --st <datetime>	requires -- collectionfile or -- collections	Defines the starting time (inclusive) of a datetime range for which to generate granule metadata. This parameter is used only if --collection , or --collectionfile is specified. It will be used to select a subset of granules from the specified collection(s) for which metadata will be generated. <datetime> should be in the format "YYYY-MM-DD HH:MM:SS" [quotes are required].
--endtime --et <datetime>	requires -- collectionfile or -- collections	Defines the end time (non-inclusive) of a datetime range for which to generate granule metadata. This parameter is used only if --collection , or --collectionfile is specified. It will be used to select a subset of granules from the specified collection(s) for which metadata will be generated. <datetime> should be in the format "YYYY-MM-DD HH:MM:SS" [quotes are required].
Option	Notes	Description
OUTPUT OPTIONS		
--noexport --ne	implies -- nosequence	Do not export the generated package to ECHO, and do not assign it a sequence number.
--noarchive --na		Do not archive the generated package into ECS.
--nosequence --ns		Generated package should not be assigned a sequence number. This is automatically implied when --noexport is specified.
--daacstring -d		A string up to 40 characters long and consisting only of valid Unix file name characters (excluding period) to be included as part of the file names in the metadata export package created by a manual export operation. For example, using " --daacstring AnnMiltEchoSmallMetgEchoTest " will produce a package named: EDFManualExport.AnnMiltEchoSmallMetgEchoTest.200800710.200800710.2008007110752.000717.zip
CONCURRENCY OPTIONS		
--excludeAuto -x		Prevent the execution of any Automatic export cycles concurrently with this manual cycle.
--noprompt -np		If there are other export cycles currently executing, instead of asking user what to do, just exit with an error.
--retry -y		If there are other export cycles currently executing, instead of asking user what to do, wait 10 seconds, and check again. Repeat until no currently executing cycles are found. Implies noprompt. Useful when calling manual processor from a script

Table 11.3-1. Manual Export Command Line Arguments (4 of 4)

--force -f		Ignore currently executing export cycles and run regardless. Implies noprompt. Useful when calling manual processor from a script
ERROR RECOVERY OPTIONS		
--regenerate -r <package ID >	incompatible with --excludeAuto and --delete . Overrides all other options besides OUTPUT OPTIONS	Attempt to regenerate the AUTOMATIC package specified by the packageId <package ID>. Must specify --noexport if package to be regenerated is in COMPLETE state. NOTE: packageId must be given, NOT cycleId .
--report -t		Generate a report of the contents of the reExport queue which are being reexported.
--corrective -o		Initiate a corrective export containing any granules which are in the reExport Queue. Incompatible with all options except --mode , --ns , --na .
--outdir -o <directory>	requires --report	Write the re-export queue report to a file in the given directory. The file will be clearly labeled as a BMGT re-export queue report with the current time as part of its name.

11.3.1 BMGT Manual Mode

- 1 Log in at the machine where the Bulk Metadata Generation Tool (BMGT) manual script is installed (e.g., e4oml01 and n4oml01).
- 2 Type **cd /usr/ecs/<MODE>/CUSTOM/utilities** then press **Return/Enter**.
- 3 To run the BMGT manually, at the UNIX prompt enter (as applicable):

EcBmBMGTManualStart.pl

- 4 Select the desired command arguments using the table above.
 - Example 1: Run the Manual script to generate Browse and Granule Information by collection and time and forward to ECHO.

Enter the following:

EcBmBMGTManualStart.pl

-mode<MODE>

-metg

-bbr

-cf<file>

-starttime<YYYY-MM-DD HH:MM:SS>

-endtime<YYYY-MM-DD HH:MM:SS>

-gr<file>

-e

- Example 2: Run the Manual script to generate Browse inserts

Enter the following:

EcBmBMGTManualStart.pl

-mode<MODE>

-bbr

-url

-gf<file>

11.4 BMGT ReExport Queue Utility

When processing Ingest Summary Reports from ECHO, the BMGT system will handle some reported errors by enqueueing corrective actions on the BMGT ReExport Queue. DAAC Staff can then remedy the reported error by running the BMGT Manual Start Script with the **--corrective** option. The **--corrective** option processes any corrective actions on the ReExport Queue, and exports corresponding metadata to ECHO.

In addition to processing the ReExport Queue for corrective export to ECHO, DAAC staff may also view and manage the ReExport Queue with the BMGT ReExport Queue Utility. The ReExport Queue Utility offers two options for viewing the queued actions; report, which prints the queue contents as a list of actions, and summary, which prints a statistical summary of the queued actions grouped by collection/group/itemtype (science, browse, or collection). The queue report or summary is printed to a file specified by the user. The utility also offers the ability to delete one or more actions from the queue, by providing dbIDs or geoids on the command line or in a file. Report output can be filtered by collection and/or group, which can be specified on the command line, or in a file.

Table 11.4-1 contains a listing/description of the ReExport Queue Utility Commands

Table 11.4-1. ReExport Queue Utility Commands

Command Name	Comments
--report -r	Print the current contents of the re-export queue, sorted by original cycle ID, newest first, then by collection, then by item type.
--stat -s	Print a statistical summary of the re-export queue contents. Items are grouped by collection plus group plus item type plus ECHO error response. Each group is accompanied by the count of the items within it.
--delete -d	Delete items from the re-export queue by item ID. delete requires at least one of --ids or --idfile , but will accept more than one.

Table 11.4-2 contains a listing/description of the ReExport Queue Utility Options

Table 11.4-2. ReExport Queue Utility Options

Parameter Name	Comments
--mode -m <MODE>	Run in ECS mode <MODE>. Mode must be provided, either by this option, or by itself as the first argument to the utility.
--help -h	Display a detailed help page.
--outdir -o <dirname>	The directory in which to write the report or summary file. Each file will be automatically given a name that identifies it and the time the report or summary was created. Only one output directory may be specified at a time. If no directory is specified, output will be to the terminal.
--collection -c <ShortName.VersionID>	The collection for which a report should be generated. More than one collection option may be given, resulting in all items from the re-export queue in any of the named collections being included in the report. collection may be combined with group. Only valid for "report".
--group -c <groupName>	The group for which a report may be generated. More than one group option may be given, resulting in all items from the re-export queue in any of the named groups being included in the report. group may be combined with collection. Only valid for "report".
--ids -i <ID>[,<ID>,...]	A list of IDs of granules to be deleted from the re-export queue. IDs must be separated by commas with no space between them, or they will be seen as separate, unrecognized arguments. IDs may be granule IDs (only digits) or geoids (e.g., SC:MOD14.005:12345). More than one ids switch may be given. ids may be combined with idfile.
--idfile -f <filename>	A file containing a list of granule IDs or geoids, separated by whitespace or commas. More than one idfile may be given. idfile may be combined with ids.

11.4.1 BMGT ReExport Queue Utility

- 1 Log in at the machine where the Bulk Metadata Generation Tool (BMGT) ReExport Queue script is installed (e.g., e4oml01 and n4oml01).
 - 2 Type `cd /usr/ecs/<MODE>/CUSTOM/utilities` then press **Return/Enter**.
 - 3 To run the BMGT manually, at the UNIX prompt enter (as applicable):
EcBmBMGTReExportQueue.pl <MODE> [COMMAND][OPTIONS]
[COMMAND] is one of the commands listed in table 11.4-1 above and [OPTIONS] is zero or more of the options listed in table 11.4-2 above.
-

11.5 BMGT Automatic Mode

The BMGT Automatic Preprocessor is used by DAAC Operations Staff to export changes to the holdings of the ECS inventory at a regular interval. The DAAC will choose and configure a cycle length, which defines the time period for which metadata changes are aggregated into a single package for export to ECHO. The time period can be any whole number of hours between 1 and 24 which splits a day into a whole number of parts (e.g. 6 hours would be valid, as 4 intervals would add up to an entire day. 5 hours would not). The Preprocessor should be run at least once per export interval, and will cause the metadata changes for any preceding un-exported interval(s) to be generated and exported to ECHO. Extraneous runs of the preprocessor will have no effect. The first run of the preprocessor for a particular day will populate the export cycles for the entire day. Since the preprocessor can be run with basically no operator interaction, it can be added as a cron job such that it will run automatically at a set interval. For instance, setting a cron to run the automatic preprocessor every hour at 5 minutes past the hour would ensure that regardless of the export cycle length being used, an export package would begin generation 5 minutes after each cycle ends. On hours where a cycle is not ending, the preprocessor would simply return, with no effect.

11.5.1 BMGT Automatic Mode

- 1 Log in at the machine where the Bulk Metadata Generation Tool (BMGT) is installed (e.g., e4oml01 and n4oml01).
- 2 At the UNIX prompt, enter:
crontab -e
A vi editor window will appear. Use the arrow keys to scroll through the file and verify that there is not already an entry for the automatic preprocessor in the desired mode.
- 3 If there is not already an entry for the desired mode:
 - Type **'o'** to open a new line.
 - On this line type: `<min> <hr1>,<hr2>,...<hrn> * * * (/bin/csh -c "cd /usr/ecs/<MODE>/CUSTOM/utilities ; /usr/ecs/<MODE>/CUSTOM/utilities/EcBmBMGTAutoStart <MODE>")`
 - Where **<min>** is the number of minutes after the hour (0-59) to run at and **<hr1...n>** are the hours (0-23) during which the cron should run.

- Hit **escape** and then type **':wq'** to save the file.
- 4** If there is already an entry for the desired mode, but the frequency of the cron needs to be changed:
- Determine the correct values for the new frequency in the format:
 - **"minute hour day month dayofweek command"**
 - Use the arrow keys to navigate to the value that you wish to change.
 - With the cursor over the beginning of the value to change, type **'cw'** followed by the new value to change the value.
 - Hit **escape**.
 - Repeat the same for all values to be changed.
 - Type **':wq'** to save the file.
- 5** If there is already an entry for the desired mode, but you would like to disable it:
- Use the arrow keys to navigate to the line where the entry is located.
 - Type **'I'** to insert at the beginning of the line.
 - Type **'#'** to comment out the line.
 - Hit **escape** and then type **':wq'** to save the file.
- 6** If there is already an entry for the desired mode, but it is disabled by a **'#'** at the beginning of the line:
- Use the arrow keys to navigate to the line where the entry is.
 - Type **'^x'** to remove the **'#'** from the beginning of the line.
 - Hit **escape** and then type **':wq'** to save the file.
-

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12. Quality Assurance

The Data Pool subsystem update utility for managing Quality Assurance (QA) metadata, the **QA Update Utility (QAUU)**, consolidates the QAMUT utility from the SDSRV subsystem into a single utility. This tool receives an input file which contains header information indicating the format of the data in the file and the flags that are being updated.

12.1 Using the QA Update Tool

The QA Update Utility is an operational support tool used for updating the values of the Quality Assurance (QA) flags in the inventory metadata. The QA Update Utility sets QA values for data granules containing one or more measured parameters after they have been assessed by Science Computing Facility (SCF) or DAAC staff to determine their quality.

Data granules have Operational and Science QA flags. Operational QA flags can have the following values:

- Passed.
- Failed.
- Being Investigated.
- Not Investigated.
- Inferred Passed.
- Inferred Failed.
- Suspect.

In addition to these Operational QA flag values, Science QA flags can also have the following value:

- Hold

Table 12.1-1 provides an Activity Checklist for Using the QA Update Tool.

Table 12.1-1. Using the QA Update Tool - Activity Checklist

Order	Role	Task	Section	Complete?
1	System Administrator/ Database Administrator	Configure the QA Update Tool	(P) 12.1.1.1	
2	System Administrator/ Database Administrator	Configure the QA Update Email script	(P) 12.1.2.1	
3	Production Monitor	Prepare QA Update Request File	(P) 12.1.4.1	
4	Production Monitor	Update QA Flags Using QA Update Utility	(P) 12.1.5.1	

During one run, the QA Update Utility can update the metadata QA flags for multiple granules. In fact, the strength of the tool derives from its ability to update batches of granules at a time. There is a configurable limit on the number of granules that may be specified for a run (MAX_NUM_GRANULES in Table 12.1-2). However, this limit may be overridden by the operator. In fact, depending on how frequently the originators of requests for QA flag updates submit their requests, the DAAC may receive requests for updates of thousands of granules at a time. However, this creates the potential for extreme database loading (e.g., requirements for temporary storage of granule information). Specific practical limits may depend on individual site capacities and requirements, and the DAAC may need to work with the originators of requests to formulate requests of appropriate size to minimize QA Update Utility processing times and associated database impacts. If a request is for significantly more than that, consideration should be given to breaking it up into multiple requests.

The granules with QA flags to be updated using the QA Update Utility may each contain several different measured parameters. The tool can update the QA flag associated with each parameter for each granule listed in a metadata update request. Updates for different measured parameters related to a particular granule may be grouped contiguously on separate lines in the request so that all the updates for the granule are accomplished at the same time.

The input needed to run the QA Update Utility is a uniformly formatted update request. Each update request contains an e-mail header (including the requester's return address) and an attachment request file containing a list of the granules to be updated, along with the new QA flag values for the specified parameters.

Requests sent via e-mail are automatically placed in the input request directory by the QA Update email script. Requests not sent by e-mail must be placed in the input request directory.

After the data has been copied to this input request directory, the metadata can be updated by using QA Update Utility.

The QA Update Utility retrieves a batch of granules to update from the processing table and is updated within the XML Archive. When all files listed in the batch are updated, the processing table is updated to record the work as completed. Additionally, the updates are recorded in a history file with the original and new values. When all batches are completed, the updates are recorded for BMGT to export. Finally, the files in the Data Pool file system are replaced by the newly updated files in the XML Archive. The QA Update Utility is accessible on the x4dpl01 server.

12.1.1 Configure QA Update Utility

The **EcDsAmQaUpdateUtility.properties** contains the QA Update configuration parameters and is used by the System Administrator/Database Administrator to manage the configuration of the QA Update Utility. The site installer or Database Administrator is responsible for maintaining this file. Table 12.1-2 contains a list and description of the QA Update Utility Configuration Parameters.

Table 12.1-2. Configuration File Parameters for QA Update Utility (1 of 2)

Parameter Name	Description
SYBASE_SQL_HOST	The host for the Inventory and Data Pool databases
SYBASE_SQL_SERVER	The name of the Sybase server for the Inventory and Data Pool databases
SYBASE_JDBC_DRIVER_CLASS	The java class used for connecting the QAUU java application to Sybase
SYB_DBNAME	The name of the Inventory database
SYB_DPL_DBNAME	The name of the Data Pool database
SYB_PORT	The port number used to connect to the Inventory and Data Pool databases
SYB_USER	The username used to connect to and perform queries for the Inventory and Data Pool databases
PGM_ID	The ECS Program ID for the QAUU user (SYB_USER)
DB_NUM_RETRIES	The number of times to retry failed DB operations
DB_SLEEP_SEC	The number of seconds between DB operation retries
EMAIL_SERVER_HOST	Host name where email server runs
EMAIL_SMTP_USER	Email SMTP user name
EMAIL_QAUU_FROM_ADDRESS	Email notification sender address
FILE_NUM_RETRIES	The number of times to retry failed file operations
FILE_SLEEP_SEC	The number of seconds between file operation retries
QA_REQUEST_DIR	Path of directory containing QA update requests
QA_ERROR_REQUEST_DIR	Path of directory containing QA update requests that have failed.
QA_COMPLETED_REQUEST_DIR	Path of directory containing successfully completed QA update requests
QA_TEMP_DIR	Path of directory containing temporary files
QA_HISTORY_DIR	Path of directory containing QA update history files
DAAC_EMAIL_ADDRESSES	List of valid DAAC email notification addresses
<SCFSite>_EMAIL_FROM_ADDRESSES	List of valid email notification from addresses for a <SCFSite>
<SCFSite>_EMAIL_REPLY_ADDRESSES	List of valid email notification reply addresses for a <SCFSite>
<SCFSite>_NOTIFICATION_ON_SUCCESS	Flag indicating (if = "Y") that email notification should be sent upon successfully processing QA update requests for a <SCFSite> or for requests that fail. If = 'N', email should only be sent for requests that fail.
VALID_SCIENCE_QA_FLAGS	List of valid science QA flag values
VALID_OPERATIONAL_QA_FLAGS	List of valid operational QA flag values

Table 12.1-2. Configuration File Parameters for QA Update Utility (2 of 2)

Parameter Name	Description
NUM_XML_THREADS	The number of threads to be used. One thread will operate upon an UPDATE_BATCH_SIZE of QA updates.
MAX_NUM_GRANULES	The maximum number of granules that can be updated per run
UPDATE_BATCH_SIZE	The number of QA updates to be performed at a time.
XML_ARCHIVE_DIRECTORY	Pathname of XML Archive file system
SOCKS_PROXY_HOST	SOCKS proxy hostname
SOCKS_PROXY_PORT	SOCKS proxy port
BCP_EXEC_PATH	Path to unix bcp executable
SHELL_PATH	Path to unix sh shell needed to perform unix commands
application.name	Name of this application
log.operations.level	Level of logging desired in operational log: NONE, INFORMATION, VERBOSE or XVERBOSE
log.debug.level	Level of logging desired in debug log: NONE, INFORMATION, VERBOSE or XVERBOSE
log.performance.level	Level of logging desired in performance log: NONE, INFORMATION, VERBOSE or XVERBOSE
log.overwrite	If true, log file will be overwritten for each run
log.threshold	Size of log files before new ones are created.
log.rotation.number	Number of log files that will be rotated through.

12.1.1.1 Configure the QA Update Utility

- 1 Log into the host for the QA Update Utility (e.g., x4dpl01).
- 2 Change to the directory for configuration files, and then press the **Return/Enter** key.
cd /usr/ecs/<MODE>/CUSTOM/cfg
 - The working directory is changed to /usr/ecs/<MODE>/CUSTOM/cfg.
- 3 Type **ls** and then press the **Return/Enter** key.
 - Configuration files are displayed.
- 4 Find and highlight the **EcDsAmQaUpdateUtility.properties** file.
- 5 To start the vi editor and specify **EcDsAmQaUpdateUtility.properties** as the name of the file to be updated, type the following:
vi EcDsAmQaUpdateUtility.properties
 - A new file is opened for editing and the cursor is displayed on the first character at the upper left corner of the file.
 - **Note:** This procedure assumes use of the vi editor. Other editors may be used.

- 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 Enter/Update data to specify how to connect to the Sybase database and provide necessary DAAC-specific configuration information (see Table 12.1-2).
 - 8 To leave the insert mode and return to the command mode, press the **Esc** key.
 - The cursor moves one character to the left and the **vi** editor is in the command mode.
 - 9 Type **ZZ** to save the file and exit the **vi** editor.
-

12.1.2 Configure QA Email Script

A perl script allows remote sites to submit update request input files via email as attachments. The script (EcDsQAUUEmailScript.pl) parses the request, gets the attached request file and moves it to the QAUU request directory. It will reside on the central mail servers while the rest of the QAUU will reside on other boxes. The directories containing the email script output (/usr/ecs/<mode>/CUSTOM/data/DSS/QAUU/ and subdirectories) will be created on the boxes holding the QAUU and remote mounted on the central mail servers. Email aliases need to be set up in the /etc/aliases file on the central mail servers to direct email QAUU update request to the email script. One email alias is required for each mode supporting QAUU.

12.1.2.1 Configure QA Email Aliases

- 1 Log into the host for the QA Update Utility (e.g., x4dpl01).
- 2 Change to the directory for utilities, and then press the **Return/Enter** key.
cd /usr/ecs/<MODE>/CUSTOM/utilities
- 3 Type **ls** and then press the **Return/Enter** key.
- 4 Set up email aliases on the central mail servers (x4eil01) by entering the following:
QAUU_<MODE>: “| /usr/ecs/<MODE>/CUSTOM/utilities/EcDsQAUUEmailScript.pl”

Examples:

QAUU_<OPS>: “| /usr/ecs/<MODE>/CUSTOM/utilities/EcDsQAUUEmailScript.pl”

QAUU_<TS1>: “| /usr/ecs/<MODE>/CUSTOM/utilities/EcDsQAUUEmailScript.pl”

QAUU_<TS2>: “| /usr/ecs/<MODE>/CUSTOM/utilities/EcDsQAUUEmailScript.pl”

12.1.3 Input File Name Format

The input file name must adhere to the following:

<MODE>_<Site>_QAUPDATE<description>.<YYYY><MM><DD><HH><MM><SS>

The following example shows the filename from site LDOPE for OPS mode at 12:20:30 on Feb. 29, 2008:

OPS_LDOPE_QAUPDATE.20080229122030

Note: All the files in the request directory will be processed alphabetically by file name and stored in the Inventory Database. The timestamp in the filenames guarantee that all the requests coming from the same site will be processed in the right order.

12.1.4 Request Format

The body of the request starts with the statement "begin QAMetadataUpdate <Science or Operational> <LGID, GranuleUR or ESDT>" and ends with an "end QAMetadataUpdate" statement. Each request can be based on 3 possible origins:

- **LGID**
- **GranuleUR**
- **ESDT with temporal range.**

In between the "begin QAMetadataUpdate" and "end QAMetadataUpdate" statements is at least one parameter/QA value statement with the following components (which must be separated by tabs):

- Short Name
- Version ID
- LGID, GranuleUR, or Range Beginning Date <tab> Range Ending date, depending on whether "LGID", "GranuleUR", or "ESDT" is specified, respectively, on the "begin" statement
- Measured Parameter Name or "ALL"
- QA Flag Value
- QA Flag Explanation Value

This information must be properly arranged and placed in the Inventory database (a designated directory or file). Figures 12.1-1 through Figure 12.1-3 contain examples the different requests.

```

From LaRC
begin QAMetadataUpdate Operational ESDT
MOD13A1  1Jul 18 2000  Jul 27 2000  ALL  Being Investigated  ESDT Update for Perf
MOD13A1  1  Jun 9 2000Jul 11 2000  ALL  Being Investigated  ESDT Update for Perf
MOD13A1  1  Oct 2 2000Oct 15 2000  ALL  Being Investigated  ESDT Update for Perf
end QAMetadataUpdate
    
```

Figure 12.1-1. Sample Metadata QA Update Request ESDT with Temporal Range

```

From LaRC
begin QAMetadataUpdate Science LGID
AIRHASCI 77 AIRHASCI.A2001181.2359.077.2003129185118.hdf RadianceCounts
Passed LGID EDC Syn IV
AIRHASCI 77 AIRHASCI.A2001181.2359.077.2003133150736.hdf RadianceCounts
Passed LGID EDC Syn IV
AIRHASCI 77 AIRHASCI.A2001181.2359.077.2003134164830.hdf RadianceCounts
Passed LGID EDC Syn IV
AIRHASCI 77 AIRHASCI.A2001181.2359.077.2003141142634.hdf RadianceCounts
Passed LGID EDC Syn IV
AIRHASCI 77 AIRHASCI.A2001181.2359.077.2003147145008.hdf RadianceCounts
Passed LGID EDC Syn IV
AIRHASCI 77 AIRHASCI.A2001181.2359.077.2003148174646.hdf RadianceCounts
Passed LGID EDC Syn IV
AIRHASCI 77 AIRHASCI.A2001181.2359.077.2003149211207.hdf RadianceCounts
Passed LGID EDC Syn IV
AIRHASCI 77 AIRHASCI.A2001181.2359.077.2003150132315.hdf RadianceCounts
Passed LGID EDC Syn IV
end QAMetadataUpdate

```

Figure 12.1-2. Sample Metadata QA Update Request with LGID

```

From LaRC
begin QAMetadataUpdate Science GranuleUR
AST_L1BUR:10:DsShESDTUR:UR:15:DsShSciServerUR:13:[PVC:DSSDSRV]:24:SC:AST_L1B.001:2007640312 ALL
Failed SynergyIV QA 2 Update
end QAMetadataUpdate

```

Figure 12.1-3. Sample Metadata QA Update Request with GranuleUR

12.1.4.1 Prepare QA Update Request File

- 1 Log into the host for the **QA Update Request File** (e.g., x4dpl01).
 - 2 To change to the directory for **QA Update Request File**, type the following and then press the **Return/Enter** key:
cd /usr/ecs/<MODE>/CUSTOM/data/DSS/QAUU/QAUURequest
 - The working directory is changed to
cd/usr/ecs/<MODE>/CUSTOM/data/DSS/QAUU/QAUURequest
 - 3 To start the **vi** editor and specify **OPS_<SITE> QAUPDATE.<yyyymmddhrminsec>** as the name of the Request file to be used by QA Update Utility, type the command:
vi OPS_<SITE> QAUPDATE.< yyyymmddhrminsec >
 - The Request file is opened for editing and the cursor is displayed on the first character at the upper left corner of the file.
 - **Note:** This procedure assumes use of the **vi** editor. Other editors may be used.
 - 4 Type **i** to put the **vi** editor into the insert mode.
 - The **vi** editor is in the insert mode, but no feedback is provided.
 - 5 Enter request data following the proper format.
 - 6 To leave the insert mode and return to the command mode, press the Esc key.
 - The cursor moves one character to the left and the **vi** editor is in the command mode.
 - 7 Type **ZZ** to save the file and exit the **vi** editor.
-

12.1.5 Update QA Metadata Flags Using QA Update Utility

Access to the QA Update Utility must be gained through the use of UNIX commands. The QAUU is started by executing the following:

```
EcAmQAUUStart modename [ -file <filename>] [ -noprompt] [-noExitonError][-recoverOnly] [-abortRecovery] [ -skipRecovery ] [ -recoverInvestigated]
```

All parameters, except for **modename**, are optional.

- **modename:** The mode to run in
- **-file <filename>:** The name of the request file containing the QA updates to be applied. If omitted, all request files in the configured request directory are processed.
- **-noprompt:** if specified, the utility will not prompt the user for confirmations
- **-noExitonError:** if specified, the utility will not exit on the first error. This allows the operator to determine all errors that may occur during processing.
- **-recovery options:** These are all mutually exclusive; only one may be specified. Note that if none of these options are specified, the utility will recover, if necessary, and process new requests:
 - **-recoverOnly:** . recover and do NOT process new requests (assume we do NOT recover failures flagged as investigating)
 - **-abortRecovery:** delete all failures in working table and process new requests

- **-skipRecovery:** flag (don't process) failures for investigation (InvestigateFlag = 'Y') and process new requests
- **-recoverInvestigated:** set InvestigateFlag = null, recover (including formally investigated failures) and process new requests

The process of updating QA metadata flags using the QA Update Utility start-up script starts with the following assumptions:

- The applicable servers are running.
- The DAAC operator has logged in to the system.
- A request for metadata update has been received in an acceptable format.
- The update request has been saved with the appropriate file name **<MODE>_<Site>_QAUPDATE<description>.<year><month><day><hour><minute><second>** (i.e., **OPS_<SITE>_QAUPDATE.<yyyymmddhrminsec**) and placed in the **/usr/ecs/<MODE>/CUSTOM/data/DSS/QAUU/QAUURequest** directory found on.x4dpl01 machine.

12.1.5.1 Update QA Flags Using the QA Update Utility

1 Log into the host for the QA Update Utility (e.g., x4dpl01).

2 Enter:

Run EcAmQAUUStart <MODE> -file <QAUpdate Request File> -noexitonerr

- The QA Update Utility retrieves the batch of granules to update from the processing table. The files listed in the batch are updated within the XML Archive.
 - The history file is updated
 - The DIMeasuredParameter table within the Data Pool database is updated
 - The affected metadata files within the Data Pool file system are replaced by the newly updated files from the XML Archive.
 - The updates are recorded for BMGT to export.
-

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13. Ingest

13.1 Ingest Process

The Data Pool (DPL) Ingest Subsystem is a Science Data Processing component that allows the Ingest Technician to obtain data from external data providers and archive into the system. The ingest technician can configure and monitor the system via access through the DPL Ingest GUI (Graphic User Interface).

The DPL Ingest Service is used for Science Investigator-Led Processing Systems (SIPS), S4P, Secure Copy (SCP) and cross-DAAC ingest. This service supports the ingest protocol known as 'Polling with Delivery Record', and inserts the ingested data into the Data Pool Storage Area Network (SAN) and archive.

The DPL Ingest Service is also used for ingesting EMOS Detailed Activity Schedules and data type ActSched which is supported by the ingest protocol known as 'Polling without Delivery Record', and inserts the ingested data into the Data Pool SAN and archive. Data Pool Ingest does not send Product Acceptance Notifications (PANS) or Product Deliver Records (PDRs) to the EMOS data provider. EMOS data files do not contain checksum values and it is assumed that processed data files in the EMOS polling directory are periodically cleaned out by a DUE (DAAC Unique Extension).

Figure 13.1-1 provides an illustration of the Data Pool Ingest Polling with Delivery Record and archiving processes which are described in the following steps:

1. SIPS providers place their data and PDRs into a polling directory. The directory can be local, e.g., accessible via a mount point; or remote, i.e., accessible via FTP or SCP.
2. The DPL Ingest Service will poll these directories as configured by the DAAC and retrieve all new PDR files in those directories.
3. The DPL Ingest Service queues ingest requests for all PDRs that it finds. To decide which validated PDR will be processed next, it checks available resources and DAAC configured priorities.
4. The granule files are copied into the Data Pool SAN, using hidden directories for that purpose unless the DAAC requested that the data be published on insert.
5. Preprocessing events include checksum verification and translation of ODL files to XML if needed.
6. For non-SIPS ESDTs, Ingest will retrieve the MCF from a configured location in the Small File Archive.
7. Ingest validates the incoming granule metadata using the XML Validation Utility. The validated science xml metadata will be copied to a location in the StorNext Archive.

8. The Data Pool Ingest Utility (DPIU) registers the granule in the DPL database
9. The DPIU then copies the granules to the StorNext Archive. This may involve a copy to both a primary and backup archive depending on how the ESDT is configured for archiving.
10. Once all granules within the PDR are completed, the provider is notified of the outcome, which could be immediately via Product Delivery Discrepancy Report (PDRD) if PDR validation failed, or later via a short or long Product Acceptance Notification (PAN).
11. If the ESDT is configured for public Data Pool insert, granule made public in the Data Pool and populates the warehouse tables using the XML version of the metadata.
12. If the ESDT is not configured for public DPL Ingest, the granule will be cleaned up when it expires

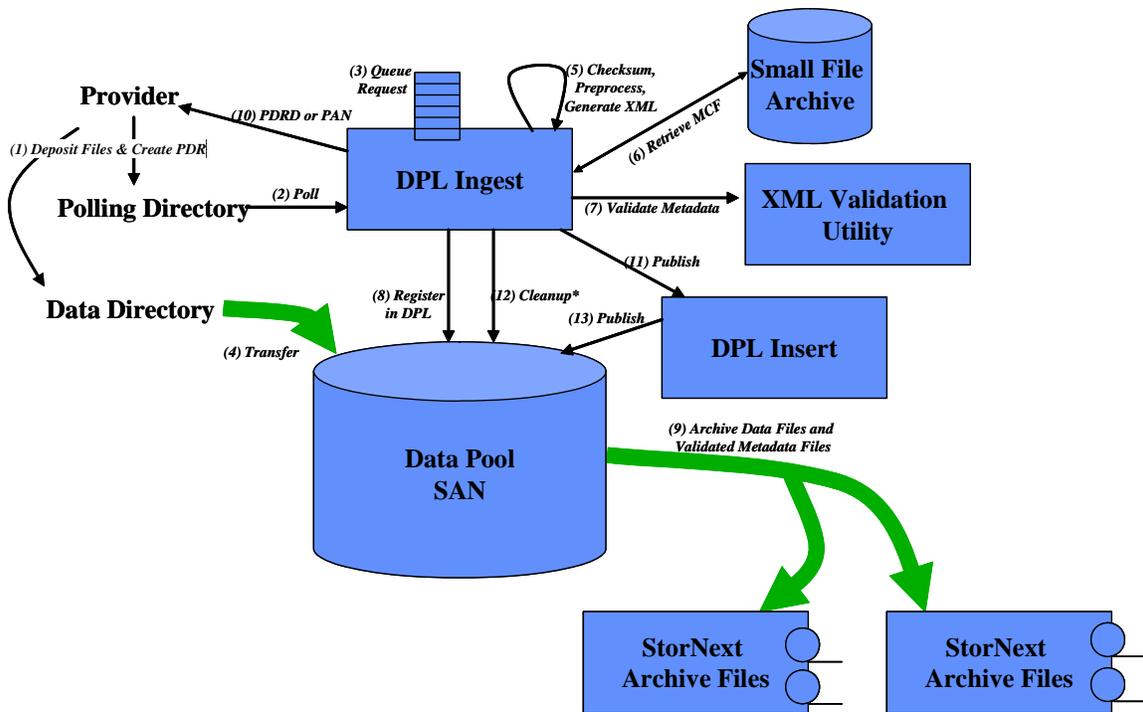


Figure 13.1-1. Data Pool Ingest High Level Architecture

The DPL Ingest Service is comprised of three distinct, contiguous components:

1. Polling (Figure 13.1-1, Step 2) will be responsible for the provision of work to the service via transferring Product Delivery Records (PDRs) into the system and registering them.
2. Processing (Figure 13.1-1, Steps 3-9) will pick up registered PDRs and attempt to ingest the inventory they describe into the Data Pool, perform any additional processing required for specific inventory (for example inventory may relate to a pending order

causing processing to inform the OMS), and archive the inventory. The processing component will update the status of a particular PDR on completion of various steps during processing, and queue a notification to be sent when all processing has completed (either successfully or unsuccessfully).

3. Notification (Figure 13.1-1, Step 10) will detect the queued notification and notify the provider associated with that PDR with details of its completion state. Terminal states are Successful, Partially Failed and Failed. Terminal states are conveyed to the provider by means of a Product Acceptance Notification (PAN) or Product Delivery Discrepancy Report (PDRD).

Subsequent sections related to Ingest address the following topics:

- **Section 13.2** Contains procedures for logging in to Data Pool Ingest System Hosts.
- **Section 13.3** Contains procedures for Monitoring Data Pool Ingest System.
- **Section 13.4** Contains procedures for resolving ingest requests with open interventions and Data Pool System alerts.
- **Section 13.5** Contains procedures for modifying DPL Ingest configuration parameters.
- **Section 13.6** Contains procedures for reviewing and generating reports.
- **Section 13.7** Contains procedures accessing Help Pages.
- **Section 13.8** Contains procedures for monitoring Data Pool Collections from the Data Pool Maintenance GUI.

13.2 Logging in to System Hosts

The following procedure presents the steps required to log in to system hosts.

Table 13.2-1 contains the activity checklist for Login to the Systems Hosts.

Table 13.2-1. Login to System Hosts - Activity Checklist

Order	Role	Task	Section	Complete?
1	Ingest Technician	Log in to System Hosts	(P) 13.2.1	

13.2.1 Log in to System Hosts

- 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 In the terminal window (at the command line prompt) log-in to the appropriate host by entering:
ssh <host name>
 - Examples of Data Pool Ingest Server host names include **e4dpl01, e4eil01, e4lil01, e4spl01** at the LP DAAC; **n4dpl01, n4eil01, n4lil01, n4spl01** at NSIDC; **l4dpl01, l4eil01, l4lil01, l4spl01** at ASDC
 - 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 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 4.
 - 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 4.
 - 4 If a prompt for **<user@remotehost>'s password:** appears, enter:
<password>
 - A command line prompt is displayed.
 - Log-in is complete.
-

13.3 Monitoring the Ingest System

The central feature for monitoring the Ingest System is accessible to the operator through the web-based Data Pool (DPL) Ingest Graphic User Interface (GUI). The DPL Ingest GUI allows operators to access and manipulate the DPL Ingest system from virtually anywhere there is accessible internal network from a qualified web browser. Using this GUI, an operator can monitor and fix Ingest requests, view system alerts, and at a glance view the status of the DPL Ingest system, either in part or whole. The DPL Ingest GUI also allows in-depth configuration of the entire DPL Ingest system eliminating manual configuration of the DPL Ingest database. It provides a fast and secure way to easily manage the entire DPL Ingest system, complete with full operator permission configuration and management so that only authorized persons may perform actions or change configuration settings.

Data Pool Ingest servers are initiated by the following three scripts:

1. EcDIInProcessingService
2. EcDIInPollingService
3. EcDIInNotificationService.

Since the DPL Ingest GUI is a web-based interface, it can be accessed from virtually anywhere there is access to the internal network. No custom software installation is required – all that is needed is a web browser (Firefox is recommended and supported) running on a Windows 2000/XP PC or a compatible Linux OS (e.g., Red Hat) that can run Firefox.

13.3.1 DPL Ingest GUI

The ECS Data Pool Ingest GUI, illustrated in Figure 13.3-3, has six functional areas accessible through an Explorer-like menu of the Navigation Panel (located in the left pane of its home page). These functions menu selections provide the following:

1. Home - Displays General System Statistics, DPL Ingest Status, Email Service Status, Notification Service Status, Polling Service Status and Processing Service Status.
2. Monitoring - Allows operators to monitor currently active Ingest Requests, History of Ingest Request, Provider Status, File System Status, Transfer Host Status, ECS Service Status, and PDR List.
3. Interventions & Alerts - Allows operator to review, resume, cancel and process ingests requests that have Open Interventions.
4. Configuration - Allows operator to alter configuration parameters for Data Providers, Data Types, Transfer Hosts, File Systems, ECS Service Hosts, Global Tuning, Volume Groups and Operators.
5. Reports - Displays information across several data providers or data types.
6. Help - Provides General help topics and Context Help Information.

The Navigation Panel also contains an operator information panel (Figure 13.3-1) below it's menus that displays a synopsis of the current/active operator and provides several menu options to perform the following actions:

- Log out – allows user to log out of the current session (without closing the browser).
- Change your password – current user can change current password on screen.
- Show all of your permissions – allows the user to view or hide current permissions.



Figure 13.3-1. Operator Information Panel

NOTE: In order to properly navigate the application, **do not use the built-in back/forward browser buttons** (Figure 13.3-2 Built-in Back/Forward Browsers Buttons), to avoid errors to occur in the application. All navigation should be performed using the navigation panel and/or list navigators (e.g., custom back/forward buttons for lists of requests and graules). The occurrence of errors on pages will display in “red” text.

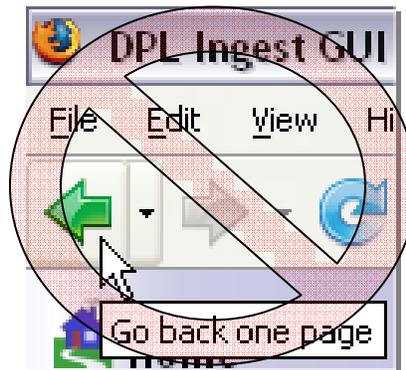


Figure 13.3-2. Built-in Back/Forward Browser Buttons

Operator GUI security standards require the following multiple levels of permissions to be assigned to each operator that has access to the DPL Ingest GUI:

- View Only
- Ingest Admin
- Ingest Control
- Security Admin
- Tuning Control.

Full-capability operators have the ability to configure parameters and perform all other actions that can be accomplished with the **DPL Ingest 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.

The DPL Ingest GUI is certified for use with any browser supporting the Mozilla Firefox 3.0+ standard. Launching the DPL Ingest GUI, it is assumed that the Ingest Technician has logged into the system. Table 13.3-1 provides an activity checklist for Monitoring DPL Ingest.

Table 13.3-1. Monitoring DPL Ingest

Order	Role	Task	Section
1	Ingest Technician	Launching the DPL Ingest GUI	(P) 13.3.1.1
2	Ingest Technician	Changing Requests Status Filters	(P) 13.3.2.1
3	Ingest Technician	Monitoring Request Status	(P) 13.3.2.2
4	Ingest Technician	Cancel, Suspend, Resume or Change Requests Priority	(P) 13.3.2.3
5	Ingest Technician	Changing Suspended Granules Status	(P) 13.3.2.4
6	Ingest Technician	Viewing Historical Requests	(P) 13.3.3.1
7	Ingest Technician	Viewing Provider Status	(P) 13.3.4.1
8	Ingest Technician	Suspend or Resume Data Providers	(P) 13.3.4.2
9	Ingest Technician	Suspend or Resume Individual Polling Locations	(P) 13.3.4.3
10	Ingest Technician	Viewing File System Status	(P) 13.3.5.1
11	Ingest Technician	Suspend or Resume File System	(P) 13.3.5.2
12	Ingest Technician	Viewing Transfer Host Status	(P) 13.3.6.1
13	Ingest Technician	Suspend or Resume Transfer Host	(P) 13.3.6.2
14	Ingest Technician	Viewing ECS Service Status	(P) 13.3.7.1
15	Ingest Technician	Suspend or Resume ECS Service(s)	(P) 13.3.7.2
16	Ingest Technician	Re-Ingesting a PDR	(P) 13.3.8.1

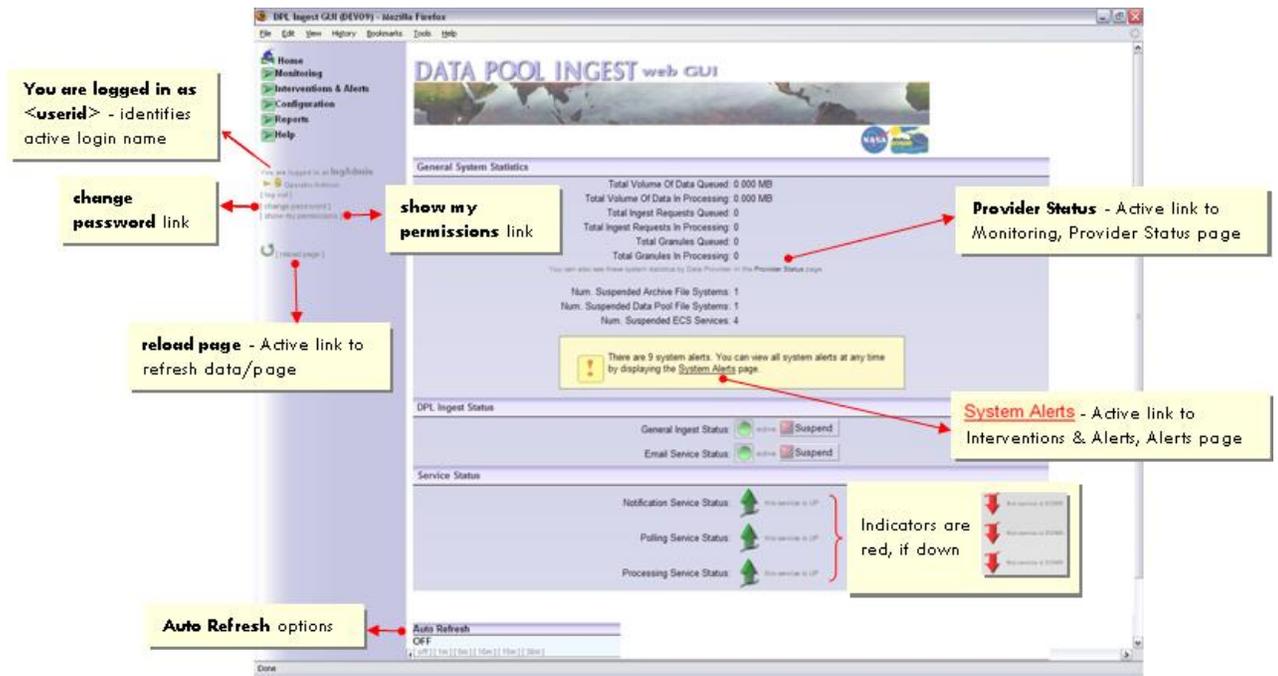


Figure 13.3-3. Data Pool Ingest GUI Home Page

The DPL Ingest GUI Home Page (Figure 13.3-3) provides a general overview of the Data Pool Ingest system status. The home page has three working sections:

1. **General System Statistics** - provides general information about current requests and granules in the system, as well as the various services and file systems used in processing. The Operator selects active links to the Provider Status and Alerts pages, from this section.

Detail descriptions of the data found in this section are listed in Table 13.3-2.

Table 13.3-2. Home Page Field Descriptions (1 of 2)

Field Name	Description
Total Volume of Date Queued	Sum of the size of all files of all granules that have not yet been activated
Total Volume of Data In Processing	Sum of the size of all files of all granules that are currently active, and not suspended or in a terminal state
Total Ingest Requests Queued	Total number of requests that have not yet been activated
Total Ingest Requests In Processing	Total number of requests that are currently active, and not suspended or in a terminal state

Table 13.3-2. Home Page Field Descriptions (2 of 2)

Field Name	Description
Total Granules Queued	Sum of all granules in active or queued requests that have not yet been activated
Total Granules In Processing	Sum of all granules in active or queued requests that are currently active, and not suspended or in a terminal state
Num. Suspended Archive File Systems	Total archive file systems that have been suspended, either automatically by the server or manually by operator
Num. Suspended Data Pool File Systems	Total data pool file systems that have been suspended, either automatically by the server or manually by operator
Num. Suspended ECS Services	Total ECS service hosts that have been suspended, either automatically by the server or manually by operator

2. **DPL Ingest Status** - consists of two status options that enables the user to suspend or resume various actions throughout the data pool ingest system:
 - **General Ingest Status** – allows the Operator to stop polling from all polling locations and prevent any new granules from being activated. Any granules that are already active will complete ingest. These actions can easily be suspended/resumed by pressing/toggling the Suspend/Resume button (Figure 13.3-4).

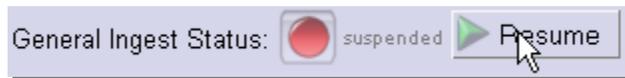


Figure 13.3-4. General Ingest Status/Resume Button

- **Email Service Status options** – allows the Operator to stop any further email notifications to the external data providers (i.e. completed, cancelled, failed, or terminated requests). Once the button is depressed/toggled, email notifications will resume (Figure 13.3-5).



Figure 13.3-5. General Ingest Status/Resume Buttons

3. **Service Status** - provides status for several primary services that make up the Data Pool Ingest system. Ingest services cannot be started and stopped via the Data Pool Ingest GUI. Instead, they are managed using start and stop scripts found in the utilities directory of the given mode. For the status of these services to be accurate, the IngestServiceMonitor script must also be running. This script is installed in the utilities directory (i.e., /usr/ecs/<MODE>/CUSTOM/utilities) of each mode and can be started with the command: `EcDIIngestServiceMonitorStart [MODE]`. The status services which cannot be changed by the operator are as follows:

- **Notification Service Status** - Indicates whether the notification service is active (up) or suspended (down). If suspended, no notifications will be sent, but a queue of notifications will be collected and distributed once the service is restarted (not done via the DPL Ingest GUI).
- **Polling Service Status** - Indicates whether the polling service is active or suspended. If suspended, PDRs will not arrive from any configured polling location, but any PDRs that remain in the directories will be added once the service is restarted (not done via the DPL Ingest GUI).
- **Processing Service Status** - Indicates whether the processing service is active or suspended. If suspended, no actions on any requests or granules will start, continue, or complete. Granules will “hang” in whatever state they are in (not done via the DPL Ingest GUI).

13.3.1.1 Launching the DPL Ingest GUI

- 1 Access a terminal window logged in to a host (e.g., the Operations Workstation or Sun external server) that has access to the **Firefox** web browser.
 - Examples of Linux external server host names include “e4spl01” or “n4spl01”.
- 2 Type **firefox &** then press **Return/Enter**.
 - 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 Mozilla Firefox web browser is displayed.
- 3 If a bookmark has been created for the **DPL Ingest GUI**, select the appropriate bookmark from those listed on the browser’s Bookmarks pull-down window.
 - The **Login:** prompt is displayed.

- 4 If no bookmark has been created for the **DPL Ingest GUI**, type **http://host:port** in the browser's **Location (Go To)** field then press **Return/Enter**.
 - For example: `http://n4dpl01.nsidc.ecs.nasa.gov:25000/Ingest`
 - For example: `http://p4dpl01.pvc.nasa.gov:25000/Ingest`.
 - For example: `http://f4dpl01.hitc.com:25010/Ingest_DEV01`
 - The Data Pool Ingest web GUI **Login Screen** (Figure 13.3-6) displays.



Figure 13.3-6. Ingest GUI Login Screen

- 5 Type the appropriate **User** name in the textbox of the security **Login** prompt.
 - 6 Type the appropriate **Password** in the textbox of the security **Login** prompt.
 - 7 Click **Login**:
 - The dialogue box is dismissed.
 - The **DPL Ingest GUI** Home Page (Figure 13.3-3) is displayed.
-

13.3.2 Monitoring Requests Status

The DPL Ingest Request Status screen is used to check the status of current active Ingest requests. Table 13.3-3 provides descriptions of the information available for each request. Table 13.3-4 lists actions allowed for different status types.

This page displays the current active Ingest requests. The limited-capability operator can use the Request Status page to filter and view Ingest request information.

Table 13.3-3. Request Status Page Column Descriptions

Field Name	Description
Request ID	Unique ID for an ingest request
Status	Status of the request (Table 13.3.4 for list of possible statuses)
Priority	The precedence which a request will have for activation and various processing actions (i.e., XPRESS, VHIGH, HIGH, LOW or NORMAL).
Provider Name	Name of the provider from which the request was obtained
Size [MB]	Sum of the size of all granules in the request
Granules	Total granules included in the request
Granules Completed Processing	Total granules that have reached a successful state
When Queued	Time the request was encountered by the polling service
Last Update	Time of the last change made by the ingest services to the status of the request or its granules

Table 13.3-4. Ingest Request Status Allowed Actions

Request Status	Request Actions				
	Suspend	Change Priority	Resume	Cancel	No Actions Allowed
New		X		X	
Validated		X		X	
Active	X	X		X	
Partially_Suspended	X	X		X	
Suspending / Suspended		X	X	X	
Resuming	X	X			
Failed					X
Partial_Failure					X
Canceling					X
Partially_Cancelled					X
Successful					X

The operator may change the filters for the Ingest Requests screen to meet a specific need, which alters the contents of the Ingest Requests screen. Filter settings will remain unchanged until altered again. Filter settings are associated with an operator's profile and are always remembered, including when logged-out of session.

13.3.2.1 Changing Requests Status Filters

- 1 Click on the **Monitoring** link in the navigation frame of the DPL Ingest GUI to expand its menu.
- 2 Click on the **Requests Status** link to display the **Ingest Requests** page (Figure 13.3-8).
- 3 Click the **Show/Hide Filters** button at top-left of the Ingest Requests page to show the current filter settings.
 - The **Active Ingest Request List Filter Panel** (Figure 13.3-7) displays.

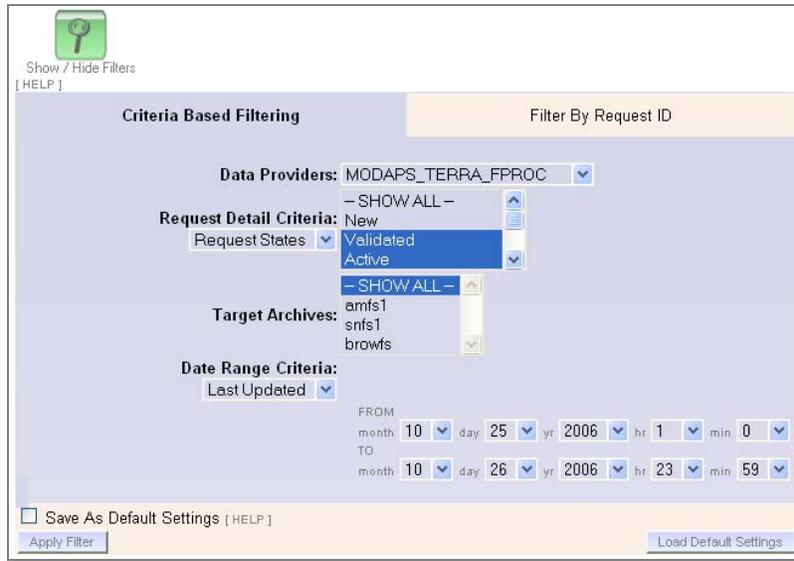


Figure 13.3-7. Active Ingest Request List Filter Panel

- 4 Click on the **Criteria Based Filtering** button to show filter options based upon the attributes of various requests (Figure 13.3-7).
 - Or to filter only a single request ID select **Filter By Request ID**.
- 5 Select the **Data Provider** from the drop-down list to display those associated with request.
- 6 Select one or multiple (hold CTRL key, then select) **Request Detail Criteria**:
 - **Error Type** – select the state to filter only requests in intervention with at least one granule currently in that error state. Only one error type may be selected.
 - **Request States** – select the state to filter requests in the selected states. Multiple states may be included in the filter (hold CTRL key, then select).
- 7 Select the **Target Archives** criteria to query requests with granules from data types configured to be sent to the selected archives.
- 8 Select the **Date Range Criteria**:

- To view entries for a particular **Date/Time Criteria**, click and hold the option button, move the mouse cursor to the desired selection (i.e., **SHOW ALL, Last Update, Queued, Queued Within Last Hour**), then release the mouse button.
 - If selected **Last Updated or Queued**, select the appropriate **FROM** Date/Time range (Month, Day, Year, Hour, Minute) and **TO** Date/Time range (Month, Day, Year, Hour, Minute),
 - Use the 24-hour format to designate the hour (e.g., type **14** to designate 2 p.m.) in the **hour** fields.
 - Use the **Tab** key to advance from one field to the next.
- 9** If the selected filters are to be the desired default filters, click in the **checkbox** next to **Save As Default Settings**.
- 10** Click the **Apply Filter** button.
- The **Ingest Requests** screen displays the new filters criteria data.
-

13.3.2.2 Monitoring Requests Status

- 1** Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
- The **Monitoring** menu is expanded.

- 2 Click on the **Requests Status** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Ingest Requests** page (Figure 13.3-8) is displayed.

The screenshot shows the 'Ingest Requests' page in the DPL Ingest GUI. The page title is 'DATA POOL INGEST web GUI' and the date/time is 'Tue Sep 11 2007 13:39:09'. The main heading is 'Ingest Requests'. Below the heading, there are several callouts:

- Dynamic Auto-Refresh Clock**: A clock icon with a 'page refresh' label and a 'paused' button. Callout: 'Dynamic Auto-Refresh Clock appears if Auto Refresh is on. Indicates next refresh time.'
- Pagination Arrows**: A set of navigation arrows. Callout: 'Pagination Arrows moves pages to first, to previous, to next or to last.'
- Action Buttons**: A row of buttons: 'Cancel Requests', 'Suspend Requests', 'Resume Requests', and 'Change Priority'. Callout: 'Action Buttons for eligible Ingest Requests.'
- Auto Refresh Control Panel**: A section with 'Auto Refresh' set to 'OFF' and a list of refresh intervals: 'off', '20s', '30s', '1m', '5m', '10m', '15m', '30m'. Callout: 'Auto Refresh Control Panel reloads page information defined by seconds or minutes. Each screen has an independent refresh rate.'

The main table displays the following data:

Request ID	Status	Priority	Provider Name	Size [MB]	Granules	Granules Completed Processing	When Queued	Last Update
20523	Active	VHIGH	JPL	0.252	2	0	2007-09-10 12:54:01	2007-09-10 12:54:03
20515	Active	VHIGH	JPL	330.337	2	1	2007-09-10 12:54:01	2007-09-11 13:20:50
20513	Active	VHIGH	JPL	330.337	2	0	2007-09-10 12:54:01	2007-09-10 12:54:17
20511	Active	VHIGH	JPL	330.337	2	1	2007-09-10 12:54:01	2007-09-11 13:21:05
20509	Active	VHIGH	JPL	330.337	2	0	2007-09-10 12:54:01	2007-09-10 12:54:16
20507	Active	VHIGH	JPL	1.523	1	0	2007-09-10 12:54:01	2007-09-10 12:54:04
20503	Active	VHIGH	JPL	1.523	1	0	2007-09-10 12:54:01	2007-09-10 12:54:04
	Active	VHIGH	JPL	1.523	1	0	2007-09-10 12:54:01	2007-09-10 12:54:03
	Active	VHIGH	JPL	1.523	1	0	2007-09-10 12:54:00	2007-09-11 13:20:38
	Active	VHIGH	JPL	1.523	1	0	2007-09-10 12:54:00	2007-09-11 13:20:38

Figure 13.3-8. Ingest Requests Page

- The **Ingest Requests** status page has the following columns:
 - **Request ID** which displays a unique ID for each ingest request.
 - **Status** which provides status of a request (i.e., New, Validated, Active, Partially_Suspended, Suspended, Canceling, Resuming, Successful, Cancelled, Partially_Cancelled, Failed, Partial_Failure or Terminated).
 - **Priority** is the precedence which a request will have for activation and various processing actions (i.e., **XPRESS, VHIGH, HIGH, LOW** or **NORMAL**).
 - **Provider Name** identifies the provider from which the request was originated.
 - **Size [MB]** is the sum of the size of all granules in the request.
 - **Granules** list the total granules included in the request.
 - **Granules Completed Processing** displays total granules that have reached a terminal state.
 - **When Queued** is the time the Request was encountered by the polling service.
 - **Last Update** is the time of the last change made by the ingest services to the status of the request or its granules.

3 Click the desired **Request ID**, to view the results of ingest request. The data is displayed on the Ingest Request Detail Page (Figure 13.3-9).

Ingest Request Detail

Request Info [Show / Hide]

Request ID: 20515	Status: Active	Priority: VHIGH
Polling Location: JPL Local Polling	Mission:	Size: 330.337 MB
Data Provider: JPL		

PDR Path and file name: /datapool/DEV09/user/FS1/pdrs/1000191/500174/Criteria_0260_1_1188918087.83048_RGEN.PDR

Last Update: 2007-09-11 13:20:50
When Queued: 2007-09-10 12:54:01
When Activated: 2007-09-10 12:54:07
When Completed:
Expiration Date/Time:

Granule Statistics:					
Total Granules	Granules Preprocessed	Granules Inserted	Granules Transferred	Granules Archived	No. Files
2	50%	50%	50%	50%	8

Status Change History

Status Changed to New	2007-09-07 14:46:23
Status Changed to Validated	2007-09-10 12:54:01
Status Changed to Active	2007-09-10 12:54:07

Request Notes

Added 2006-10-26 17:23:33 by **IngAdmin**
GranuleID: 10000000019387 Failed granule.

Added 2006-10-26 17:24:24 by **IngAdmin**
Failed granule after verifying that the metadata was corrupt and could not be processed after retrying the granule.

[Add annotation...] [Cancel]

Annotation text:
After failing the granule, the metadata was corrected and the granule will be reingested through a later request

Add This Annotation

[Add annotation...]

Request Info details specific to current request, including dates of major changes.

Granule Statistics details overall statistics of all granules associated with request.

Scrollable table of complete records of status changes.

Annotations, useful in tracking changes to the request – add automatically by server or manually by operator. All notations are time stamped on entry.

Figure 13.3-9. Ingest Request Detail Page

- The **Ingest Request Detail** page (Figure 13.3-9) is divided into several parts:
 1. **Request Info** which contains summarized data from the **Ingest Request** status page and is located at the top of the page. The following information (Table 13.3-5) highlights the fields that are found this page:

Table 13.3-5. Ingest Request Detail Page –Request Info Field Descriptions

Field Name	Description
Request ID	Unique ID for an ingest request
Polling Location	Unique name assigned to the polling location from where the request was obtained
Data Provider	Unique name assigned to the provider associated with the polling location where the request was found
Status	The current state of the request (Table 4.6.1-3 for possible request states)
Mission	Satellite mission defined in the PDR associated with this request (this is not defined in most PDRs)
Priority	The precedence which a request will have for activation and various processing actions.
Size	Sum of the size of all granules in the request
PDR Path and file name	Temporary location and file name of the PDR after it was copied from the polling location. The PDR can be found in this location until the request completes ingest.
Last Update	The last time the status of the request or an associated granule changed
When Queued	The time the request was added to the request list
When Activated	The time the request was moved into the “Active” state
When Completed	The time all the granules in the request reached a terminal state
Expiration Date/Time	The date and time by which the corresponding ingest request must be completed

2. The **Granule Statistics** contains the following information (Table 13.3-6) for all the granules associated with this request:

Table 13.3-6. Ingest Request Detail Page – Granule Statistics Field Descriptions

Field Name	Description
Total Granules	Total number of granules included in the request
Granules Preprocessed	Percentage of granules that have moved from the preprocessing state to the archiving state
Granules Inserted	Percentage of granules that have been inserted into the Science Data Server
Granules Transferred	Percentage of granules transferred from the provider to the temp directories
Granules Archived	Percentage of granules that have been archived
No. Files	Total number of files associated with granules in the request

3. **Status Change History** is displayed for the selected Request ID.
4. **Request Notes**, annotations that can be useful in tracking changes to a request, are either added by the operator or automatically added by the server. Automatic annotations are generated when operator performs an action on the request or granules in the request.
5. The **Granule List** (Figure 13.3-12) for the selected Request ID, details (at the bottom of the Ingest Request Detail Page) contains the following associated status information (Table 13.3-7):

Table 13.3-7. Ingest Request Detail Page – Granule List Field Descriptions

Field Name	Description
Checkbox column	This column may contain a checkbox next to the granule, <u>if the granule is not in a terminal state</u> . This allows an action to be processed for the selected granule(s). The checkbox at the top of the column selects or de-selects all the granules in the list that have checkboxes.
File Detail	<p>The column holds a link to display the detailed file information for each granule – this information appears for each granule at the top of the table when clicked. The associated granule file information details, when displayed, includes the following:</p> <ul style="list-style-type: none"> • Path for the directory identified in the PDR of the file location. • Name of the file. • Type of the internal file of the file translated from the file type to PDR according to a predefined table (i.e., SCIENCE, METADA, BROWSE) • Status of the last action performed on file or the most recent, unresolved, error encountered during file processing.
Seq. Number	The order in which a granule was found in the PDR
Ingest Gran ID	Unique Identifier assigned to the granule
Data Type	Data Type found in the PDR describing the granule
Version	Version found in the PDR describing the granule. The version will be extracted from the database if none is in the PDR
Status	Current granule status (Table 4.6.1-7) and detailed error information
Granule Size (MB)	Sum of the size of all files associated with the granule
No. Files	Number of files found associated with the granule in the PDR
Last Status Change	Date and time the granule's status was last updated

- Any granule(s) encountering problems during any point in their processing are initially flagged as “suspended”. The only exception is if a granule fails checksum verification during each of the configured number of tries. Granules are not failed until the operator explicitly invokes a “fail suspended granules” action – this is an exception of failed checksum verification or a PDR validation failure. The following actions (Table 13.3-8. Granule List - Granule Allowable Actions) can be performed on granules (in the granule list) depending on the granule state:

Table 13.3-8. Granule List – Granule Allowable Actions

Granule Status	Status Type	Fail / Retry / Retry From Start	Cancel	No Actions Allowed
New	Queued		✓	
Transferring / Transferred	Active		✓	
Checksumming / Checksummed	Active		✓	
Preprocessing / Preprocessed	Active		✓	
Archiving / Archived	Active		✓	
Inserting	Active		✓	
Inserted	Active			✓
Suspending / Suspended	Error	✓	✓	
Resuming	Active		✓	
Canceling	Active			✓
Cancelled	Terminal			✓
Successful	Terminal			✓
Failed	Terminal			✓
Publishing / Published	Terminal			✓

Sometimes it may be necessary to cancel, suspend or resume the processing of one or more ingest request. The procedure for canceling, suspending or resuming granule processing starts with the assumption that all applicable servers and the DPL Ingest GUI are currently running.

13.3.2.3 Cancel, Suspend, Resume or Change Requests Priority

- Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Monitoring** menu is expanded.
- Click on the **Requests Status** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Ingest Requests** page is displayed.
- To change one or more Request Statuses (cancel, suspend or resume) (Figure 13.3-10), select the desired request(s) by checking the checkboxes on the left side of the request list.

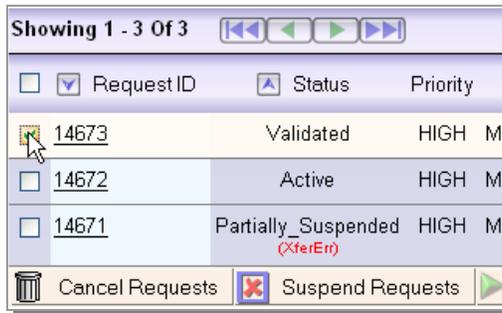


Figure 13.3-10. Cancel Request/Suspend Requests Buttons

- Click on the **desired action button** at the bottom of the list:
 - **Cancel Requests:** This is an irreversible action; there is no way to ‘un-cancel’ a request.
 - **Suspend Requests:** This action may be performed only if the selected request(s) are not already suspended or cancelled and is used to stop new granules from being activated. Active granules in suspended requests will continue through processing.
 - **Resume Requests:** This action may be performed only if the selected requests are suspended.
 - **Change Priority:** To change the priority of an ingest request, select the desired requests and click on the Change Priority button at the bottom of the list. A dropdown lists appears to select the new priority.
 - The **Change Priority dialog box** (Figure 13.3-11) will appear to enter a reason for the status change.

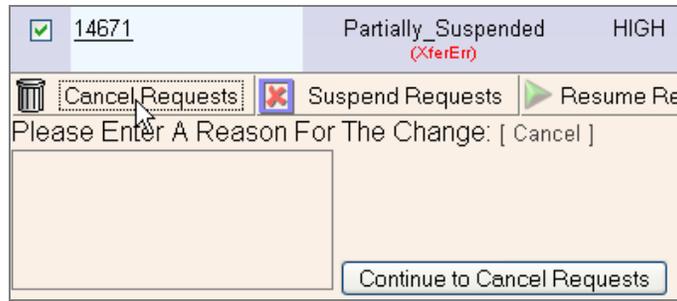


Figure 13.3-11. Change Priority Dialog Box

- Enter the reason for the change in the **Reason For Change** textbox.
- To cancel this action click on the **Cancel** button.
- Select the **Continue to [Cancel or Resume]** button.
- Or, Select the **OK** button.

Any granule(s) encountering problems during any point in their processing are initially flagged as “suspended”. They are not failed until the operator explicitly takes an action to fail such granules. The following actions may be performed on granules that have been initially suspended:

- **Retry selected granules:** This applies only to granules that are currently suspended and retries them from the last known good state of processing.
- **Retry from START selected granules:** This applies only to granules that are currently suspended and retries them from the beginning of processing.
- **Fail selected granules:** This applies only to granules that are currently suspended and transitions the granule into the failed state, with the status indicating the type of error that originally caused the suspensions
- **Cancel selected granules:** This applies to granules that are in the New state, Active state, or Suspended state and can be cancelled by selecting this icon. If the state is Successful, Failed or any Terminal state, the granule may not be cancelled. This action manually fails the granules, marking them ‘canceled.’

13.3.2.4 Changing Suspended Granules Status

- 1 Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Monitoring** menu is expanded.
- 2 Click on the **Requests Status** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Ingest Requests** page is displayed.

- 3 Click on the desired **Request ID**.
 - **Request Detail Page** displayed for the selected Request ID.
 - At the bottom of the **Request Detail Page – Granule List** (Figure 13.3-12), listed, are the granules for selected request(s).

File Detail	Seq. Number	Ingest Gran. ID	Data Type	Version	Status	Granule Size (MB)	No. Files	Last Status Change
[show/hide]	4	1000000008387	MOD29P1D	86	Successful	6.144	2	2006-10-27 11:37:52
[show/hide]	3	1000000008386	MOD29P1D	86	Cancelling	6.148	2	2006-10-27 11:42:17
[show/hide]	1	1000000008384	MOD29P1D	86	XferErr Error executing the following copy command: /usr/ecs/OPS/CUSTOM/bin/DPL/EcDICopyExec /home/cmshared/PDRS/scripts/TEMP/OPS//Criteria_1420_MOD_r1.1161963070.11622.RGEN.hdf /datapool/OPS/user/FS1/temp/ingest/14679/1000000008384/ 4096 3, Failed by Operator	6.148	2	2006-10-27 11:42:02
[show/hide]	2	1000000008385	MOD29P1D	86	Resuming	6.144	2	2006-10-27 11:42:39

Figure 13.3-12. Request Detail Page – Granule List

- Any granule(s) that encountered problems during any point in their processing are initially flagged as “suspended”.
- 4 Click on the checkbox next to the granule you want to change the status.
 - A checkmark is displayed.
- 5 Select one of the following appropriate actions:
 - **Retry Selected Granules:** This applies only to granules that are currently suspended and will retry them from the last known good state of processing.
 - **Retry Selected Granules From Start:** This applies only to granules that are currently suspended and will retry them from the beginning of processing.

- **Fail Selected Granules.**
 - This applies only to granules that are currently suspended and transitions the granule into the failed state, with the status indicating the type of error that originally caused the suspensions. Error types are determined by the state granule is in when failed:
 - **XferErr** – transferring.
 - **ChecksumErr** – checksumming.
 - **PreprocErr** – preprocessing.
 - **ArchErr** – archiving.
 - **InsertErr** – inserting.
 - **PubErr** – publishing.

NOTE: Post-failure of granules, an annotation is generated identifying time-stamp with operator ID and action.
 - **Cancel Selected Granules:** This applies only to granules that are not yet in a terminal state. It manually fails the granules, marking them ‘canceled.’
 - A selected action is executed and status is updated.
-

13.3.3 Viewing Historical Requests

When an ingest transaction has been completed, several things happen:

- A notice is automatically sent to the data provider indicating the status of the ingested data.
- The data provider sends an acknowledgment of that notice.
- Receipt of the acknowledgment is logged by Ingest.
- The **Request ID** of that ingest request is removed from the list of active requests.
- The DPL Ingest History receives statistics on the completed transaction.

The DPL Ingest Historical Requests provides the following information:

- A summary of ingest requests that have been processed.
- Historical Requests Detail gives detailed information about each completed ingest request.
- Request Timings provides ingest request processing statistics to include time required to perform Transfer, Checksum, Preprocess DPL Insert and Archive.
- Granule List provides detailed information about each granule.

Since the Historical Requests are completed requests, no action can be processed from these pages.

- The operator can configure the length of time Historical Request Related Configuration information (Figure 13.3-13) is kept on a page. These historical ingest requests column descriptions can be modified on the Global Tuning Configuration page by the operator.

13.3.3.1 Viewing Historical Requests

- 1 Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Monitoring** menu is expanded.
- 2 Click on the **Historical Request** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Historical Ingest Requests** (Figure 13.3-13) page is displayed with the following fields.
 - **Request ID:** Unique ID for an ingest request, which displays a request detail page similar to that for an Active Ingest Request.
 - **Status:** Terminal state reached by the request.
 - **Priority:** The final priority assigned to the request during processing.
 - **Provider Name:** Name of the provider from which the request was obtained.
 - **Size [MB]:** Sum of the size of all granules in the request.
 - **No. Granules:** Total number of successful granules included in the request.
 - **Ingest Method:** Whether the request was processed by “CLASSIC” Ingest, or the new “DPL” (DataPool Ingest) system.
 - **When Queued:** Time the request was encountered by the polling service.
 - **When Proc. Started:** Time the request was activated by processing.
 - **When Processing Completed:** Time the request reached a terminal state.

DATA POOL INGEST web GUI Tue Sep 11 2007 13:45:48

Historical Ingest Requests

Show / Hide Filters

[HELP]
Showing 1 - 20 of 707 Page size: 20

RequestId	Status	Priority	Provider Name	Size	No. Granules (no. Successful)	Ingest Method	When Queued	When Proc. Started	When Proc. Completed
20427	Cancelled (Prepared)	HIGH	1@2.3	111.125	2(0)	DPL	2007-09-01 16:30:26	2007-09-01 16:30:29	
18573	Failed	HIGH	1@2.3	-0.000	1(0)	DPL	2007-08-31 00:56:58		2007-08-31 00:56:58
18563	Failed	HIGH	1@2.3	-0.000	1(0)	DPL	2007-08-31 00:56:57		2007-08-31 00:56:59
18565	Failed	HIGH	1@2.3	-0.000	1(0)	DPL	2007-08-31 00:57:07		2007-08-31 00:57:15
18575	Failed	HIGH	1@2.3	0.006	1(0)	DPL	2007-08-31 00:57:08		2007-08-31 00:57:15
18567	Failed	HIGH	1@2.3	-0.000	1(0)	DPL	2007-08-31 00:56:58		2007-08-31 00:57:15
18569	Failed	HIGH	1@2.3	-0.000	1(0)	DPL	2007-08-31 00:57:07		2007-08-31 00:57:15
18571	Failed	HIGH	1@2.3	-0.000	1(0)	DPL	2007-08-31 00:57:08		2007-08-31 00:57:22
18555	Failed	HIGH	1@2.3	-0.000	1(0)	DPL	2007-08-31 00:57:08		2007-08-31 00:57:22

Historical Request Related Configuration

Parameter Name	Parameter Description	Parameter Value
MONTHS_TO_KEEP_HIST_STATS_ALERTS	The retention time in months for keeping historic information for requests, alerts and throughput statistics	2

Apply Changes Cancel Changes

Figure 13.3-13. Historical Ingest Requests Page

- 3 Click on the **Show/Hide Filters** button.
 - The following filters are displayed.
 - **Provider** (i.e., SHOW ALL, EDOS, ASTER, MODAPS, MISR).
 - **Request States** (i.e., SHOW ALL, Resuming, Successful, Cancelled, Partially_Cancelled, Failed, Partial_Failure, Terminated).
 - **Date/Time Range Filter** (i.e., SHOW ALL, When Completed, When Queued, Queued Within 24 Hours, Start Date and Stop Date).
 - **Data Type** (e.g., SHOW ALL, AST_L1B, MOD021KM.003, MISL0CA).
- 4 Select the desired **Provider** (e.g., **EDOS**) by highlighting the desired provider from the pull-down window.
- 5 Select the desired **Request State** (i.e., **SHOW ALL, Resuming, Successful, Cancelled, Partially_Cancelled, Failed, Partial_Failure, Terminated**) by highlighting the desired request state from the window.
- 6 Select **Date/Time Range Filter** (i.e., **When Completed, When Queued, Queued Within 24 Hours, Start Date and Stop Date**), by highlighting the desired Date/Time Range Filter from the pull-down window.

- If you selected **When Completed** or **When Queued** select the appropriate **From Date/Time Range (Month, Day, Year, Hour, Minute)** and **To Date/Time range (Month, Day, Year, Hour, Minute)**.
 - Use the 24-hour format to designate the hour (e.g., type **14** to designate 2 p.m.) in the **hour** fields.
- 7** Select a particular **Data Type** (e.g., AST_L1B) by highlighting the desired data type from the pull-down window.
- 8** Select the **Apply Filter** button.
- **The Historical Ingest Request** page is displayed with the new filters.
 - This page shows all of the ingest requests that have been processed. The DPL database keeps a persistent record of all requests that have undergone ingest processing and can thus be viewed on this page.
- 9** To view the **Historical Ingest Request Detail** for a given **Request ID**, click on the desired **Request ID**.
- The **Historical Ingest Request Detail** page (Figure 13.3-14) is displayed.
 - The layout of the request detail page for historical requests consist of **Request Info** (top section), **Request Timings** and **Status Change History** (middle section) and **Granule List** (bottom section) and are very similar to the data contained on the **Active Ingest Request** page.
 - The details on this page pertain to historical data only and can not be changed.

- Table 13.3-9. Historical Ingest Request Page describes the information on the Historical Ingest Request Detail page sections:

Table 13.3-9. Historical Ingest Request Detail Page –Field and Column Descriptions

Field Name: Reques Info	Description
Request ID	Unique ID for an ingest request
Status	The final state of the request (Table 4.6.1-3 for a list of possible request states)
Priority	The precedence which a request will have for activation and various processing actions.
Provider	Unique name assigned to the provider associated with the polling location where the request was found
Size	Sum of the size of all granules in the request
No. Granules	Total number of granules in the PDR
Ingest Method	Whether the request was processed by Classic Ingest, or the new DataPool Ingest system
No. Files	Number of files found associated with the granule in the PDR
Field Name: Request Timings	Description
Time to Xfer	Total seconds of time that passed during all granule transfers
Time to Checksum	Total seconds of time that passed during all granule checksum operations
Time to Preprocess	Total seconds of time that passed during all granule preprocessing operations
Time to Insert	Total seconds of time that passed to insert all granules into AIM
Time to Archive	Total seconds of time that passed to copy all granules into the archive
Field Name: Granule List	Description
Seq Number	The order in which a granule was found in the PDR
Ingest Gran ID	Unique Identifier assigned to the granule by the DPL Ingest System
ECS Gran ID	Unique Identifier assigned to the granule for insert into AIM
DPL Gran ID	Unique Identifier assigned to the granule for registration in the Data Pool
Data Type	Data Type found in the PDR describing the granule
Version	Version found in the PDR describing the granule
Status	Terminal state reached by the granule
Granule Size (MB)	Sum of the size of all files associated with the granule
No. Files	Number of files found associated with the granule in the PDR
Proc. Start	Time of granule activation
Proc. End	Time granule reached a terminal state
Total Proc. Time	Total seconds that lapsed in between granule activation and completion
Time to Checksum	Total seconds that passed during granule checksum across all files
Retry Count	Number of times the granule was retried (or retried from start)

Historical Ingest Request Detail for RequestId 18565													
Request Info [Show / Hide]													
RequestID: 18565				Status: Failed				Priority: HIGH					
Provider: 1@2.3				Size: 0.000 MB				No. Granules: 1 (0 successful)					
Ingest Method: DPL								No. Files: 2					
When Queued: 2007-08-31 00:57:07 When Processing Started: When Processing Ended: 2007-08-31 00:57:15													
Request Timings													
Time To Xfer	Time To Checksum	Time To Preprocess	Time To DPL Insert	Time To Archive									
0	-	0	-	0									
Status Change History													
Status Changed to New 2007-08-31 00:41:59													
Status Changed to Validated 2007-08-31 00:57:07													
Status Changed to Failed 2007-08-31 00:57:15													
Request Notes													
There are no Request Notes for this request.													
Granule List Showing 1 - 1 Of 1													
Seq. Number	Ingest Gran. ID	ECS Gran. ID	DPL Gran. ID	Data Type	Version	Status	Granule Size (MB)	No. Files	Proc. Start	Proc. End	Total Proc. Time	Time To Checksum	Retry Count
1	5000000021393			AE_RnGd	1	InitErr	0.085	0					

Figure 13.3-14. Historical Ingest Request Detail Page

13.3.4 Provider Status

The Provider Status link provides access to the status and information about each configured data provider in the ingest system. This page provides the following:

- List of all configured providers along with general statistics for each provider.
- Provides the status of the provider (i.e., Active, Suspended by Server, or Suspended by Operator). This is the only changeable field on this page. From this page a provider can be Resumed or Suspended.
- Provides individual status for polling locations (e.g., total number of active or suspended polling location).
- Provides access to detailed provider status that shows individual status of each polling location associated with a provider. From this page, an individual polling location can be suspended or resumed accordingly.

13.3.4.1 Viewing Provider Status

- 1 Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Monitoring** menu is expanded.
- 2 Click on the **Provider Status** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Provider Status** page (Figure 13.3-15) is displayed with the following fields.
 - **Provider:** Provider name configured to identify an External Data Provider.
 - **Status:** Whether the provider is active, suspended by server, or suspended by operator.
 - **Polling Locations:** Total number of active polling locations on the provider, or the number of polling locations that are suspended out of the total number configured.
 - **Request Queued:** Total Number and Volume of requests waiting for activation.
 - **Request In Process:** Total Number and Volume of requests that are active and not suspended.
 - **Granules Queued:** Total number of granules waiting for activation in requests from the provider.
 - **Granules In Process:** Total number of granules waiting for activation in requests from the provider.

DATA POOL INGEST web GUI Tue Sep 11 2007 13:50:08

Provider Status

[HELP]

<input type="checkbox"/>	Provider	Status	Polling Locations	Requests Queued	Requests In Process	Granules Queued	Granules In Process
<input type="checkbox"/>	0270	active	No Polling Locations	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	0310	active	No Polling Locations	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	1@23	active	1 of 1 active	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	1Lisa_Amsar	suspended by operator	No Polling Locations	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	1Lisa_Modaps_Aqua	suspended by operator	No Polling Locations	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	1Lisa_Modaps_Terra	suspended by operator	No Polling Locations	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	4010_Connection_Prob	suspended by operator	No Polling Locations	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	ACRIM	suspended by operator	1 of 1 suspended	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	AMSR_E_SIPS	active	1 of 2 suspended	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	ASTER_GDS	suspended by operator	1 of 2 disabled	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	ASTER_OSF	suspended by operator	1 of 1 suspended	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	DAP	suspended by operator	1 of 1 suspended	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	DOIST	suspended by operator	1 of 1 suspended	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	EDOS	suspended by operator	No Polling Locations	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	FtpProvider	suspended by operator	No Polling Locations	0	0	0 (0.000 MB)	0 (0.000 MB)
<input type="checkbox"/>	ICESAT	suspended by operator	1 of 1 suspended	0	0	0 (0.000 MB)	0 (0.000 MB)
TOTALS:				0	9	5 (21.529 MB)	9 (659.067 MB)

Status Indicators

active At least one active polling location

suspended by operator Operator manually suspended polling location via GUI .

suspended by server Server automatically suspended polling location.

Figure 13.3-15. Provider Status Page

- 3 To view the individual status of each polling location associated with a given provider, Click on the desired **Provider** (e.g., ASTER.OSF, JPL, etc.)
 - The **Provider Status Detail** page (Figure 13.3-16) is displayed.

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Provider Status Detail

General Status

Provider: NSIDC_DAAC

General Status: ● suspended by operator ▶ Resume

Requests Queued: 0 (0.000 MB)

Requests In Process: 0 (0.000 MB)

Configured Notification Types

Email: Yes FTP: No SCP: No

Polling Locations

	Status	Source Polling Path	Host Type	Host Name	Host Status	Address
<input type="checkbox"/>	● suspended by operator	/net/origin/devdata1/DEV09INGEST/poll/NSIDC	local	LOCAL	● active	LOCAL

■ Suspend ▶ Resume

Figure 13.3-16. Provider Status Detail Page

- Displayed in the **General Status** section, information for a given Provider:
 - **Provider:** Unique name for that identifies the selected external data provider.
 - **General Status:** Identifies status of the provider (i.e., Active or Suspend).
 - **Requests Queued:** Total Number and Volume of requests waiting for activation from the Provider.
 - **Request In Process:** Total Number and Volume of requests that are active and not suspended from the Provider.
- Listed in the **Configured Notification Types** section, related information.
 - Status of each notification method (i.e. Email: No, or FTP: Yes).
- Listed in the **Polling Locations** section, related information:

- **Status:** Whether the polling location is Active, Suspended by Server, or Suspended by Operator.
 - **Source Polling Path:** Full path of the directory being polled.
 - **Host Type:** Method being used for polling – Local, FTP, or SCP.
 - **Host Name:** Label assigned to the host on which the polling location is found.
 - **Host Status:** Whether the host where the polling location is found is active or suspended – Polling location can be suspended, which will not affect the host state.
 - **Address:** IP Address or DNS name where the polling directory can be found.
-

A Data Provider may be suspended or resumed from the Provider Status page. Suspending a Data Provider will stop the activation of Ingest Requests from that Provider, but Ingest Requests that are already active will be completed. Ingest will also stop polling any of the Polling Locations associated with that Data Provider. This means that no new Requests from that suspended Data Provider will be queued except if a polling cycle is in progress, in which case the polling cycle will be completed.

13.3.4.2 Suspend or Resume Data Providers

- 1 Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Monitoring** menu is expanded.
 - 2 Click on the **Provider Status** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Provider Status** page is displayed.
 - 3 Select the desired **provider(s)** (e.g., ASTER.OSE, JPL, etc.) by clicking in the **checkbox** next to the name of the provider.
 - A checkmark is displayed.
 - 4 Select either the **Suspend** or **Resume** button located at the bottom of the page.
 - You will be prompted for confirmation before the action is carried out.
 - If you selected **Suspend**, the activation of Ingest Requests from that Provider will be stopped, but Ingest Requests that are already active will be completed. Ingest will also stop polling any of the Polling Locations associated with that Data Provider.
 - If you selected **Resume**, the activation of Ingest Requests from that Provider will be resumed.
 - The **Status** field will be updated accordingly when the requested action is completed.
-

Polling Locations for a Data Provider may be suspended or resumed from the Provider Status Detail page. Each Data Provider has a list of associated Polling Locations, which are directories on SCP, FTP or local Hosts. Polling locations can be suspended or resumed in order to halt or resume data to be sent through these providers, without impacting the status of the Host on which that polling location resides.

13.3.4.3 Suspend or Resume Individual Polling Locations

- 1 Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Monitoring** menu is expanded.
 - 2 Click on the **Provider Status** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Provider Status** page is displayed.
 - 3 Click on the desired **Provider** (e.g., ASTER.OSF, JPL, etc.).
 - The **Provider Status Detail** page is displayed.
 - At the bottom of the **Provider Status Detail**, the list of **Polling Locations** for the selected Provider displays.
 - 4 Select the desired **Polling Locations** to be suspended or resumed by clicking in the **checkbox** associated with the **Source Polling Path**.
 - A checkmark is displayed in the checkbox.
 - 5 Select either the **Suspend** or **Resume** button located at the bottom of the page.
 - You will be prompted for confirmation before the action is carried out.
 - If you selected **Suspend**, the Polling Path(s) will be stopped but Ingest Requests that are already active will be completed.
 - If you selected **Resume**, the activation of Ingest Requests from that Polling Location will be resumed.
 - The **Status** field will be updated accordingly when the requested action is completed.
-

13.3.5 File System Status

The **File System Status** page displays the following status information for each of the Archive File Systems and Data Pool File Systems:

- Name(s) and directory paths for **Archive** and **Data Pool File Systems**.
- Provides the statuses of the Archive and Data Pool File Systems (i.e., **Active**, **Suspended by Operator** or **Suspended by Server**). This is the only changeable field on this page. From this page Archive and Data Pool File Systems can be **Resumed** or **Suspended**.
- Provides File System space threshold metrics.

13.3.5.1 Viewing File System Status

- 1 Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Monitoring** menu is expanded.
- 2 Click on the **File System Status** link in the navigation frame of the **DPL Ingest GUI**.
 - The **File System Status** page (Figure 13.3-17) is displayed with the following fields for **Data Pool** and **Archive File Systems**:

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File System Status

[HELP]

Data Pool File Systems

<input type="checkbox"/>	Name Path	Status	Free Space	Used Space Updated	Cache Used Alert Threshold	Queued Granules Volume	Granules Processing Volume
<input type="checkbox"/>	DEFAULT /datapool/DEV09/usedFS1/	active	175GB	52% 2007-09-11 13:49:20.586	92%	5 21.529 MB	9 659.087 MB
<input type="checkbox"/>	FS2 /datapool/DEV09/usedFS2/	active	232GB	36% 2007-09-11 13:49:20.593	92%	0 0.000 MB	0 0.000 MB

Archive File Systems

<input type="checkbox"/>	Name Path	Status	Free Space	Used Space Updated	Cache Used Alert Threshold	Cache Used Suspend Threshold	Queued Granules (Min-Max) Volume (Min-Max)	Granules Processing (Min-Max) Volume (Min-Max)
<input type="checkbox"/>	ARCHIVE5 /atomex2/browsf/	active	203GB	18% 2007-09-11 13:49:20.66	95%	100%	0 - 0 0.000 - 0.000MB	0 - 0 0.000 - 0.000MB
<input type="checkbox"/>	ARCHIVE8 /atomex2/amts1/	active	62GB	74% 2007-09-11 13:49:20.853	95%	100%	0 - 0 0.000 - 0.000MB	0 - 0 0.000 - 0.000MB
<input type="checkbox"/>	Archive1 /atomex2/ants1/	active	60GB	75% 2007-09-11 13:49:20.856	80%	99%	5 - 5 21.529 - 21.529MB	9 - 9 659.087 - 659.087MB
<input type="checkbox"/>	XMLArchive /atomex2/mal/mes/	active	231GB	9% 2007-09-11 13:49:20.866	95%	100%	0 - 0 0.000 - 0.000MB	0 - 0 0.000 - 0.000MB

Auto Refresh
OFF
[Off] [1m] [5m] [10m] [15m] [30m]

Figure 13.3-17. File System Status Page

- **Name:** Unique name assigned to the file system and the directory which the file system is located.
- **Status:** Whether the file system is active, suspended by operator, or suspended by server.
- **Free Space:** Space (GB) remaining on the file system.
- **Used Space:** Percentage of used space and the time this information was last checked.
- **Cache Used Alert Threshold:** The percentage of used space in the cache at which point an alert would be raised. For example, if the threshold was set to 80%, an alert would be raised as soon as more than 80% of the cache was used.

Neither requests nor file systems would be suspended as a result of reaching this threshold.

- **Cache Used Suspend Threshold** (Archive File System only): The percentage of used space in the cache at which point the Archive File System or Data Pool File System would be suspended. For example, if the threshold was set to 90%, the Archive File System would be suspended as soon as more than 90% of the cache was used.
 - **Queued Granules**: Total granules waiting for activation set to ingest on the file system and the sum of the size (MB) of those granules.
 - **Granules Processing**: Total granules active set to ingest on the file system and the sum of the size (MB) of those granules.
-

Each of these archives (Data Pool File System and Archive File System) can also be suspended or resumed from the File System Status page. Suspending a File System will prevent the occurrence of any activity on the selected File System. Conversely, resuming a File System will allow activity on a File System to resume.

13.3.5.2 Suspend or Resume File Systems

- 1 Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Monitoring** menu is expanded.
 - 2 Click on the **File System Status** link in the navigation frame of the **DPL Ingest GUI**.
 - The **File System Status** page is displayed.
 - 3 Click on the **checkbox** next to the desired **Data Pool File System** (or **Archive File System**).
 - A checkmark is displayed in the checkbox.
 - Multiple selections may be made.
 - 4 Select either the **Suspend** or **Resume** button located at the bottom of the page.
 - You will be prompted for confirmation.
 - The page will reload with the status of the selected archives changed.
 - The application will not allow the same action to be taken twice on an Archive File System. For example, an already active status can not be resumed. However, an Archive File system that was suspended by the server may be manually suspended by the operator.
-

13.3.6 Transfer Host Status

The Transfer Host Status page shows the status of each configured FTP and SCP host, including the status of Local transfers. The hosts and provider read/write statuses can be suspended or resumed manually, or by the Data Pool Ingest Service

When an operator suspends a host read/write status, the Data Pool Ingest Service will complete any ongoing transfers, polling cycles, or notifications with that host, but not start any new ones. When an operator resumes a host read/write status, this will resume all traffic with that host whose state was not “suspended by operator”. This includes polling for any previously suspended polling locations, that is, resuming a host read/write status will resume all Polling Locations on that host that may have been suspended automatically by the Ingest Service.

13.3.6.1 Viewing Transfer Host Status

- 1 Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Monitoring** menu is expanded.
- 2 Click on the **Transfer Host Status** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Transfer Host Status** page (Figure 13.3-18) is displays fields for all existing FTP and SCP Hosts, including Local Host Operations.

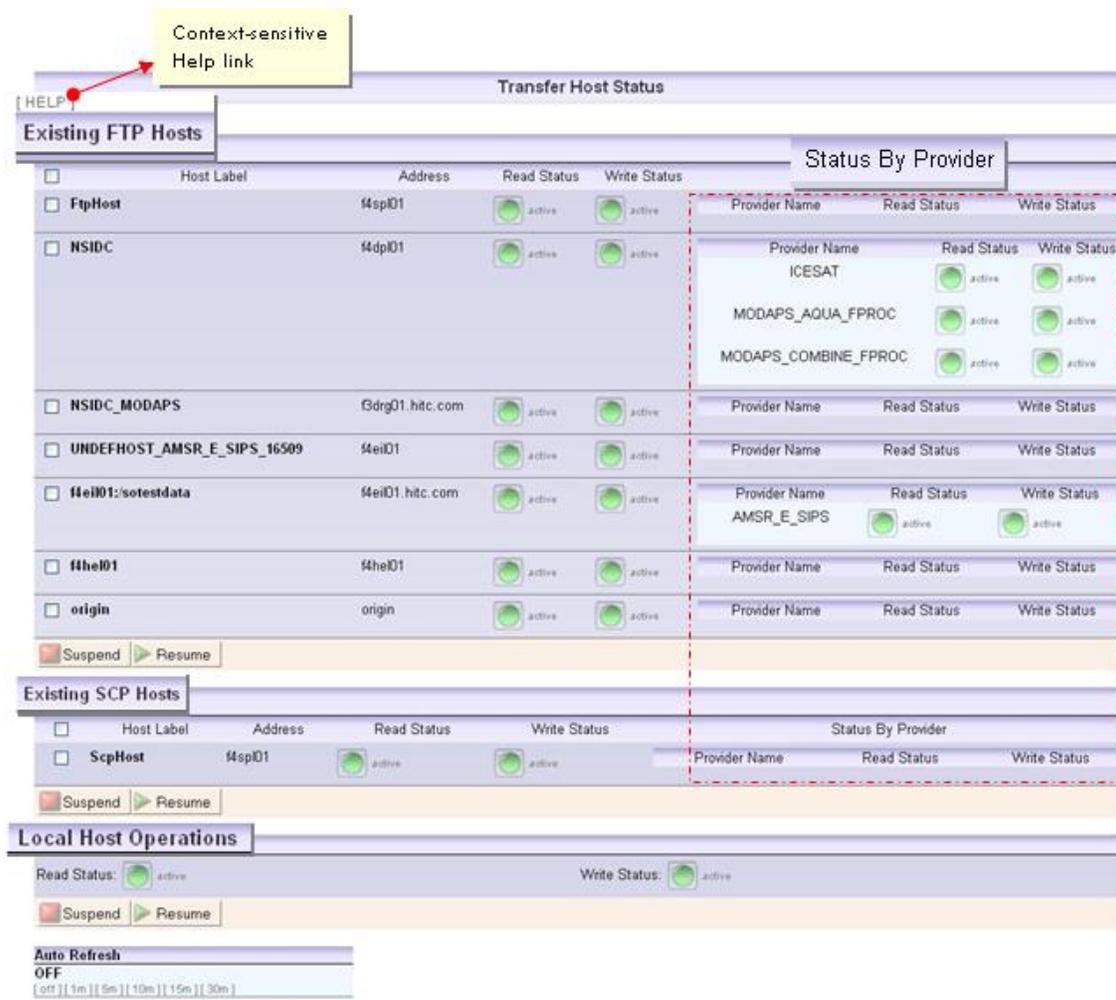


Figure 13.3-18. Transfer Host Status Page

- **Host Label:** Label assigned to the host on which the polling location is found.
- **Address:** The IP address or the canonical name and port number of the host.
- **Read Status:** Whether or not read actions (such as polling location listings) are active, suspended by operator, or suspended by server on the host.
- **Write Status:** Whether or not write actions (such as transferring notifications) are active or suspended on the host.
- **Status By Provider:**
 - **Provider Name** - Name of the provider with a polling location configured on the host (non-changeable from this page).
 - **Read Status** - Whether or not read actions are active or suspended for a

specific provider (non-changeable from this page).

- **Write Status** - Whether or not write actions are active or suspended for a specific provider.
-

Each of the FTP hosts, as well as Local Host Operations, can be suspended or resumed. The status columns show a green (active) or red (suspended) icon and indicate which operation (read, write, or both) are suspended.

13.3.6.2 Suspend or Resume Transfer Host

- 1 Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Monitoring** menu is expanded.
 - 2 Click on the **Transfer Host Status** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Transfer Host Status** page is displayed.
 - 3 Click on the **checkbox(es)** next to the desired **FTP (or SCP) Host**.
 - A checkmark is displayed in the checkbox.
 - 4 Click either the **Suspend** or **Resume** button located at the bottom of the page.
 - You will be prompted for a confirmation.
 - The page will reload and display status changes of the selected host(s).
 - Both Read and Write status will suspend as a result of suspending the host, if this option is executed. Polling stops on these hosts' transfer polling locations. A notification to the host(s) is halted until the host is later resumed.
 - If the status is suspended, the GUI indicates whether it was suspended by an operator or automatically by the server.
 - If a PDR is sent through processing with a host configured in the PDR that does not show up on the GUI, a new host will automatically be added to the list of FTP Hosts with the name UNDEFHOST_[Provider]_[RequestID]. No provider status will be displayed until the operator manually configures a provider to use that host.
-

13.3.7 Viewing ECS Service Status

The ECS Service Status page shows the status of each of the various ECS Services. There are two types of ECS Services:

1. Non-host Services – are services that run on the same host as the Ingest processing service. These services cannot be suspended or resumed by the operator because every granule requires these services to be active. If the service is suspended it means there is an alert open against that service.

2. Hosts Used For ECS Services – are services that can run on any number of hosts that have been configured for that purpose. Examples are checksumming, archiving, and transfers. The service on each host is independent of the same type of service on the other hosts, in that its configuration and status is host specific. For example, checksumming on one host may be suspended but may be operating just fine on the other. As a result, the GUI shows the status information for that service separately for each host.
 - The status columns show a green (active) or red (suspended) icon.
 - Some services exist only once and run on the host on which they were installed. An example is the XML Validation Service (XVU).
 - The DPL Ingest GUI shows only one configuration and status entry for each of those services that do not run on ECS Service host. These services are called *Non-Host Services*.

13.3.7.1 Viewing ECS Services Status

- 1 Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Monitoring** menu is expanded.
- 2 Click on the **ECS Service Status** link (Figure 13.3-19) of the **DPL Ingest GUI**.

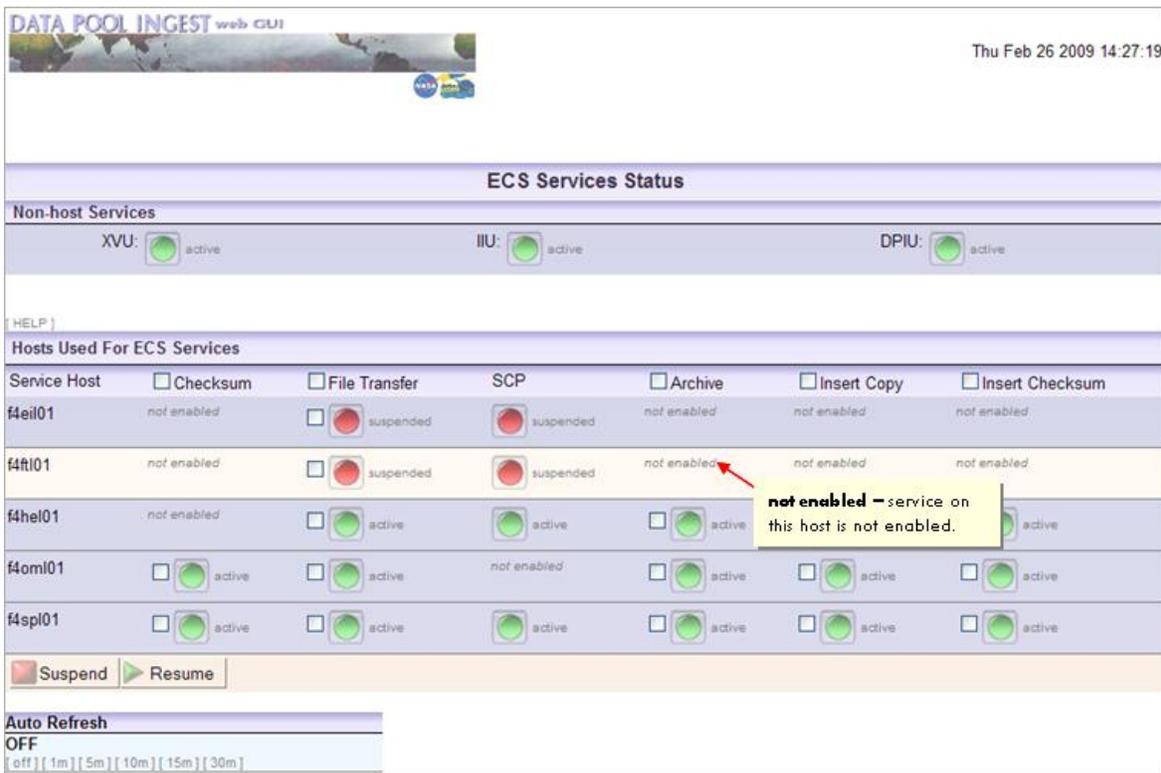


Figure 13.3-19. ECS Services Status Page

- The **ECS Service Status** page (Figure 13.3-19) displays the status for all **Non-Host Services**:
 - **XVU**: The XML Validation Utility (XVU) is used to validate the incoming granule metadata files.
 - Status: **Active, Suspended by Server or Suspended by Operator.**
 - **IIU**: The Inventory Insert Utility (IIU) service is used to insert granule metadata information into the AIM database
 - Status: **Active, Suspended by Server or Suspended by Operator.**
 - **DPIU**: The Data Pool Insert Utility (DPIU) is used to register granule metadata into the DPL database.
 - Status: **Active, Suspended by Server or Suspended by Operator.**
 - The **Host Used For ECS Services** displays the following services that are tied to a specific host, of which each of the services can be suspended or resumed on that particular host:
 - **Checksum** (Status: Active, Suspended by Server or Suspended by Operator.)
 - **File Transfer** (Status: Active, Suspended by Server or Suspended by Operator.)
 - **Archive** (Status: Active, Suspended by Server or Suspended by Operator.)
 - **Insert Copy** (Status: Active, Suspended by Server or Suspended by Operator.)
 - **Insert Checksum** (Status: Active, Suspended by Server or Suspended by Operator.)
-

Non-Host services are not tied to a particular host. These services can be suspended or resumed by simply clicking on the button next to the indicated service status.

Suspending a service on a host specific location, will let all service operations of that type that are currently executing on that host complete, but no new requests for that service will be dispatched to that host. For example, if the Checksum service is suspended for HOST_A, ongoing checksumming operations will complete, but then no more checksumming operations will be dispatched on that host (regardless of the type of checksum involved).

13.3.7.2 Suspend or Resume ECS Service(s)

- 1 Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Monitoring** menu is expanded.
 - 2 Click the **ECS Service Status** link of the **DPL Ingest GUI**.
 - The **ECS Services** page is displayed.
 - 3 In the **Non-Host Service**, click on the button next to the indicated SDSVR **Non-Host Service status**, to **Suspend or Resume** the SDSVR service.
 - The service will respond accordingly.
 - 4 In the **Hosts Used For ECS Services**, click the **checkbox** next to the desired **Service Host**.
 - A checkmark is displayed in the checkbox.
 - Multiple selections may be made.
 - 5 Select either the **Suspend** or **Resume** button located at the bottom of the page.
 - The page will reload with the status of the selected Service Host changed.
-

13.3.8 Monitoring PDR List

The PDR List page displays the PDR information retrieved from the Ingest database. The PDRs are listed by Polling Location Name and PDR File Name. Selecting a PDR from the PDR List allows the operator to re-ingest the data from the selected polling location.

13.3.8.1 Re-Ingesting a PDR

- 1 Click on the **Monitoring** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Monitoring** menu is expanded.
- 2 Click on the **PDR List** link of the **DPL Ingest GUI**.

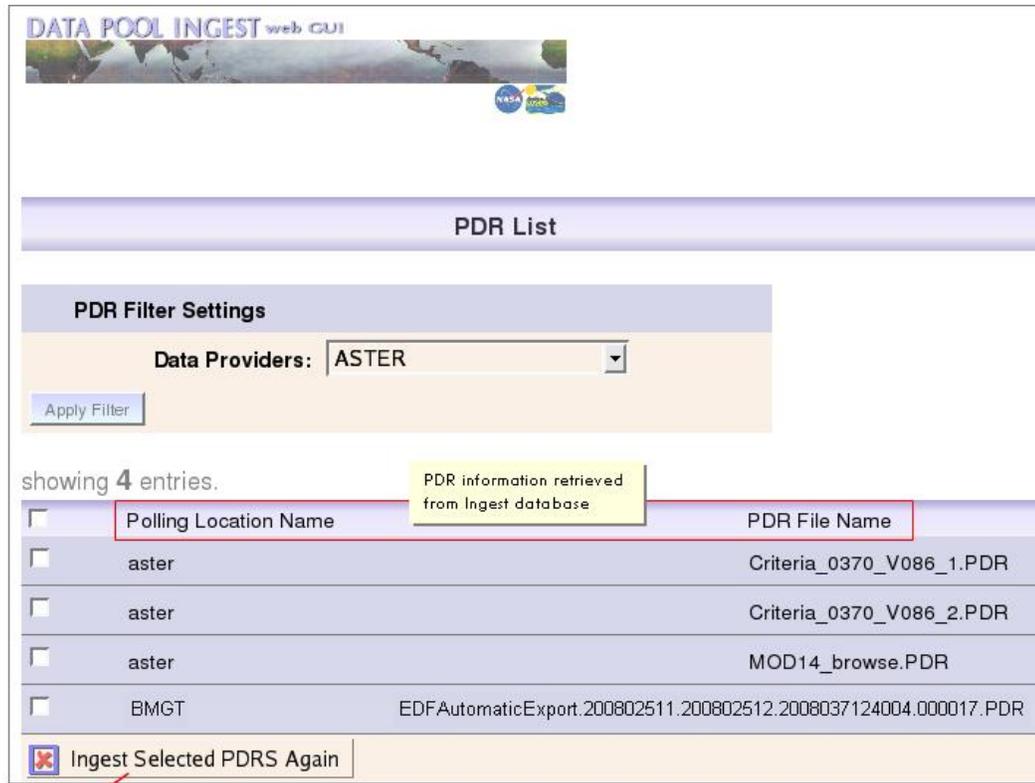


Figure 13.3-20. PDR List Page

- The **PDR List** page (Figure 13.3-20) displays a list of Polling Locations and File Name for filtered PDRs.
- 3 Click the checkbox next to the desired PDR/Polling location name.
 - A checkmark is placed in the checkbox.
 - 4 Select **Ingest Selected PDRS Again**
 - The data is re-ingested.

13.4 Interventions & Alerts

The Interventions & Alerts link provides the operator access to **Active Ingest Requests** with open interventions. The operator may select any eligible request and perform either a cancel request(s), resume request(s) or restart actions. Additionally, the **Interventions & Alerts** link displays Data Pool System Alerts as they are raised in the DPL database. These warn the operator when the Ingest Service runs into a problem that it believes is associated with a resource or service it is using. After raising an alert, the Ingest Service will check in regular intervals whether the problem has been resolved and clear the alert, if that is the case. An alert may also be cleared manually once the operator determined that the problem has been resolved. An operator might do that to avoid waiting until the next auto-retry of the resource. Table 13.4-1 provides an activity Checklist for Interventions & Alerts.

Table 13.4-1. Interventions & Alerts

Order	Role	Task	Section
1	Ingest Technician	Viewing Open Intervention Ingest Requests	(P) 13.4.1.1
2	Ingest Technician	Changing Request EMail Configuration	(P) 13.4.1.2
3	Ingest Technician	Changing Open Interventions Ingest Requests	(P) 13.4.1.3
4	Ingest Technician	Viewing Open Intervention Detail Page	(P) 13.4.1.4
5	Ingest Technician	Changing Suspended Granules Status	(P) 13.4.1.5
6	Ingest Technician	Viewing System Alerts	(P) 13.4.2.1
7	Ingest Technician	Changing EMail Recipient Configuration	(P) 13.4.2.2
8	Ingest Technician	Viewing Detailed System Alert Information	(P) 13.4.2.3
9	Ingest Technician	Clearing An Alert	(P) 13.4.2.4

13.4.1 Open Intervention

The **Interventions & Alerts** link provides the operator access to **Active Ingest Requests** with open interventions. The operator may select any eligible request and perform one of three actions:

- **Cancel (Active Ingest) Request(s)** – *This is an irreversible action with no way to ‘uncancel’ a request.* Processing for this ingest request will be terminated and any granules that did not complete processing, at this point, will be considered failed. A PAN will be sent to the provider that will report failed or cancelled granules and the failure reasons.
- **Resume (Active Ingest) Request(s)** – *Used only if the selected requests are suspended or cancelled – cancelled requests can not be resumed.* Resuming a request will resume processing for all granules that are currently suspended, restarting each from the last known good state. To disposition individual granules differently, the operator needs to access the intervention detail page.

- **Restart (Active Ingest) Request(s)** – an operator invoked action to re-activate/re-start eligible granules from their beginning state.

13.4.1.1 Viewing Open Intervention Ingest Requests

- 1 Click on the **Interventions & Alerts** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Interventions & Alerts** menu is expanded.
- 2 Click on the **Interventions** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Open Interventions** page (Figure 13.4-1) is displayed and contains the following **Open Information Management** information for all interventions:

Open Interventions

Show / Hide Filters

This panel shows the current filter settings.

Combined Filter Settings

Data Provider : -- SHOW ALL --

Intervention Type : -- SHOW ALL --

Target Archive : -- SHOW ALL --

Save as default settings [HELP]

Apply Filter Load Default Settings

[HELP]

Open Intervention Management

Showing 0 - 0 of 0 [Navigation icons] Page size: 20 [dropdown]

<input type="checkbox"/>	Request ID	Provider	Intervention Type	Worker	When Created	When Acknowledged
<input type="checkbox"/>	16505	ACRIM	PreprocErr		2007-08-17 12:21:06	2007-08-17 12:25:52
<input checked="" type="checkbox"/>	14918	JPL	XferErr			

Click to sort in (^)Ascending or (v) Descending on this column by creation date – for this session only.

Click to apply action to "active" requests

Cancel Requests Resume Requests Restart Requests

Intervention Related Configuration

Parameter Name	Parameter Description	Parameter Value
NOTIF_INTERV_EMAIL_ADDRESS	Email address for sending operator interventions and alerts	cmshared@f4ei101.hitc.c
SEND_INTERVENTION_EMAILS	Indicates whether to send an email for interventions	<input checked="" type="checkbox"/>

Apply Changes Cancel Changes

Auto Refresh

OFF

[off] [20s] [30s] [1m] [5m] [10m] [15m] [30m]

Please Enter A Reason For The Status Change: [Cancel]

File size error needs review. Request will be cancelled and resubmitted later.

This box appears to capture reason for status change (i.e., "Cancel Requests" for Request ID 14918).

Continue to Cancel Requests

Figure 13.4-1. Open Interventions Page

- **Request ID.**
 - Unique Data Pool Ingest identifier assigned to the request in intervention.
 - **Provider.**
 - Name of the provider from which the request was obtained.
 - **Intervention Type.**
 - Type of error encountered during processing of at least one of the request granules: (i.e., XferErr, ChecksumErr, PreProcErr, ArchErr, InsertErr, PubErr, InitErr, Multiple).
 - **Worker.**
 - Name of a worker assigned to address the intervention.
 - **When Created.**
 - Time the intervention was generated (which may have been after several retries after the error was first encountered).
 - **When Acknowledged.**
 - Time the intervention was first viewed by an operator.
 - The **Intervention Related Configuration** fields are as follows and can be changed:
 - **Parameter Name.**
 - **SEND_INTERVENTION_EMAIL.** Indicates whether to send an Email for Intervention.
 - **NOTIFY_INTERV_EMAIL_ADDRESS.** Email address for sending operator interventions and alerts.
 - **Parameter Description.**
 - Indicates whether to send an Email for Intervention.
 - Email address for sending operator interventions and alerts.
 - **Parameter Value.**
 - **SEND_INTERVENTION_EMAIL.** Contains a checkbox to apply or change this parameter.
 - **NOTIFY_INTERV_EMAIL_ADDRESS.** Contains a textbox to enter an Email address for sending operator interventions and alerts.
-

The **Interventions & Alerts** link provides the operator access to **Ingest Requests** with open interventions. The operator may set and/or change the email recipient configuration from within the Intervention Related Configuration section of the Open Interventions page (Figure 13.4-2).

Intervention Related Configuration		
Parameter Name	Parameter Description	Parameter Value
NOTIF_INTERV_EMAIL_ADDRESS	Email address for sending operator interventions and alerts	cmops_edf@yahoo.com
SEND_INTERVENTION_EMAILS	Indicates whether to send an email for interventions	<input checked="" type="checkbox"/>

Apply Changes
 Cancel Changes

Figure 13.4-2. Interventions Related Configuration Section

13.4.1.2 Changing E-Mail Recipient Configuration

- 1 Click on the **Interventions & Alerts** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Interventions & Alerts** menu is expanded.
- 2 Click on the **Interventions** link of the **DPL Ingest GUI**.
 - Displays the **Open Interventions** page.
- 3 To set or change the intervention email address parameter: In the **Intervention Related Configuration** section, enter an **email address** in the **NOTIFY_INTERV_EMAIL_ADDRESS Parameter Value** textbox (Figure 13.4-2).
- 4 To set the email address and permit mail notification of Interventions for available addressee(s): Click on the **checkbox** next to the **SEND_INTERVENTION_EMAIL Parameter Value** column (Figure 13.4-2).
 - A checkmark is displayed in the checkbox.
- 5 Click on **Apply Changes** button displayed at the bottom of the **Intervention Related Configuration** section.
 - A confirmation window is displayed. To confirm, click OK.
 - The page will reload with the new e-mail address.
 - The configured email address(es) will receive notifications for all interventions as they are opened.

When a request completes its processing, a review is made to determine the status of each granule. If at least one granule from a request is suspended because it ran into some error, the entire request is suspended and goes into Operator Intervention Status as Suspended.

From the **Open Intervention Ingest Requests** an operator can resume suspended requests regardless of the reason for a failure.

13.4.1.3 Changing Open Intervention Ingest Requests

- 1 Click on the **Interventions & Alerts** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Interventions & Alerts** menu is expanded.
 - 2 Click on the **Interventions** link in the navigation frame of the **DPL Ingest GUI**.
 - Displays the **Open Interventions** page.
 - 3 In the **Open Intervention Management** section of the Open Intervention page, click the checkbox next to the desired **Request ID**.
 - A checkmark is displayed in the checkbox.
 - Multiple selections may be made.
 - 4 Select either the **Cancel Requests** or **Resume Requests** button located at the bottom of the page as appropriate.
 - Selecting **Cancel Requests** is an irreversible action. There is no way to ‘un-cancel’ a request. Processing for this ingest request will be terminated and any granules that did not complete processing will be considered failed. A PAN will be sent to the provider that will report the failed granules and the failure reasons.
 - Selecting **Resume Requests** will resume a request if the selected requests are suspended or not cancelled. Resuming a request will resume processing for all granules that are currently suspended, restarting each from the last known good state. To disposition individual granules differently, the operator needs to access the intervention detail page.
 - The page will reload with the status of the selected Request ID changed.
-

The **Open Interventions Detail** page allows the operator (who has Ingest Control permissions) to invoke actions on specific granules that have been intervened. Information related to the Ingest Request, contained in the Open Intervention page, is displayed at the page top, in the Intervention Info section of the Open Intervention Detail page. Related granule(s) listing(s) with detailed information is displayed at the bottom of the page. An Operator Intervention for an Ingest Request remains open as long as there are suspended granules in the Request. The operator can take one of several actions to ‘close’ the intervention (i.e., take the request out of suspension and allow the Ingest Request to be processed normally). Furthermore, any granule(s) encountering problems during any point in processing are initially flagged as “suspended”. The following actions can be performed depending on the granule state:

- **Fail Selected Granules.**
 - Applicable to granule(s) currently in the suspended state, then will transition granule(s) into a failed state. This is a permanent action and cannot be reversed. The type of suspension error the granule originally encountered will be stasured. Errors types are determined by the granules’

failed state: XferErr (transferring), ChecksumErr (checksumming), PreproErr (preprocessing), ArchErr (archiving), InsertErr (inserting),

- **Retry Selected Granules.**
 - Applicable to granule(s) that are currently suspended and retries from the last known good state of processing (e.g., checksum), at which point an annotation is added identifying the time, operator and action taken. This is effective for most cases and requires the least amount of time to reprocess.
- **Retry From START Selected Granules.**
 - The granule is retried from the start of processing, no matter where in the processing chain it failed. An annotation is added identifying the time, operator and action taken.
- **Cancel Selected Granules.**
 - Applicable only to those granules not yet in a terminal state. The granule is manually cancelled and the operator is expected to re-ingest the granule.

Once all granules issues have been resolved, the Operator Intervention status will automatically be removed. No explicit action on the part of the operator is required to do this.

If an Operator Intervention is not resolved after being viewed, it will remain in the intervention list and can be worked on at any time after navigating to a different page or even logging out of the session.

13.4.1.4 Viewing Open Intervention Detail Page

- 1 Click on the **Interventions & Alerts** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Interventions & Alerts** menu is expanded.
- 2 Click on the **Interventions** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Open Interventions** page is displayed.

- 3 Click on the specific **Request ID**.
 - The **Open Intervention Detail** page (Figure 13.4-3) is displayed.

The screenshot shows the 'Open Intervention Detail' page. At the top, it displays 'Intervention Info' with fields for RequestID: 14921, Provider: JPL, Intervention Type: MULTIPLE, and Worked By: James Pino. The status is 'Suspended' and the size is '24.586 MB'. A 'Priority: NORMAL' section indicates 'No. Granules: 4 (0% complete)'. A 'Show / Hide' link is highlighted with a callout: '[Show / Hide] link to display or collapses the Intervention Info section of the details page.'

The main content area includes 'Intervention Creation Date/Time: 2006-10-30 11:53:51', 'Intervention Acknowledgement Date/Time: 2006-10-30 11:54:58', 'When Queued: 2006-10-30 11:53:42', and 'When Processing Started: 2006-10-30 11:53:44'. Below this is an 'Operator Notes' section with two entries from 'IngAdmin' dated 2006-10-30 11:56:05 and 2006-10-30 12:06:20. A callout points to the 'Add annotation...' link: '[Add annotation...] link to display a time stamped (with OperatorID) annotation textbox for Notes.'

An 'Ingest Request Detail' pop-up window is visible on the right, showing 'Request ID: 14921', 'Status: Suspended', and 'Priority: HIGH'. It includes a 'view details' link and a 'Granule Statistics' table:

Total Granules	Granules Progressed	Granules Failed	Granules Transferred	Granules Cancelled	No. Files
2	0%	0%	0%	0%	2

Below the notes is a 'Request Notes' section with the text 'There are no Request Notes for this request.' and a 'Granule action buttons' bar with icons for 'Retry Selected Granules', 'Retry From START Selected Granules', 'Fail Selected Granules', and 'Cancel Selected Granules'.

The 'Granule List' section shows a table with 4 granules. A callout points to the '[show/hide]' link in the first row: '[show/hide] link to display or hide details of granules that have not reached terminal state for action.'

File Detail	Seq Number	Ingest Gran. ID	Data Type	Version	Status	Granule Size (MB)	No. Files	Processing Start	Processing End
[show/hide]	1	15000000008388	MOD29P1D	86	Suspended (overErr) Error executing the following copy command: /usr/ecs/OPS/CUSTOM/bin/DPLcDlCopyExec /home/cmshare/PDRS/scripts/TEMP/OPS/Criteria_1420_MOD_r1.1162227188.55036.RGEN.hdf.met /datapool/OPS/user/FS1/temp/ingest/14921/15000000008388/4096.3	6.148	2	2009-02-03 17:04:38	2009-02-03 17:04:45
[show/hide]	3	15000000008390	MOD29P1D	86	Successful	6.148	2		
[show/hide]	4	15000000008391	MOD29P1D	86	Successful	6.144	2		
[show/hide]	2	15000000008389	MOD29P1D	86	PreprocErr Metadata validation failed with error: Metadata validation failed with reason: Failure reason: Error obtaining INVENTORYMETADATA from the descriptor, Failed by Operator	6.144	2	2009-02-03 17:12:46	

Figure 13.4-3. Open Interventions Detail Page

- The following detailed information is displayed in the Open Interventions Detail – Intervention Info section (Table 13.4-2):

Table 13.4-2. Open Interventions Detail – Intervention Info

Field Name	Description
Request ID	Unique Data Pool Ingest identifier assigned to the request in intervention.
Provider	Name of the provider from which the request was originated.
Intervention Type	Type of error encountered during processing of at least one of the request granules (if there are multiple error types encountered in a single request, the type will be “MULTIPLE”). Other types of errors: XferErr, ChecksumErr, PreProcErr, ArchErr, InsertErr, PubErr, InitErr.
Worked By	Name of a worker assigned to address the intervention.
Status	Provides status of a request (i.e. New, Validated, Active, Partially_Suspended, Suspended, Cancelling, Resuming, Successful, Cancelled, Partially_Cancelled, Failed, Partial_Failure or Terminated).
Size	Sum of the size of all granules in the request.
Priority	The precedence which a request will have for activation and various processing actions (i.e., XPRESS, VHIGH, HIGH, LOW or NORMAL).
No. Granules	Total Granules included in the request.
Intervention Creation Date/Time	Time the intervention was generated (which may have been after several retries after the error was first encountered).
Intervention Acknowledgement Date/Time	Time the intervention was first viewed by an operator.
When Queued	Time request was queued.
When Processing Started	Time when request processing started.
Operator Notes	Displays all notes along with the name of the operator who added the annotation.
Request Notes	Displays Request related annotations by the operator included a time stamp with OperatorID.
Granule List	The section contains the following information for all the granules associated with this request.

- The following detailed information is displayed in the Open Interventions Detail – Granule List section (Table 13.4-3) which provides detailed file information about each granule:

Table 13.4-3. Open Interventions Detail – Granule List

Field Name	Description
File Detail (show/hide)	A link that displays/toggles the following details for a Granule: <ul style="list-style-type: none"> • <i>Path</i>: Directory identified in the PDR where the file can be found • <i>Name</i>: Name of file. • <i>Type</i>: Type of file, as identified by the file extension (e.g., SCIENCE or METADATA). • <i>Status</i>: Last action performed on the file or the most recent, unresolved, error encountered while processing the file.
Seq. Number	The order in which a granule was found in the PDR.
Ingest Gran. ID	Unique Identifier assigned to the granule.
Data Type	Data Type found in the PDR describing the granule.
Version	Version found in the PDR describing the granule.
Status	Current granule status (whether the granule is queued, its stage in processing, an error status, or its terminal state) and detailed error information.
Granule Size (MB)	Sum of the size of all files associated with the granule.
No. Files	Number of files found associated with the granule in the PDR.
Processing Start	Time the granule’s processing started.
Processing End	Time the granule’s processing ended.

The **Open Interventions Detail** page is the operator’s link to taking action on specific granules that have been intervened. The **Request** information contained in the Open Intervention page is listed at the top of the page. A list of granule(s) along with detailed information is displayed at the bottom of the page.

An Operator Intervention remains open as long as there are suspended granules. The operator can take one of several actions to ‘close’ the intervention (i.e., take the request out of suspension and allow the Ingest Request to be processed normally):

- The suspended granules can be failed. This is a permanent action and cannot be reversed. The granule transitions into one of the ingest granule error states that indicates the type of error the granule encountered.
- The suspended granules can be retried in one of two ways:

- **Retry Selected Granules.**
 - The granule is retried from the last point of processing (For example: Checksum), at which point it was suspended. This is effective for most cases and requires the least amount of time to reprocess.
- **Retry From Start.**
 - The granule is retried from the start of processing, no matter where in the processing chain it failed.

13.4.1.5 Changing Suspended Granules Status

- 1 Click on the **Interventions & Alerts** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Interventions & Alerts** menu is expanded.
 - 2 Click on the **Interventions** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Open Interventions** page is displayed.
 - 3 Click on the specific **Request ID**.
 - **The Open Interventions Detail** page is displayed.
 - 4 In **Granule List** section of the Open Intervention Detail page, click on the checkbox next to the desired **Granule ID**.
 - A checkmark is displayed in the checkbox.
 - Multiple selections may be made.
 - 5 Any granule(s) encountering problems during any point in their processing are initially flagged as “suspended”. **To modify**, click one of the **appropriate buttons**:
 - **Fail Selected Granules.**
 - Suspended granules can be failed. This is a permanent action and cannot be reversed. The granule transitions into one of the ingest granule error states that indicates the type of error the granule encountered.
 - **Retry Selected Granules.**
 - This applies only to granules that are currently suspended. The granule is retried from the last point of. This is effective for most cases and requires the least amount of time to reprocess.
 - **Retry Selected Granules From Start.**
 - This applies only to granules that are currently suspended. The granule is retried from the start of processing, no matter where in the processing chain it failed.
 - **Cancel Selected Granules.**
 - The granule is cancelled.
 - Once the suspended granule retry is successful, the system will automatically close the Operator Intervention.
-

13.4.2 Viewing System Alerts

The Ingest operator is able to monitor Data Pool System Alerts as they are raised in the Ingest database. These alerts warn the operator when the Ingest Service runs into a problem that is believed to be associated with a resource or service being used. Ingest Service checks in regular

intervals whether the problem has been resolved and clear the alert if that is the case. An alert may also be cleared manually once the operator determines that the problem has been resolved.

13.4.2.1 Viewing System Alerts

1 If the **DPL Ingest GUI Home** page is displayed, and an alert has been generated, the General System Statistics section will contain a link to **System Alerts**. Clicking on this link will take you to the **Alerts** page.

- The Alerts page is displayed.

OR

2 Click on the **Interventions & Alerts** link in the navigation frame of the **DPL Ingest GUI**.

- The **Interventions & Alerts** menu is expanded.

3 Click on the **Alerts** link in the navigation frame of the **DPL Ingest GUI**.

- The **Alerts** page (Figure 13.4-4) containing the following **Alert Management** information for the Data Pool is displayed:

The screenshot shows the Alerts page in the DPL Ingest GUI. At the top, the page title is "DATA POOL INGEST web GUI" and the date/time is "Thu Feb 5 2009 13:21:56". The main heading is "Alerts". Below this is a "Combined Filter Settings" panel with dropdowns for "Alert Type" (set to "SHOW ALL") and "Resource Type" (set to "SHOW ALL"), and buttons for "Apply Filter" and "Load Default Settings". A callout box says "This panel shows the current filter settings." Below the filter settings is an "Alert Management" table with columns: Alert Details, Alert Description, Alert Type, Resource, Resource Type, Server Name, and Creation Time. One alert is listed: "Failure to connect with an ECS service" with Alert Type "SRVC_CANNOT_CONNECT", Resource "H1001", Resource Type "FILE_TRANSFER", Server Name "Processing", and Creation Time "2007-01-30 16:21:54". A callout box says "Clears selected Alert." pointing to the "Alert Details" checkbox. Below the table is an "Alert Related Configuration" section with parameters: "ALERT_EMAIL_ADDRESS" (cmshared@44eil01.hitc.c) and "SEND_ALERT_EMAILS" (checked). Below that is an "Auto Refresh" section set to "OFF". At the bottom, there is a detailed view of the selected alert with a "Show / Hide" link. The details include: "The error response indicates that the file system is down", "Symptom: Error DPL file system: /datapool/DEV01/user/FS3/ is down", and "Impact: Data Providers affected: None, Number of PDRs: 0, Number of granules: 0, Total amount of data queued: 0 000 MB, Total amount of data processing: 0 000 MB". A callout box says "If Resource Type is an archive or file system, link displays/toggles additional details related by the alert condition."

Figure 13.4-4. Alerts Page

- **Alert Details.**
 - The **Show/Hide** link will display expanded detailed alert information to include **Symptom** and **Solutions** of the alert.
 - **Alert Description.**
 - Basic description of the error that generated the alert.
 - **Alert Type.**
 - Unique name for the type of error that was encountered.
 - **Resource.**
 - The name of the resource affected by the alert.
 - **Resource Type.**
 - The type of resource affected by the alert, such as SCP/FTP Host, Polling Location or Archive.
 - **Server Name.**
 - .The name of the server affected by the alert.
 - **Creation Time.**
 - The time by the alert was generated (which may have recorded after several retries after the error was first encountered).
 - The **Alert Related Configuration** fields displayed as follows:
 - **Parameter Name.**
 - **ALERT_EMAIL_ADDRESS.**
 - **SEND_ALERT_EMAIL**
 - **Parameter Description.**
 - Email address to which alert emails will be sent.
 - Indicates whether sending alert emails is active.
 - **Parameter Value.**
 - Contains a place to enter an email address for sending alerts notification.
 - Contains a checkbox to select this parameter.
 - Contains a place to enter an email address for sending operator interventions and alerts.
-

In addition to being displayed on this page, alerts can also be sent as email to a specified address. Use the following procedure to set the email address and permit email notification.

13.4.4.2 Changing Email Recipient Configuration

- 1 Click on the **Interventions & Alerts** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Interventions & Alerts** menu is expanded.
 - 2 Click on the **Alerts** link in the navigation frame of the **DPL Ingest GUI**.
 - Displays the **Alerts** page.
 - 3 In the **Alert Related Configuration** section, enter an address in the **Parameter Value** field for the **ALERT_EMAIL_ADDRESS** parameter.
 - 4 Click on the checkbox in the **SEND_ALERTS_EMAIL** Parameter Value checkbox.
 - A checkmark is displayed in the checkbox.
 - 5 Click on **Apply Changes** button displayed at the bottom of the **Alert Related Configuration** section.
 - The page will reload with the new email address.
-

The Ingest operator is able to monitor Data Pool System Alerts as they are raised in the DPL database. Additional details can be viewed by using the Show/Hide button and will include **Symptoms** of the alert. If the **Resource Type** is an **archive** or **file system** the Alert Details will contain **Symptoms, Data Provider, Request Status** information. These alerts warn the operator when the Ingest Service runs into a problem that is believed to be associated with a resource or service it is using. The Ingest Services test in regular intervals whether the problem has been resolved and if so, automatically clears the alert. An alert may also be cleared manually once the operator determined that the problem has been resolved.

13.4.2.3 Viewing Detailed System Alert Information

- 1 Click on the **Interventions & Alerts** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Interventions & Alerts** menu is expanded.
 - 2 Click on the **Alerts** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Alerts** page is displayed.
 - 3 In the **Alert Management** section of the screen, click on the **Show/Hide** button to display the following Detailed Alert information:
 - **Symptom**
 - Information about the specific action or item that caused the alert.
 - If the Resource Type is an Archive or File System, the following alert details are displayed:
 - **Data Providers affected:**
 - List of providers that will be suspended as a result of the alert.
 - **Number of PDRs.**
 - Total number of PDRs “stuck” in a particular state as a result of the alert.
 - **Number of granules.**
 - Total number of granules “stuck” as a result of the alert.
 - **Total amount of data queued.**
 - Sum of the size of the files in the granules that require the file system and will not be activated while it is suspended.
 - **Total amount of data processing.**
 - Sum of the size of the files in the granules that require the file system, but will get “stuck” in an active state as a result of the alert.
-

An alert may be cleared manually once the operator determines that the problem has been resolved. In response, the Ingest Service will resume using that resource and all the associated resources. The Ingest Service may find that it is still unable to use the resource (e.g., still cannot connect), in which case the alert will be raised again. However, it may be appropriate to manually clear an alert, e.g., if the operator took steps to manually resolve the reported problem (restarting an ECS Host) and then expects the Ingest Service to immediately try using that resource.

13.4.2.4 Clearing an Alert

- 1 Click on the **Interventions & Alerts** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Interventions & Alerts** menu is expanded.
 - 2 Click on the **Alerts** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Alerts** page is displayed.
 - 3 In **Alert Management** section of the **Alerts** page, click on the checkbox next to the Alert(s) to be cleared.
 - A checkmark is displayed in the checkbox.
 - Multiple selections may be made.
 - 4 After selecting all alerts to be cleared, click on the **Close Alerts** button.
 - A confirmation prompt is displayed. Select **OK** or **Cancel**.
 - If you selected **OK**, the page will be reloaded with the selected alerts no longer appearing on the list.
-

13.5 DPL Ingest Configuration

This section contains descriptions of how to modify DPL Ingest configuration values.

The DPL Ingest Configuration pages provide the full-capability operator with a means of modifying (if necessary) the values assigned to the following types of DPL Ingest configuration parameters:

- Providers.
- Data Types.
- Transfer Hosts.
- File Systems
- ECS Services
- Global Tuning
- Volume Groups.
- Operators

Table 13.5-1 provides an activity Checklist for Modifying DPL Ingest Configuration.

Table 13.5-1. Modifying DPL Ingest Configuration

Order	Role	Task	Section
1	Ingest Technician	Edit a Data Provider	(P) 13.5.1.1
2	Ingest Technician	Edit a Polling Location	(P) 13.5.1.2
3	Ingest Technician	Remove a Data Provider	(P) 13.5.1.3
4	Ingest Technician	Remove a Polling Location	(P) 13.5.1.4
5	Ingest Technician	Add a Data Provider	(P) 13.5.1.5
6	Ingest Technician	Changing Default Retention Times for Data Types	(P) 13.5.2.1
7	Ingest Technician	Changing Data Types Attributes	(P) 13.5.2.2
8	Ingest Technician	Remove FTP or SCPTransfer Host	(P) 13.5.3.1
9	Ingest Technician	Add FTP or SCP Transfer Host	(P) 13.5.3.2
10	Ingest Technician	Edit FTP or SCP Transfer Host	(P) 13.5.3.3
11	Ingest Technician	Edit Local and Default Host Configuration	(P) 13.5.3.4
12	Ingest Technician	Change File System Threshold	(P) 13.5.4.1
13	Ingest Technician	Remove Checksum Type	(P) 13.5.5.1
14	Ingest Technician	Add Checksum Type	(P) 13.5.5.2
15	Ingest Technician	Add an ECS Service Host Type	(P) 13.5.5.3
16	Ingest Technician	Edit an ECS Service Host Type	(P) 13.5.5.4
17	Ingest Technician	Change Global Tuning Parameters	(P) 13.5.6.1
18	Ingest Technician	Add a Volume Group For a New Versioned Data Type	(P) 13.5.7.1
19	Ingest Technician	Add a Volume Group For an Existing Versioned Data Type	(P) 13.5.7.2
20	Ingest Technician	Modify Volume Groups	(P) 13.5.7.3
21	Ingest Technician	Modify Operator Permission Settings	(P) 13.5.8.1
22	Ingest Technician	Add Operator Permissions	(P) 13.5.8.2
23	Ingest Technician	Remove Operator Permission Settings	(P) 13.5.8.3

13.5.1 Data Provider Configuration

The Provider Configuration page (Figure 13.5-1) lists all of the Data Providers for the DPL Ingest System along with the following selected attributes for each **Provider**:

- **Checksum Mandatory.**
- **% Files To Checksum.**
- **Default Priority.**

- **Notification Method.**

Provider	Checksum Mandatory	% Files To Checksum	Default Priority	Notification Method
<input type="checkbox"/> <u>AMSR_E_SIPS</u>	<input checked="" type="checkbox"/>	100%	NORMAL	FTP
<input type="checkbox"/> <u>ASTER_GDS</u>	<input checked="" type="checkbox"/>	100%	VHIGH	EMAIL
<input type="checkbox"/> <u>ASTER_OSF</u>	<input checked="" type="checkbox"/>	100%	NORMAL	FTP
<input type="checkbox"/> <u>DDIST</u>	<input checked="" type="checkbox"/>	100%	NORMAL	EMAIL
<input type="checkbox"/> <u>ECSBulkExport</u>	<input checked="" type="checkbox"/>	0%	VHIGH	EMAIL
<input type="checkbox"/> <u>EDOS</u>	<input checked="" type="checkbox"/>	100%	VHIGH	EMAIL
<input type="checkbox"/> <u>ICESAT</u>	<input checked="" type="checkbox"/>	100%	NORMAL	FTP
<input type="checkbox"/> <u>JPL</u>	<input checked="" type="checkbox"/>	100%	NORMAL	FTP
<input type="checkbox"/> <u>MODAPS_AQUA_FPROC</u>	<input checked="" type="checkbox"/>	100%	NORMAL	EMAILFTP
<input type="checkbox"/> <u>MODAPS_COMBINE_FPROC</u>	<input checked="" type="checkbox"/>	100%	NORMAL	FTP
<input type="checkbox"/> <u>MODAPS_TERRA_FPROC</u>	<input checked="" type="checkbox"/>	100%	NORMAL	EMAIL
<input type="checkbox"/> <u>NSIDC_DAAC</u>	<input checked="" type="checkbox"/>	100%	NORMAL	EMAIL
<input type="checkbox"/> <u>S4P00</u>	<input checked="" type="checkbox"/>	100%	NORMAL	EMAIL

Figure 13.5-1. Provider Configuration Page

By clicking on the underscored Provider name, the operator can view/change configuration parameters for a data provider. Table 13.5-2 contains a list of changeable Data Provider parameters and their descriptions.

Table 13.5-2. Edit a Data Provider Configuration Parameter Descriptions (1 of 2)

Field Name	Entry	Description
Name	Required	Name for an external data provider
ProviderType	Required	Indicates the type of the provider (such as Polling with DR, Polling without DR, EDOS)
Checksum Mandatory	Optional	Indicates that the Data Provider <i>must</i> provide checksum information in the PDR.
% Files to Checksum	Required	Percent of requests to checksum for this provider
Default Priority	Required	Default priority for ingest requests for this provider

Table 13.5-2. Edit a Data Provider Configuration Parameter Descriptions (2 of 2)

Field Name	Entry	Description
Preprocessing Type	Required	Type of ingest processing to occur (such as SIPS or DDIST)
Max Active Data Volume	Required	Maximum total active data volume that will be allocated to a provider if requests for other providers are pending
Max Active Granules	Required	Maximum total active granules that will be allocated to a provider (if requests for other providers are pending)
Transfer Type	Required	Method used for obtaining files from the external data provider (local, FTP, or SCP with various cipher types)
Notification Method	Required	Method for providing notifications to the provider (email, SCP, FTP, or combination of SCP/FTP and email)

13.5.1.1 Edit a Data Provider

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2 Click on the **Providers** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Provider Configuration** page is displayed. (Figure 13.5-1.)
- 3 Click on the underscored **Provider** link (under the name column) to be modified.
 - The **Provider Configuration Detail - Edit a Provider** page (Figure 13.5.2) is displayed.
 - **NOTE:** Trailing and leading white space will be removed from values entered into text fields on this page and all related sub-pages.

Edit a Provider

Name: MODAPS_AQUA_FPROC

Provider Type: Polling with DR

Checksum Mandatory:

% Files to Checksum: 100 [0-100]

Default Priority: VHIGH(235)

Preprocessing Type: SIPS

Max Active Data Volume: 3750.000 MB [help]

Max Active Granules: 30 [help]

Transfer Type: Ftp [help]

Read Info

Read Login ID: ins

Edit Password:

FTP Mode: Passive

Notification Method: Email And Ftp

E-Mail Info

E-Mail address: cmdex08@yahoo.com

Write Info

Write Login User ID: ins

Edit Password:

Path: /usr/ecs/OPS/CUSTOM/data/dplngest/amrs/P

Choose Host: NSIDC [help]

Name	NSIDC
Address	4ei01
Max FTP Operations	7
Timeout	yes (30s)
Auto Retry	yes (15s)

Apply Changes Reset

Name	Address	Source Polling Path	Polling Freq
<input type="checkbox"/> OLA_Test	LOCAL	/usr/ecs/OPS/CUSTOM/data/INS/pollAMSR/	120
<input type="checkbox"/> pollAMSR	4ei01	/usr/ecs/OPS/CUSTOM/data/dplngest/amrs/pollAMSR_E_SIPS	120

Remove Selected Polling Locations Add A Polling Location

Figure 13.5-2. Edit a Provider Page

- 4 Select the fields to be modified.
 - Certain fields are required and must be populated.
 - 5 To apply changes, click the **Apply Changes** button.
 - A Confirmation prompt is displayed. Click **OK**
 - Changes are accepted.
-

Table 13.5-3 describes the changeable Polling Location fields. The following procedure contains the steps required to Edit a polling location.

Table 13.5-3. Polling Location Page Field Descriptions

Field Name	Entry	Description
Parent Provider	Not Editable	Name of the provider with which this polling location is associated
Polling Location Name	Required	Name used to uniquely identify the polling location
Source Polling Path	Required	Source Directory where the PDRs are located.
Polling Frequency	Required	Number of seconds the ingest service will wait between scanning the polling path for new PDRs (must be greater than 120 seconds)
DPL Ingest Enabled	Optional	Indicates whether this polling location is enabled for ingest via DPL
Polling Method	Required	Transfer method used for obtaining PDRs from the polling location (Local Disk. Or Ftp Host)
Host Name	Required if using a remote transfer method	Host where the polling directory is found

13.5.1.2 Edit a Polling Location

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2 Click on the **Providers** link in the navigation frame of the **DPL Ingest GUI**.
 - The Provider Configuration page is displayed.
- 3 Click on the **Provider** to be modified.
 - The **Edit a Provider** page is displayed (Figure 13.5-2).
- 4 Locate the Existing Polling Locations section (at page bottom).
- 5 Click the **underscored Polling Location** name link in the name column.
 - The **Edit a Polling Location Details** page (Figure 13.5-3) is displayed.

The screenshot displays the 'Edit a Polling Location' interface. The main form includes the following fields and options:

- Parent Provider: AMSR_E_SIPS
- Polling Location Name: OLA_Test
- Source Polling Path: /usr/ecs/OPS/CUSTOM/data/INS/pc
- Polling Frequency: 120 [seconds]
- DPL Ingest Enabled:
- Polling Method: FTP Host
- Host Name: Define New Host...

The 'Existing Host Parameters' inset shows:

Name	NSIDC
Address	f4eil01
Max FTP Operations	7
Timeout	yes (30s)
Auto Retry	yes (15s)

The 'New Host Parameters' section includes:

- Label: []
- Address: []
- Max. Operations: 5
- Timeout: [enable host timeout]
- Expected Throughput: 3,000 [Minimum expected throughput, in MB/s]
- Pad Time: 30 [seconds]
- Auto Retry: [enable automatic retry when Host is suspended]
- Retry Interval: 120 [seconds]

Buttons: Apply Changes, Reset

Figure 13.5-3. Edit a Polling Location Details Page

- 6 Update the desired information.
- 7 Click the **Apply Changes** button.
 - A Confirmation prompt is displayed. Click **OK** to accept updates.
 - Changes are accepted.

13.5.1.3 Remove a Data Provider

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
 - 2 Click on the **Providers** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Provider Configuration** page is displayed.
 - 3 Click on the **checkbox** next to the Provider to be removed.
 - A checkmark is placed in the checkbox.
 - Multiple selections are accepted.
 - 4 At the bottom of the screen, click the **Remove Selected Providers** button.
 - 5 A Confirmation screen is displayed. Click **OK**
 - Changes are accepted.
-

13.5.1.4 Remove a Polling Location

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
 - 2 Click on the **Providers** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Provider Configuration** page is displayed.
 - 3 Click on the **Provider** name.
 - **The Edit a Provider** Configuration page is displayed.
 - 4 Locate the **Existing Polling Locations** section (at page bottom).
 - 5 Click on the checkbox next to the polling location name to be removed.
 - A checkmark is placed in the checkbox.
 - Multiple selections are accepted.
 - 6 At the bottom of the screen, click the **Remove Selected Polling Locations** button.
 - 7 A Confirmation screen is displayed. Select **OK**
 - Changes are accepted
-

13.5.1.5 Add a Data Provider

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The Configuration menu is expanded.
- 2 Click on the **Providers** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Provider Configuration** page is displayed.
- 3 On the **Provider Configuration** page, click on the **Add A Provider** button at the bottom of the existing provider list.

- The **Add a Provider** (Figure 13.5-4) page is displayed.

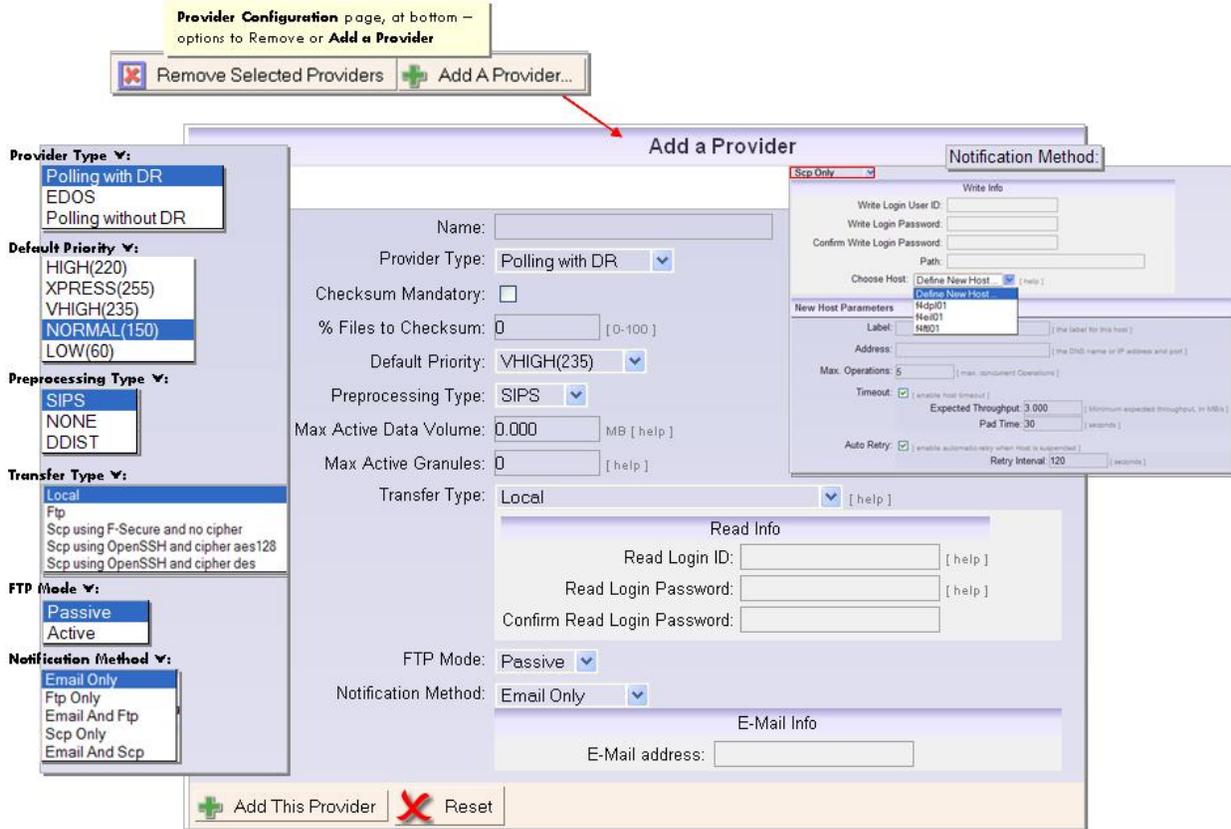


Figure 13.5-4. Add a Provider Page

- 4 In the **Name** field enter a unique name for this provider.
 - Already existing names will be rejected by the database.
- 5 Select the **Provider Type** from the pull-down window.
 - If you select...
 - **EDOS**, **Preprocessing Type** will become **NONE**;
 - **Transfer Type** will become **FTP**;
 - **Notification** method will become **FTP Only**.
 - If you select...
 - **Polling without DR**, a **VersionedDataType** drop-down list will appear on the page for operator to select the ESDT this provider will ingest from a predefined list of polling without DR ESDTs;

- the **Checksum Mandatory** checkbox will be unchecked and disabled, the **% Files to Checksum** will be set to 0 and disabled;
 - the **Preprocessing Type** will become **NONE** and
 - **Notification Method** will become **NONE**.
- These Provider Type options cannot be changed.
- 6** If applicable, click the checkbox for **Checksum Mandatory**;
- If this checkbox is checked, the DPL Ingest System will perform **100% checksum** regardless of the “% of Checksum Files” entered.
 - If you would like to **checksum at less than 100%, disable checksum mandatory and enter the desired percent**.
- 7** Select one of the following default priorities from the **Default Priority** pull-down window:
- **LOW (60), NORMAL (150), HIGH (220), VHIGH (235), XPRESS (255)**.
- 8** Select **Preprocessing Type** from the pull-down window.
- **NONE, SIPS, DDIST**
- 9** Enter the maximum active data volume in the **Max Active Data Volume** field that can be processed at the same time on this provider.
- The Ingest Service uses the maximum data volume and number of granules to limit the amount of the work which it will activate for a provider.
 - Ingest will activate a new granule for an active ingest request when the amount of work for the provider that is currently in progress reaches one of the configured limits.
 - New granules will be activated as granules complete and slots are opened up.
- 10** Enter the maximum number of granules in the **Max Active Granules** field that can be processed at the same time.
- New granules will be activated as granules complete and slots are opened up.
 - Note: There are overall limits on the total amount of work in progress, across all providers, which may further limit how much work is activated.
- 11** Select the **Transfer Type** from the pull-down window.
- a.** If data transfer will be **FTP**, the operator must enter **Read Info** in the area just below the Transfer Type listbox..
- If this information is not filled out, when a polling location is added, the operator will not be able to select ftp as the transfer method.
- 12** Select **FTP Mode** (FTP Host only) from the listbox.

- **Active or Passive.**
- 13** Select the **Notification Method** from the listbox. Depending on your selection, the appropriate parameter related box(es) will appear (Figure 13.5-4) below the drop-down list:
- **Email Only:** enter a valid Email address in the **E-Mail Info** field.
 - **FTP only or SCP only:** enter the Write Info login information (Write Login User ID, Write Login Password, Write Login Password Confirmation, the directory Path and then Choose Host information.
 - Pick an existing, pre-configured **FTP host** as defined in the FTP Host Configuration page from the pull-down window: When you select the desired host, an information box is displayed, showing the host's login information, IP address, and other details:
 - **Local:** Enter the **local disk directory**.
 - **Email and FTP, or Email and SCP:** enter the **E-Mail information and write login information (Write Login User ID, Write Login Password and Write Login Password Confirmation)**, the directory **Path** and the **Choose Host** information.
- 14** Click the **Add This Provider** button, at bottom of the Add a Provider page.
Note: Polling locations can not be added until the provider has been added.
- A confirmation screen is displayed. Select **OK**
 - The Provider Configuration page is displayed.
- 15** Select the new provider just entered.
- **Edit a Provider** detail page is displayed.
- 16** At the bottom of the page, click **Add a Polling Location** button.
Note: The provider will not become active until at least one polling location is added.
- **Add a Polling Location** page is displayed.
- 17** Enter a unique name for the **Polling Location Name**.
- Names that already exist for this polling location will be rejected by the database.
- 18** Enter the **Source Polling Path**.
- This is the pathname from which to transfer the PDR files.
- 19** Enter the **Polling Frequency** in seconds.
- The minimum value is 120 seconds.
- 20** Select whether or not this Polling Location is **DPL Ingest Enabled**.
- A checkmark is placed in the checkbox.
- 21** Choose the **Polling Method** from the pull-down list of pre-configured hosts.

- Selecting **FTP Host** will cause an information box to be displayed, showing the host's login information, IP address, and other details.
- Selecting **Local Disk** will not require additional (the directory path is already provided at the top of the page).

22 Click the **Add Polling Location** button at the bottom of the screen.

13.5.2 Data Type Configuration

Any ECS collection is eligible for DPL ingest. ECS collections are added via the DataPool Maintenance GUI. Using this GUI, the DAAC users is allowed to configure whether to publish the granules for the collection and/or whether to ignore XML metadata validation warnings during ingest.

The Data Type Configuration page, Data Types With DPL Ingest Configurations options allows the DAAC users to change the default attributes. Table 13.5-4 describes the available fields on the Data Type Configuration page.

Table 13.5-4. Data Type Configuration Page Field Descriptions

Field Name	Entry	Description
Short Name.Version ID	Not Editable	Data Type identifier. Version number of the data type (the identifier and version id is separated by a period)
Public In Data Pool	Optional	Indicates whether or not to "publish data" for this data type in the public Data Pool following successful Ingest.
Ignore Validation Warnings	Optional	If a granule of a given data type has metadata validation warnings, indicates whether or not to send email notifications and save metadata file to a holding directory..

13.5.2.1 Changing Data Types

- 1 Click the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2 Click the **Data Types** link to display the **Data Type Configuration** page (Figure 13.5-5).

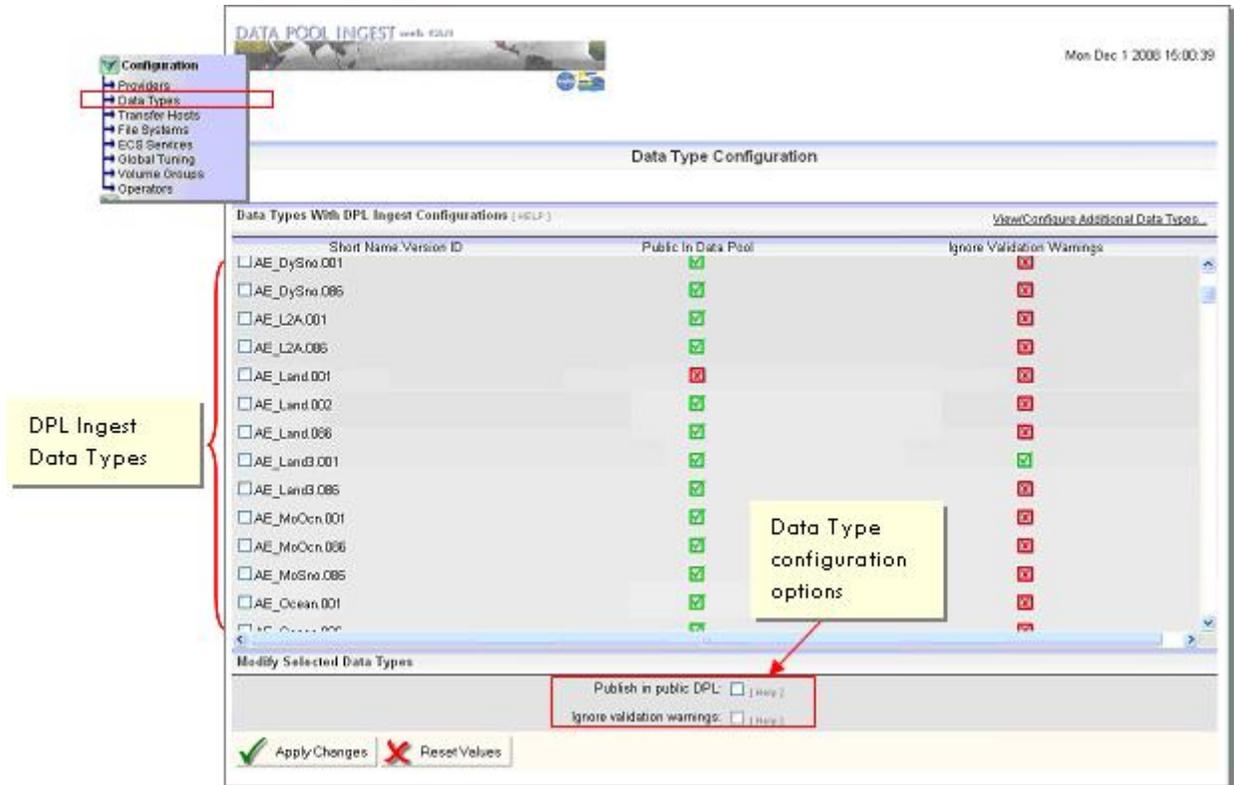


Figure 13.5-5. Data Type Configuration Page

- Displayed, is the last defined **Data Type Configurations** in the **Data Types With DPL Ingest Configurations** section, whose configurations have been altered to support non-default options. **To configure data types in the list:**
 - ▶ Click the **checkbox** of the desired **data type(s)**.
 - ▶ Enter **new parameters**
- 3 Click on the **Apply Changes** button to **Modify Selected Data Types**.
 - A Confirmation prompt is displayed. Select **OK**.

13.5.2.2 Changing Data Types Attributes

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
 - 2 Click the **Data Types** link to display the Data Type Configuration page (Figure 13.5-5).
 - The Data Types With DPL Ingest Configurations whose configurations have been altered to support non-default options displays.
 - If the Data Type you want to change is not listed, select the View/Configure Additional Data Types link. This will display the list of Data Types without DPL Ingest Configurations.
 - 3 Select each **Data Type** by clicking on the checkbox next to the **Short Name Version ID**.
 - 4 Scroll to the bottom of the screen until the Modify Selected Data Types or the Configure selected Data Types section appears.
 - 5 Make the desired changes for the following parameters.
 - **Publish in Public DPL.** Indicates whether or not to “publish data” for this data type in the public Data Pool following successful Ingest. Place a checkmark to select this option by clicking on the checkbox.
 - **Ignore Validation warnings.** Selection of this parameter will allow ingest to ignore warnings received from the XML Validation Utility for the selected ESDT. Place a checkmark to select this option by clicking on the checkbox.
 - 6 Click on the **Apply Changes** button.
 - A Confirmation prompt is displayed. Select **OK**.
 - Parameters for the selected **Data Types** are change to the new settings.
-

13.5.3 Transfer Host Configuration

The **Transfer Host** link allows the operator to manage SCP and FTP hosts for general use in the Data Pool Ingest system. These hosts can be referenced when defining polling locations or notification hosts. Table 13.5-5 provides a list of the SCP and FTP related filed descriptors.

In addition, if the host ip-addresses are referenced within PDRs as the source locations for granule files, DPL Ingest will automatically refer to their definition to obtain time out and retry parameters.

In cases where a host has not been explicitly defined, the ingest operator will be able to define default time-out and retry parameters for SCP or FTP hosts. If a request is sent through processing with a host configured in the PDR that does not show up on the GUI (as a configured host), a new host will automatically be added to the list of SCP/FTP Hosts with the name UNDEFHOST_[Provider]_[RequestID]. Default host configuration parameters will be applied to the new host until the operator chooses to modify them.

The Transfer Host, Host Configuration page has five working sections that allow the DAAC to add SCP or FTP hosts names and suitable configurations; ability to edit and/or remove hosts; change the default parameters for all SCP or FTP hosts including the LOCAL hosts. These sections are:

- Existing FTP Hosts.
- Existing SCP Hosts.
- Default FTP Host Configurations.
- Default SCP Host Configurations.
- Local Host Configurations.

The SCP or FTP Host related field descriptions are described in the Table 13.5-5:

Table 13.5-5. SCP or FTP Host Page Related Field Descriptions

Field Name	Entry	Description
Label	Required	A unique identifier for the host
Address	Required	An IP address or the canonical name and port (if needed) of an FTP host
FTP Mode	Required For FTP only	Whether the FTP host will be considered Active or Passive. This item does not appear on the form to Add a SCP Host.
SSH Type/Cipher	Required For SCP only	The sryptographic cipher this host will use when connecting. This item does not appear on the form to add a FTP host.
Max Operations	Required	Total number of operations that can occur, simultaneously, on the host. If this field is left empty a default value will be supplied.
Timeout	Optional	Whether or not to allow a host to timeout if operations of a particular size take too much time to complete
Expected Throughput	Required if timeout is flagged	Expected amount of MBs of a granule to be processed during the configured pad time. If this field is left empty a default value will be supplied.
Pad Time	Required if timeout is flagged	Time (in seconds) a configured chunk of data should be processed before raising a timeout alert. If this field is left empty a default value will be supplied.
Auto Retry	Optional	Whether or not to retry an action that failed or generated an error on the host
Retry Interval	Required if Auto Retry is flagged	Time in between retries on the host. If this field is left empty a default value will be supplied.

13.5.3.1 Remove FTP or SCP Transfer Hosts

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2 Click on the **Transfer Hosts** link in the navigation frame of the **DPL Ingest GUI**.
 - **The Host Configuration** page (Figure 13.5-6) is displayed.

Host Configuration

[HELP]

Existing FTP Hosts

<input type="checkbox"/>	Label	Address	Max. FTP Operations	Timeout (Expected Throughput + Pad Time)	Auto Retry Interval
<input type="checkbox"/>	NSIDC	f4eil01	7	3.000MB/s + 30s	15s
<input type="checkbox"/>	f4dpl01	f4dpl01.hitc.com	10	3.000MB/s + 30s	120s
<input type="checkbox"/>	f4eil01	f4eil01.hitc.com	5	3.000MB/s + 30s	120s

Remove Selected Hosts Add A FTP Host...

[HELP]

Existing SCP Hosts

<input type="checkbox"/>	Label	Address	Max. SCP Operations	Timeout (Expected Throughput + Pad Time)	Auto Retry Interval
<input type="checkbox"/>	f4dpl01	f4dpl01	10	3.000MB/s + 30s	15s
<input type="checkbox"/>	f4eil01	f4eil01	25	3.000MB/s + 30s	20s
<input type="checkbox"/>	f4eil01	f4eil01	25	3.000MB/s + 30s	15s

Remove Selected Hosts Add A SCP Host...

Default FTP Host Configurations

Max. FTP Operations: 5

Timeout (Expected Throughput + Pad Time): 3.000MB/s + 30s

Auto Retry Interval: 120s

[Edit](#)

Default SCP Host Configurations

Max. SCP Operations: 5

Timeout (Expected Throughput + Pad Time): 3.000MB/s + 30s

Auto Retry Interval: 120s

[Edit](#)

Local Host Configurations

Max. Local Operations: 5

Timeout (Expected Throughput + Pad Time): 3.000MB/s + 30s

Auto Retry Interval: 120s

[Edit](#)

Figure 13.5-6. Host Configuration Page

- Displays five related **Host Configurations** sections.

- 3 Click the checkbox next to the host name of the existing FTP or SCP Host(s) to be removed (multiple selections are accepted).
 - A checkmark is placed in the checkbox.
 - 4 Click on the **Remove Selected Hosts** button.
 - A Confirmation prompt is displayed. Select **OK**
 - The selected hosts are removed.
-

13.5.3.2 Add an FTP or SCP Transfer Host

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2 Click on the **Transfer Hosts** link in the navigation frame of the **DPL Ingest GUI**.
 - **The Host Configuration** page (Figure 13.5-6) is displayed.
 - Displays five related **Host Configurations** sections.
- 3 In the **Existing FTP Hosts** or **Existing SCP Hosts** sections click on the **Add a FTP Host** or **Add a SCP Host** button.
 - The **FTP Host Configuration-add a new host** (or **SCP Host Configuration-add a new host**) screen is (Figure 13.5-7) displayed.

SCP Host Configuration - add a new host

FTP Host Configuration - add a new host

Host Parameters

Label: [the label for this host]

Address: [the DNS name or IP address and port]

Max. Operations: [max. concurrent FTP Operations]

Timeout: [enable host timeout]

Expected Throughput: [Minimum expected throughput, in MBs]

Pad Time: [seconds]

Auto Retry: [enable automatic retry when Host is suspended]

Retry Interval: [seconds]

Add This Host Cancel

Figure 13.5-7. FTP (or SCP) Host Configuration Add a New Host Page

- 4 Enter a unique name in the **Label** field.
 - Existing names will be rejected by the database.

- 5 Enter the **IP Address** (e.g., 192.168.2.1) or the **DNS** (canonical name (e.g., my.ftp.host). including the **Port** number (on the same line, separated by a colon) in the **Address** field.
 - 6 Enter the **Max. Operations** parameter.
 - This value represents the maximum number of concurrent FTP or SCP operations that this host may initiate.
 - 7 Click on the **Timeout** checkbox (optional field).
 - If this checkbox checked, text boxes will be displayed for the **Expected Throughput** (in mb/s) and **Fixed Overhead** (seconds) values: Enter these values.
 - 8 Click on the **Auto Retry flag** (optional field).
 - If this checkbox checked, a textbox will be displayed to set the **Retry Interval** value (the number of minutes to wait between retries of this host if it becomes suspended by the server. Enter this value.
 - 9 Select the **Add This Host** button at the bottom of the screen.
 - The new entry will be displayed on the **FTP Host Configuration** page.
-

13.5.3.3 Edit an SCP or FTP Transfer Host

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2 Click on the **Transfer Hosts** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Host Configuration** page displays its five related **Host Configurations** sections.

3 In the **Existing FTP Hosts** or **Existing SCP Hosts** section, click on the underscored Label (name) of the desired host.

- The **Host Configuration for [LabelName]** page (Figure 13.5-8) is displayed.

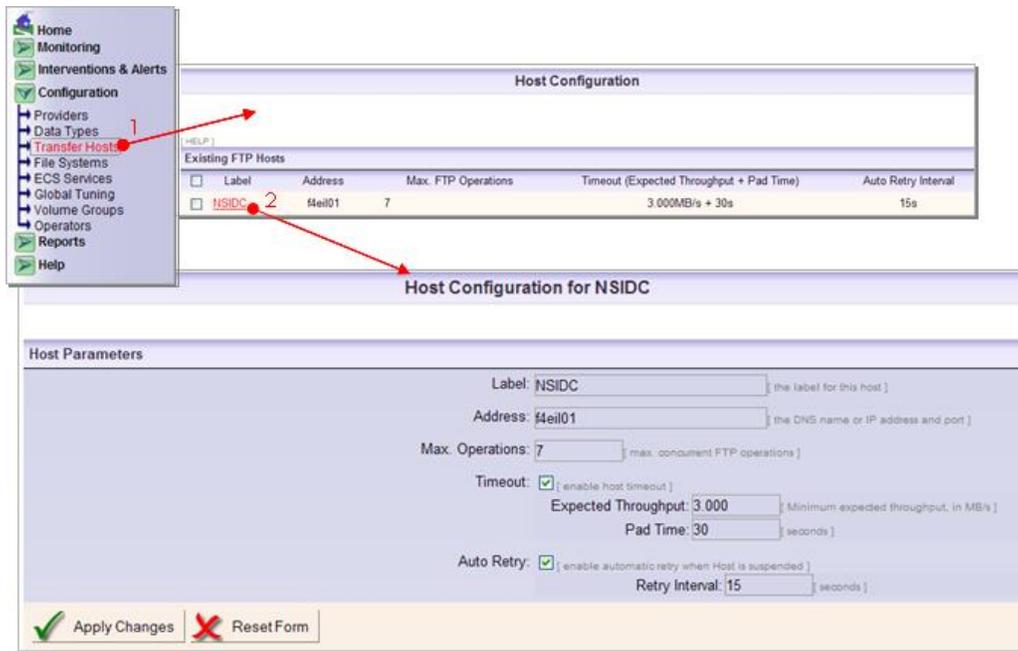


Figure 13.5-8. Host Configuration for [LabelName] Page

4 Edit the desired fields, then click the **Apply Changes** button at the bottom of the page.

- Changes will be implemented.

Local Host configuration parameters are used during any local transfer operations. The maximum Local operations limit how many local copies will occur concurrently. The timeout values apply to each individual local copy operation.

Default SCP and FTP Host configuration values are used to fill in default values whenever a new SCP or FTP host is added, or if a field is left empty when updating an existing SCP or FTP host.

13.5.3.4 Edit Local and Default [FTP or SCP] Host Configuration

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2 Click on the **Transfer Hosts** link in the navigation frame of the **DPL Ingest GUI**.
 - **The Host Configuration** page is displayed.
- Displays five related **Host Configurations** sections.
- 3 In the **Default FTP Host Configurations** section, the **Default SCP Host Configurations** section or **Local Host Configurations** section, click the **Edit** button to display their detail pages.
 - The **Host Configuration Details Page** is displayed (Figure 13.5-9).

The screenshot displays the 'Host Configuration for FTPDEFAULT' page. At the top, there are two tabs: 'Host Configuration for SCPDEFAULT' and 'Host Configuration for FTPDEFAULT'. The main content area is titled 'Host Parameters' and contains the following fields:

- Label:** FTPDEFAULT (with a tooltip: 'the label for this host')
- Address:** FTPDEFAULT (with a tooltip: 'the DNS name or IP address and port')
- Max. Operations:** 5 (with a tooltip: 'max. concurrent FTP operations')
- Timeout:** (with a tooltip: 'enable host timeout')
- Expected Throughput:** 3,000 (with a tooltip: 'Minimum expected throughput, in MB/s')
- Pad Time:** 30 (with a tooltip: 'seconds')
- Auto Retry:** (with a tooltip: 'enable automatic retry when Host is suspended')
- Retry Interval:** 120 (with a tooltip: 'seconds')

At the bottom left of the form, there are two buttons: 'Apply Changes' (with a green checkmark icon) and 'Reset Form' (with a red X icon). Below the form, there is a yellow box with the following text:

Comparisons:
The **SCPDefault** and **FTPDefault** host parameters information displays the same fields. The **LOCAL** host configurations has no Label or IP Address data requirements.

Two red arrows point from the yellow box to the 'Label' and 'Address' fields in the 'LOCAL Host Configurations' section below. The 'LOCAL Host Configurations' section has the same fields as the 'FTPDEFAULT' section, but it does not have 'Label' or 'Address' fields.

Figure 13.5-9. Host Configuration Details Page

- FTP and SCP Hosts details display is similar.
 - The LOCAL Host Configuration page is displayed with varying information.
- 4 Edit the desired fields, then click the **Apply Changes** button at the bottom of the screen.
 - Changes will be implemented.

13.5.4 File System Configuration

The File System Configuration page allows the operator to configure warning and suspension thresholds for any configured Archive or Data Pool File Systems. This page displays related information for both file systems, as illustrated in Figure 13.5-10:

File System Configuration			
[HELP]			
XMLArchive /stornext/smallfiles			
Cache Warning Threshold	The percentage of cache used which will trigger an operator alert	<input type="text" value="88"/>	[percent]
Cache Full Threshold	The percentage of cache used which will trigger an operator alert and suspend the Archive File System	<input type="text" value="99"/>	[percent]
Cache Warning Low Watermark	The percentage of cache used that will clear the Archive Cache Warning Alert	<input type="text" value="85"/>	[percent]
Cache Full Low Watermark	The percentage of cache used that will clear the Archive Cache Full Alert	<input type="text" value="95"/>	[percent]
Amfs1 /stornext/amfs1/			
Cache Warning Threshold	The percentage of cache used which will trigger an operator alert	<input type="text" value="76"/>	[percent]
Cache Full Threshold	The percentage of cache used which will trigger an operator alert and suspend the Archive File System	<input type="text" value="80"/>	[percent]
Cache Warning Low Watermark	The percentage of cache used that will clear the Archive Cache Warning Alert	<input type="text" value="60"/>	[percent]
Cache Full Low Watermark	The percentage of cache used that will clear the Archive Cache Full Alert	<input type="text" value="70"/>	[percent]
Browfs /stornext/browfs/			
Cache Warning Threshold	The percentage of cache used which will trigger an operator alert	<input type="text" value="90"/>	[percent]
Cache Full Threshold	The percentage of cache used which will trigger an operator alert and suspend the Archive File System	<input type="text" value="99"/>	[percent]
Cache Warning Low Watermark	The percentage of cache used that will clear the Archive Cache Warning Alert	<input type="text" value="88"/>	[percent]
Cache Full Low Watermark	The percentage of cache used that will clear the Archive Cache Full Alert	<input type="text" value="95"/>	[percent]
Snfs1 /stornext/snfs1/			
Cache Warning Threshold	The percentage of cache used which will trigger an operator alert	<input type="text" value="90"/>	[percent]
Cache Full Threshold	The percentage of cache used which will trigger an operator alert and suspend the Archive File System	<input type="text" value="99"/>	[percent]
Cache Warning Low Watermark	The percentage of cache used that will clear the Archive Cache Warning Alert	<input type="text" value="88"/>	[percent]
Cache Full Low Watermark	The percentage of cache used that will clear the Archive Cache Full Alert	<input type="text" value="95"/>	[percent]
<input checked="" type="checkbox"/> Update <input checked="" type="checkbox"/> Reset			
[HELP]			
DataPool File System			
Warning Threshold	The percentage of cache used which will trigger an operator alert	<input type="text" value="90"/>	[percent]
Warning Low Watermark	The percentage of cache used that will clear the File System Warning Alert	<input type="text" value="81"/>	[percent]
<input checked="" type="checkbox"/> Update <input checked="" type="checkbox"/> Reset			

Figure 13.5-10. File System Configuration

The File System Configuration page display information is defined in the Table 13.5-6 for all fields shown on its page for the Archive and Data Pool File Systems:

Table 13.5-6. File Systems Configuration Page – Field Descriptions

Field Name – Archive File System	Entry	Description
Cache Warning Threshold	Required	The percentage of cache used which will trigger an operator alert. This must be below the Cache Full Threshold and above the Cache Warning Low Watermark.
Cache Full Threshold	Required	The percentage of cache used which will trigger an operator alert and suspend the Archive File System. This must be above the other threshold and watermarks.
Cache Warning Low Watermark	Required	The percentage of cache used that will clear the Archive Cache Warning Alert. This must be below the Cache Warning Threshold and the Cache Full Low Watermark.
Cache Full Low Watermark	Required	The percentage of cache used that will clear the Archive Cache Full Alert. This must be below the other watermark and thresholds.
Warning Threshold	Required	Warning Threshold the percentage of cache used which will trigger an operator alert.
Warning Low Watermark	Required	The percentage of cache used that will clear the File System Warning Alert.

13.5.4.1 Change File System Threshold

-
- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
 - 2 Click on the **File Systems** link in the navigation frame of the **DPL Ingest GUI**.
 - The **File System Configuration** page (Figure 13.5-10) is displayed.
 - 3 Enter the **desired changes** in the configurable fields.
 - The change appears in the field.
 - 4 Click the **Update** button at the bottom of the page.
 - The change is accepted.
-

13.5.5 ECS Service Configuration

The operator can perform several activities from the ECS Services Configuration page (Figure 13.5-11):

- can configure parameters of ECS services (Tables 13.5-7 and 13.5-8), on a specific-host basis;
- can be set a default checksum type and algorithm for use by the checksumming service hosts;

NOTE: The initial **ECS Services Configuration** page (Figure 13.5-11) is a listing (view) only page. Modifications cannot be made from this page. The list shows which services are enabled for each host.

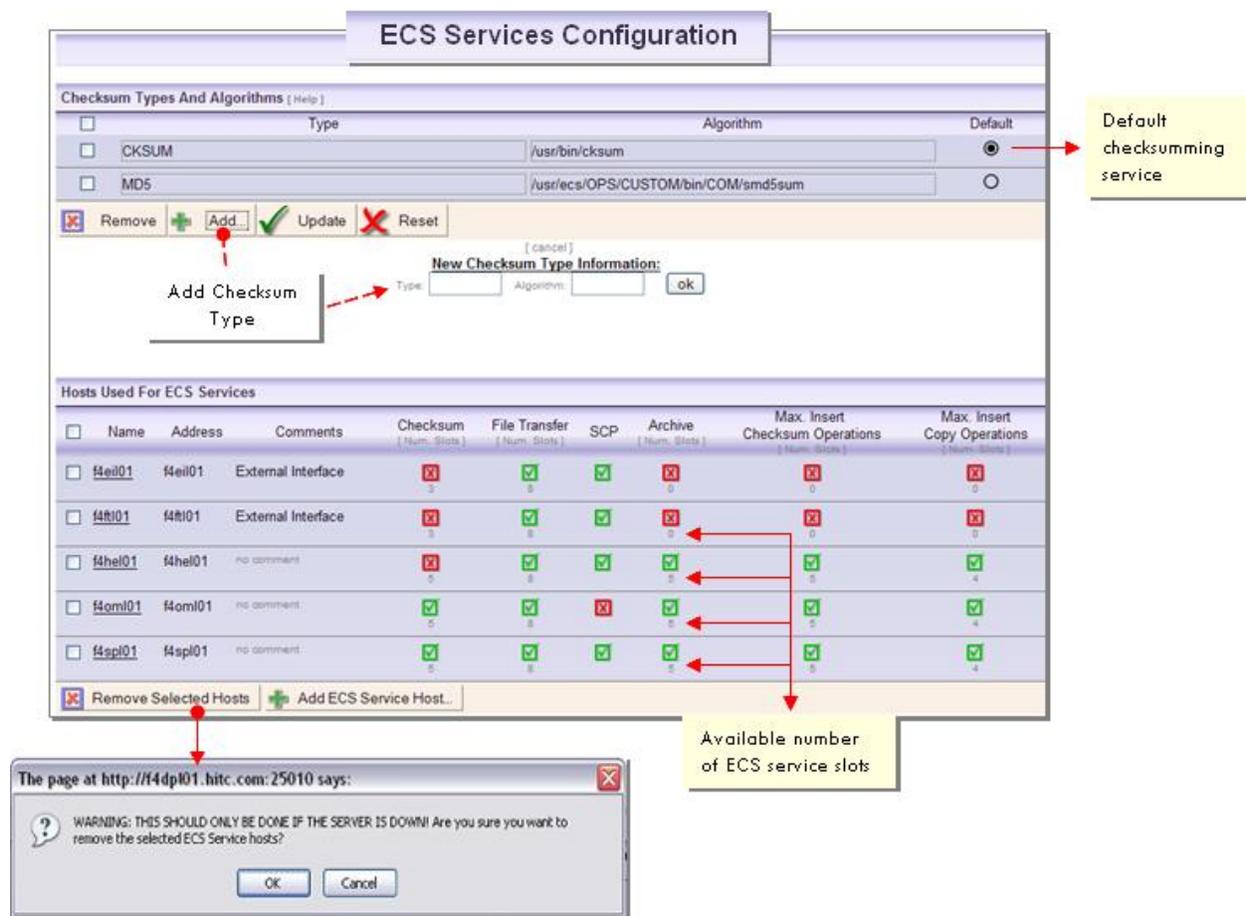


Figure 13.5-11. ECS Services Configuration Page

The **ECS Services Configuration** page contains the following two sections:

1. **Checksum Types and Algorithm.** The operator can add, edit, and delete checksum types and their specific algorithms, and specify if the checksum type will be used as the default type.
2. **Host Used For ECS Services.** The operator can view and configure the attributes of the ECS Service host and can configure each of the services that run on that host.

Table 13.5-7 provides a detailed description of the Host Used for ECS Services:

Table 13.5-7. ECS Services Configuration Field Description

Field Name	Entry	Description
Name	n/a	The unique name given for this ECS Service Host
Address	n/a	The IP address or DNS name and port of the host
Comments	n/a	Any descriptive comment text given for this host.
Checksum	n/a	Each of these ECS Services is indicated as enabled (green checkmark) or disabled (red x) for each host. The number associated with each indicator represents the number of available service slots.
File Transfer	n/a	
SCP	n/a	
Archive	n/a	
Max. Insert Checksum Operations	n/a	The maximum number of Insert Checksum Operations that will be performed by this host (checksum performed before archiving)
Max. Insert Copy Operations	n/a	The maximum Insert Copy operations that will be performed by this host.
NOTE: Unlabeled Number (below services indicator) Is the available number of ECS Service slots allocated to each host.		

The ECS Services Configuration page allows the Full-Capability Operator the ability to configure other attributes of the ECS Service Hosts from the ECS Service Configuration: Add Service Host details page (Figure 13.5-12). Table 13.5-8 provides a detailed description of the Add Service Host details page.

ECS Service Configuration: Add Service Host	
Global Parameters	
Label:	<input type="text"/>
Address:	<input type="text"/>
Port:	<input type="text"/> number
Auto Retry:	<input type="checkbox"/>
Comments:	<input type="text"/>
Checksum	
Enable this service:	<input type="checkbox"/>
Max. Concurrent Checksum Operations:	<input type="text"/> 1 number
Expected throughput:	<input type="text"/> MB/s [help]
Checksum Timeout Pad Time:	<input type="text"/> seconds [help]
File Transfer	
Enable this service:	<input type="checkbox"/>
Enable SCP:	<input type="checkbox"/>
Max. Concurrent File Transfers:	<input type="text"/> 1 number [help]
Archiving	
Enable this service:	<input type="checkbox"/>
Max. Concurrent Archive Operations:	<input type="text"/> 1 number [help]
Expected Throughput:	<input type="text"/> MB/S [help]
Archive Timeout Pad Time:	<input type="text"/> seconds [help]
Insert Checksum	
Max. Concurrent Insert Checksum Operations:	<input type="text"/> 1 number [help]
Insert Copy	
Max. Concurrent Insert Copy Operations:	<input type="text"/> 1 number [help]
Expected Throughput:	<input type="text"/> MB/S [help]
Insert Copy Timeout Pad Time:	<input type="text"/> seconds [help]
<input checked="" type="checkbox"/> Add This Service Host	<input checked="" type="checkbox"/> Cancel

Figure 13.5-12. ECS Services Configuration: Add Service Host Page

**Table 13.5-8. ECS Services Configuration: Add Service Host - Field Descriptions
(1 of 2)**

Field Name	Entry	Description
Global Parameters		
Label	Required	A unique name for the ECS Service host, preferably based on the actual host name.
Address	Required	The IP address (e.g., 127.5.2.88) or canonical name (e.g., f4eil01.hitc.com) of the host.
Port	Required	The port number associated with this service. Hint: the port can be determined by looking at the Quickserver's configuration file.
Auto Retry	Optional	Whether or not to automatically retry processing of actions for all services enabled on this host.
Comment	Optional	The description of the host and its services.
Checksum		
Enable this service	Optional	Whether or not to use this service.
Max. Concurrent Checksum Operations	Required if enabled	The maximum number of concurrent checksum operations that may be performed on this host at any one time.
Expected Throughput	Required if enabled	The expected data throughput for checksum operations. This is to identify stuck operations,
Checksum Timeout Pad Time	Required if enabled	The additional delay for a checksum operation before it is considered timed-out.
File Transfer		
Enable this service	Optional	Whether or not to use this service.
Enable SCP	Optional	Whether or not to use SCP as the file transfer method. This service takes effect only if "Enable this service" is checked.
Max. Concurrent File Transfers	Required if enabled	The maximum number of concurrent file transfers that may be executed on this host.
Archiving		
Enable this service	Optional	Whether or not to use this service.
Max. Concurrent Archive Operations	Required if enabled	The maximum number of concurrent archive operations that may be executed on this host.
Expected Throughput	Required if enabled	The expected data throughput for archive operations. This is to identify stuck operations.
Archive Timeout Pad Time	Required if enabled	The additional delay for an archive operation before it is considered timed-out.
Insert Checksum		
Max. Concurrent Insert Checksum Operations:	Optional	The maximum number of concurrent Insert Checksum operations that may be executed on this host.

**Table 13.5-8. ECS Services Configuration: Add Service Host - Field Descriptions
(2 of 2)**

Field Name	Entry	Description
Insert Copy		
Max. Concurrent Insert Copy Operations	Required	The maximum number of concurrent Insert Copy operations that may be executed on this host.
Expected Throughput	Required	The expected data throughput for Insert Copy operations. This is to identify stuck operations.
Insert Timeout Pad Time	Required	The additional delay for an Insert Copy operation before it is considered timed-out.

13.5.5.1 Remove Checksum Type

- 1 Click on the **Configuration** link of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
 - 2 Click on the **ECS Services** link.
 - The **ECS Services Configuration** page is displayed (Figure 13.5-11).
 - The **ECS Services Configuration** page is a view only page. Individual settings cannot be entered using this initial page view.
 - 3 In the **Checksum Types And Algorithms** section, click the checkbox next to the checksum type to be removed (multiple selections are accepted).
 - A checkmark appears in the checkbox.
 - 4 Click on the **Remove** button.
 - A Confirmation prompt is displayed. Click **OK**.
 - The selected checksum(s) is removed.
-

13.5.5.2 Add Checksum Type

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
- 2 Click on the **ECS Services** link of the **Configuration** menu.
 - The **ECS Services Configuration** page is displayed.
- 3 In the **Checksum Types And Algorithms** section, click on the **Add** button.
 - The **New Checksum Type Information** screen (and its two input boxes) is displayed in the white space portion of the **Checksum Types And Algorithms** section.
- 4 In the **New Checksum Type Information** section, click in the in the input box next to **Type**. Enter the **Checksum Type** information.

- The checksum type entered will be displayed in the **Type** field.
- 5 In the **New Checksum Type Information** section, click in the input box next to **Algorithm**. Enter the **Algorithm** information.
 - The Algorithm entered will be displayed in the **Algorithm** field.
 - 6 Click on the **ok** button.
 - The new checksum type and algorithm will be added to the **ECS Services Configuration** page.
 - 7 In the **Checksum Types And Algorithms** section of **ECS Services Configuration** page, review the default setting for the checksum. If the setting is not what you want, click on the desired **Checksum Default** button.
 - The desired default **Checksum Types and Algorithms** will be selected.
-

13.5.5.3 Add an ECS Service Host Type

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2 Click on the **ECS Services** link in the navigation frame of the **DPL Ingest GUI**.
 - **The ECS Services Configuration** page is displayed.
- 3 In the **Hosts Used For ECS Services**, Click on the **Add ECS Service Host** button.

- The **ECS Services Configuration: Add Service Host** page (Figure 13.5-13 is displayed).

ECS Service Configuration: Add Service Host

Global Parameters

Label:

Address:

Port: number

Auto Retry:

Comments:

Checksum

Enable this service

Max. Concurrent Checksum Operations: number

Expected throughput: MB/s [help]

Checksum Timeout Pad Time: seconds [help]

File Transfer

Enable this service

Enable SCP

Max. Concurrent File Transfers: number [help]

Archiving

Enable this service

Max. Concurrent Archive Operations: number [help]

Expected Throughput: MB/s [help]

Archive Timeout Pad Time: seconds [help]

Insert Checksum

Max. Concurrent Insert Checksum Operations: number [help]

Insert Copy

Max. Concurrent Insert Copy Operations: number [help]

Expected Throughput: MB/s [help]

Insert Copy Timeout Pad Time: seconds [help]

Figure 13.5-13. ECS Services Configuration: Add Service Host Page

- 4** In the **Global Parameters** section, perform the following to enter the server parameters:
- Click in the **Label** textbox. Enter a unique name for the ECS Service host.
 - Existing names will be rejected by the database.

- Click in the **Address** textbox. Enter the **IP Address** (or the name) of the ECS Service host.
- Click in the Port textbox. Enter the port number associated with the service ECS Service host.
- The port can be determined by looking at the quickserver's configuration file.
- Click the Auto Retry (optional) checkbox. A checkmark displays
- All services enabled will automatically retry processing in the event of failure.
- Click in the **Comments** (optional) textbox. Enter a **description of the host** and its services.

5 In the **Checksum** section, perform the following configurations:

- Click the checkbox next to the Enable this service (optional) label. A checkmark displays.
- If Checksum is enabled, complete the next steps, otherwise, go to step 6.
- Click in the Max. Concurrent Checksum Operations textbox. Enter the maximum number of checksum operations that may be performed on this host at any one time.
- Click in the Expected Throughput textbox. Enter the expected data throughput (MBs) for checksum operations. This will help to identify stuck operations.
- Click in the Checksum Timeout Pad Time field. Enter additional delay time for a checksum operation before it is considered timed-out.

6 In the **File Transfer** section, perform the following configurations:

- Click in the checkbox next to the Enable this service (optional) label. A checkmark displays.
- If File Transfer is enabled, complete the next steps, otherwise, go to step 7.
- Click in the checkbox next to the Enable SCP label. A checkmark displays.
- Click in the Max. Concurrent File Transfers field. Enter the maximum number of concurrent file **transfers** that may be executed on this host at any one time.

7 In the **Archiving** section, perform the following configurations:

- Click in the checkbox next to the Enable this service (optional) label. A checkmark displays.
- If Archiving is enabled, complete the next steps, otherwise, go to step 23.
- Click in the Max. Concurrent Archive Operations field. Enter the maximum number of archive operations that may be performed on this host at any one time.
- Click in the Expected Throughput field. Enter the expected data throughput (MBs) for archive operations. This will help to identify stuck operations.

- Click in the Archive Timeout Pad Time field. Enter additional delay time for an archive operation before it is considered timed-out.
- 8** In the **Insert Checksum** section, perform the following configurations:
- Click in the **Max. Concurrent Insert Checksum Operations** field and enter the **maximum number of concurrent checksum operations** that may be executed on this host at any one time.
- 9** In the **Insert Copy** section, perform the following configurations:
- Click in the Max. Concurrent Insert Copy Operations field. Enter the maximum number of concurrent Insert Copy Operations that may be performed on this host at any one time.
 - Click in the Expected Throughput field. Enter the expected data throughput (MBs) for Insert Copy operations. This will help to identify stuck operations.
 - Click in the Insert Copy Timeout Pad Time field. Enter additional delay time for an Insert Copy operation before it is considered timed-out.
- 10** Select the **Add This Service Host** button at the bottom of the page.
- A Confirmation prompt is displayed. Select OK.
 - The new entry will be displayed on the **ECS Service Configuration** page.
-

13.5.5.4 Edit an ECS Service Host Type

- 1** Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2** Click on the **ECS Services** link in the navigation frame of the **DPL Ingest GUI**.
 - **The ECS Services Configuration** page is displayed.
- 3** In the **Hosts Used For ECS Services**, click on the name of the **ECS Service Host** to be edited.
 - The **ECS Services Configuration: Service Host Detail [Name]** page is displayed.
 - Any or all parameters listed on the **ECS Services Configuration: Service Host Detail [Name]** page can be edited from this page..
- 4** In the **Global Parameters** section, enter the desired changes.
- 5** In the **Checksum** section, enter the desired changes.
- 6** In the **File Transfer** section, enter the desired changes.
- 7** In the **Archiving** section, enter the desired changes.
- 8** In the **Insert Checksum** section, enter the desired changes.
- 9** In the **Insert Copy** section enter the desired changes.

- 10** Select the **Apply Changes** button at the bottom of the page.
- A Confirmation prompt is displayed. Select **OK** to implement changes.
-

13.5.6 Global Tuning Configuration

The Global Tuning link allows the operator to configure the Parameter Name and Value of the global tuning parameters in the Data Pool Ingest database. The parameters are listed along with their descriptions in Table 13.5-9.

There are three sections of the Global Tuning page. The first section titled Global Admin Tuning Parameters, consists of tuning parameters that can be edited by an operator with Ingest Admin Tuning privileges. The second section titled Global Tuning Parameter Configuration requires Tuning privileges. The third section titled Database Connection Configuration requires Tuning privileges. If the logged in operator does not have permission to edit a section, the fields and buttons for that section will be disabled.

Dynamic parameters are those that are applied to the Ingest Service without having to restart the Ingest Service. The Ingest Service will automatically apply these parameters within 1 minute of having been set in the database. Static parameters are those that require the Ingest Service to be restarted.

Table 13.5-9. Global Tuning Parameter Descriptions (1 of 4)

Parameter Name	Dynamic/ Static	Description
Global Admin Tuning Parameters:		
ARCHIVE_CACHE_CHECK_INTERVAL	Dynamic	Number of seconds between checks on archive cache.
DAYS_TO_KEEP_COMPLETED_NOTIFICATIONS	Dynamic	Number of days to keep completed notifications in InNotification table
DEFAULT_ALERT_RETRY_SECS	Dynamic	Default number of seconds to wait in between retrying a situation that caused a suspension
ENABLE_NOTIFICATION_PERFORMANCE_LOG	Dynamic	Indicates whether notification performance log has been enabled
ENABLE_POLLING_PERFORMANCE_LOG	Dynamic	Indicates whether polling performance log has been enabled
ENABLE_PROCESSING_PERFORMANCE_LOG	Dynamic	Indicates whether processing performance log has been enabled
FAIL_MULTIPLE_LINKAGE_PH_GRANULE	Dynamic	Indicate whether to fail PH granules with linkage error due to multiple science granules referenced by a single local granule id.
GET_DPL_SPACE_MINS	Dynamic	Number of minutes to wait in between refreshing DPL free space info
MAX_NUM_FILES_IN_VOLUME_GROUP	Dynamic	Maximum number of files in a volume group
MAX_RETRY_CHECKSUM_VERIFY	Dynamic	Maximum number of allowable retries for a checksum verification error
MINS_TO_KEEP_COMPLETED_REQS	Dynamic	Number of minutes before a completed request qualifies for archival
MONTHS_TO_KEEP_HIST_STATS_ALERTS	Dynamic	The retention time in months for keeping historic information for requests, alerts and throughput statistics
NUM_RETRIES_UR_ERROR	Dynamic	Number of times to retry UR Translation due to an error

Table 13.5-9. Global Tuning Parameter Descriptions (2 of 4)

Parameter Name	Dynamic/ Static	Description
RETRY_SECS_UR_ERROR	Dynamic	Number of seconds to wait in between retrying UR Translation on error
VOLUME_GROUP_MONITOR_INTERVAL	Dynamic	Time interval in hours for processing server to monitor volume group changes
Global Tuning Parameter Configuration:		
CUSTOM_DATA_LOG_FULL_THRESHOLD	Dynamic	The percentage of space used which will trigger an operator warning alert on CUSTOM data log directory
DEFAULT_NUM_RETRIES	Dynamic	Default number of retries for an error condition where no error-specific number exists
DEFAULT_RETRY_INTERVAL	Dynamic	Default retry interval (seconds) where no error-specific interval exists
EDOS_SUCCESSFUL_PAN_DIR	Dynamic	EDOS directory in which successful PANs are to be stored
FAILED_CHECKSUM_HOLDING_DIR	Dynamic	Location of files that failed checksum verification. This directory needs to be monitored and when necessary, cleaned up.
IGNORE_ARCHIVE_ALERT	Dynamic	Still activate requests independent of archive status.
IGNORE_DPL_FS_DOWN	Dynamic	Indicates whether or not we activate requests that use a suspended file system
IIU_TIMEOUT_VALUE	Dynamic	The amount of time the server will wait for a request to IIU before assuming the request is lost
MAX_CONCURRENT_PREPROCESS	Dynamic	Maximum number of concurrent preprocessing operations
MAX_CONCUR_DPL_INSERT	Static	Maximum number of allowed concurrent DPL Insert processes for Ingest
MAX_CONCUR_IIU_PROCESSES	Dynamic	Maximum number of allowed concurrent IIU processes for Ingest
MAX_CONCUR_PDR_VALIDATIONS	Dynamic	Maximum number of allowed concurrent PDR validations for Ingest

Table 13.5-9. Global Tuning Parameter Descriptions (3 of 4)

Parameter Name	Dynamic/ Static	Description
MAX_CONCUR_SCP_OPS	Dynamic	Max number of concurrent SCP ops
MAX_CONCUR_XVU_PROCESSES	Dynamic	Maximum number of allowed concurrent XVU processes for Ingest
MAX_CONSEC_FS_ERRORS	Dynamic	Maximum number of permissible file system access errors for different granules prior to raising an alert
MAX_CONSEC_XFER_ERRORS	Dynamic	Maximum number of permissible transfer errors for different files (including PAN/PDRD) prior to raising an alert
MAX_CONSEC_XFER_ERRORS_PDR	Dynamic	Maximum number of permissible PDR transfer errors for different files prior to raising an alert
MAX_GRANS_WITH_SERV_ERR	Dynamic	Maximum of allowable number of the same type of error for an ECS service for different granules prior to raising an alert for that ECS Service
PROCESSING_MAX_GRANS	Dynamic	Maximum number of granules that can be in processing at once
PROCESSING_MAX_VOLUME	Dynamic	Maximum amount of data in MB that can be in processing at once
SMTP_HOST	Dynamic	Host on which the SMTP server resides
THROUGHPUT_STATS_INTERVAL	Dynamic	Number of minutes at which throughput statistics will be recorded
VALIDATION_WARNINGS_DIR	Dynamic	Directory where we will store metadata files for granules which had validation warnings returned by the XVU. This directory needs to be monitored and when necessary, cleaned up. Note:the directory is not automatically cleaned up it must be maintained manually.
VALIDATION_WARNINGS_EMAIL	Dynamic	Comma separated list of email addresses to send granule validation warnings to.

Table 13.5-9. Global Tuning Parameter Descriptions (4 of 4)

Parameter Name	Dynamic/ Static	Description
XVU_TIMEOUT_VALUE	Dynamic	The amount of time the server will wait for a request to XVU before assuming the request is lost
Database Connection Configuration		
MAX_AIM_DB_CONN	Dynamic	Maximum database connection pool size for AIM DB
MAX_DPL_DB_CONN	Dynamic	Maximum database connection pool size for DPL DB
MAX_INGEST_DB_CONN	Dynamic	Maximum database connection pool size for Ingest DB
MAX_SSS_DB_CONN	Dynamic	Maximum database connection pool size for SSS DB
MIN_AIM_DB_CONN	Dynamic	Minimum database connection pool size for AIM DB
MIN_DPL_DB_CONN	Dynamic	Minimum database connection pool size for DPL DB
MIN_INGEST_DB_CONN	Dynamic	Minimum database connection pool size for Ingest DB
MIN_SSS_DB_CONN	Dynamic	Minimum database connection pool size for SSS DB

13.5.6.1 Change Global Tuning Parameters

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2 Click on the **Global Tuning** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Global Tuning** page is displayed (Figure 3.5-14).

Global Tuning

[HELP]

Global Admin Tuning Parameter Configuration

Parameter Name	Description	Value
ARCHIVE_CACHE_CHECK_INTERVAL	Number of seconds between checks of archive cache	120
DAYS_TO_KEEP_COMPLETED_NOTIFICATIONS	Number of days to keep completed notifications in notification table	2
DEFAULT_ALERT_RETRY_SECS	Default number of seconds to wait in between retrying a situation that caused a suspension	60
ENABLE_NOTIFICATION_PERFORMANCE_LOG	Indicates whether notification performance log has been enabled	<input type="checkbox"/>
ENABLE_POLLING_PERFORMANCE_LOG	Indicates whether polling performance log has been enabled	<input type="checkbox"/>

Apply Changes Reset

Global Tuning Parameter Configuration

Parameter Name	Description	Value
CUSTOM_DATA_LOG_FULL_THRESHOLD	The percentage of space used which will trigger an operator warning alert on CUSTOM data log directory	93
DEFAULT_NUM_RETRIES	Default number of retries for an error condition where no error-specific number exists	3
DEFAULT_RETRY_INTERVAL	Default retry interval (seconds) where no error-specific interval exists	30
EDOS_SUCCESSFUL_PAN_DIR	EDOS directory in which successful PANs are to be stored	/usr/ecs/OPS/CUSTOM/d...
FAILED_CHECKSUM_HOLDING_DIR	Location of files that failed checksum verification	/usr/ecs/OPS/CUSTOM/d...
IGNORE_ARCHIVE_ALERT	Still archive requests independent of archive status	<input checked="" type="checkbox"/>

Apply Changes Reset

Database Connection Configuration

Parameter Name	Description	Value
MAX_AIM_DB_CONN	Maximum database connection pool size for AIM DB	10
MAX_DPL_DB_CONN	Maximum database connection pool size for DPL DB	10
MAX_INGEST_DB_CONN	Maximum database connection pool size for Ingest DB	40
MAX_SSS_DB_CONN	Maximum database connection pool size for SSS DB	10

Apply Changes Reset

Dynamic parameters indicators (green curled arrow)



Figure 13.5-14. Global Tuning Page

Note: Operator must have Ingest Admin or Tuning privileges to make changes on this page.

- The **Global Tuning** is page divided into the following three sections:
 1. **Global Admin Tuning Parameter Configuration.**

2. Global Tuning Parameter Configuration.

3. Database Connection Configuration.

- 3 Click in the **Value** field and enter the desired change for the selected parameter.
 - The change is displayed as entered.
- 4 Click on the **Apply Changes** button found in each section.
 - A Confirmation prompt is displayed. Select **OK to apply changes**.

NOTE: The directories for Failed_Checksum_Holding_DIR and Validation_Warning_DIR need to be routinely monitored. These directories require a manual cleanup.

13.5.7 Configure Volume Groups

The Volume Group configuration in the DPL Ingest GUI was developed to duplicate the functionality in the decommissioned STMGT GUI tab with minor refinements and enhancements. The **Volume Groups Configuration** page (Figure 13.5-15) displays the list of currently configured volume groups. This alphabetical listing is displayed on one scrollable-page by Data Type Shortname. You can search for a desired data type by using the browser's built-in search function.

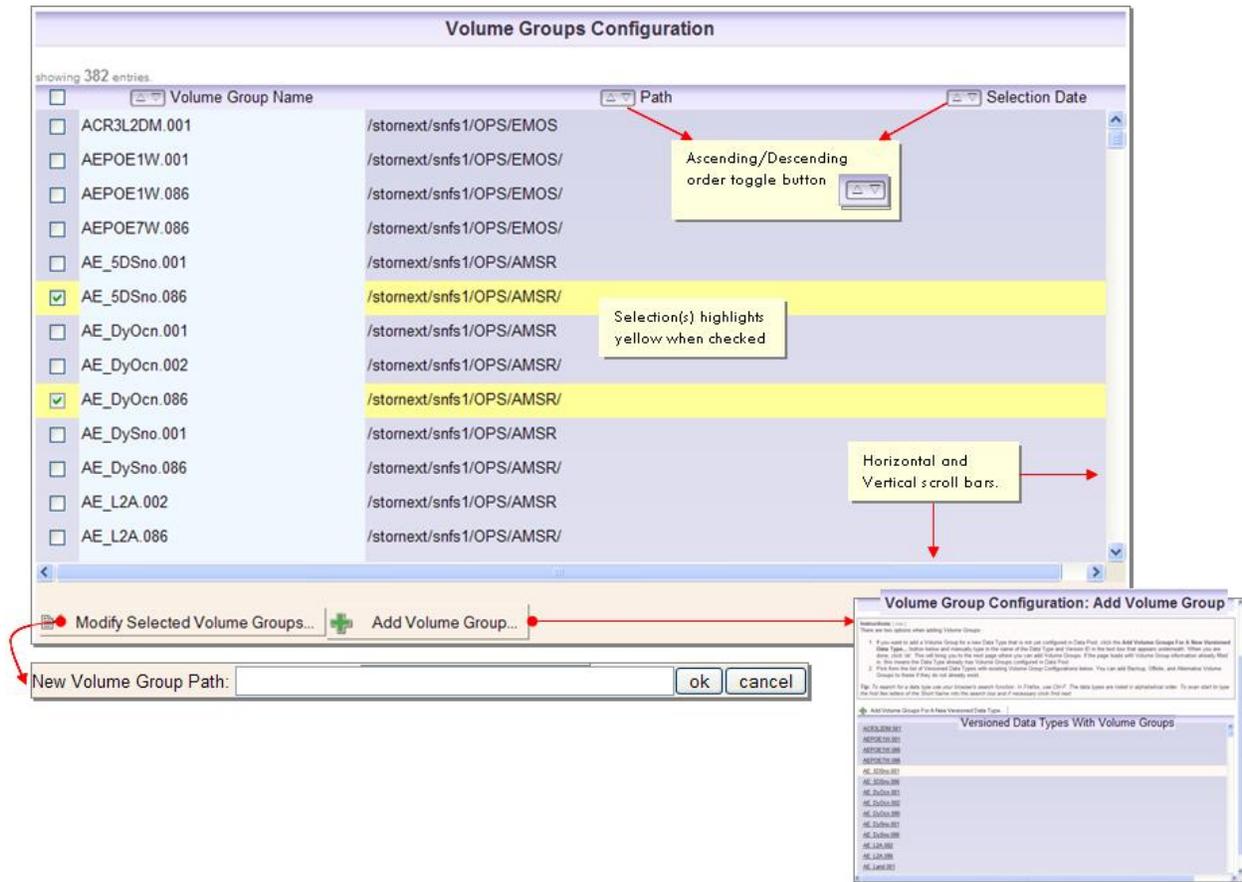


Figure 13.5-15. Volume Groups Configuration (listing page)

The **Volume Groups Configuration** page is divided into three distinct columns that provide important information about a particular **Volume Group**:

1. **Volume Group Name.**
2. **Path.**
3. **Selection Date.**

The bottom of the **Volume Groups Configuration** page has buttons to add a new volume group or to modify existing volume groups.

Table 13.5-10 contains a description of the fields contained on the **Volume Groups Configuration** page (Figure 13.5-15).

Table 13.5-10. Volume Groups Configuration Page Field Descriptions

Field Name	Entry	Description
Volume Group Name	System Generated	The name of the Volume Group based on a Data Type shortname with version identifier.
Path	System Generated	The fully qualified UNIX path to where data is stored for the specified data type.
Selection Date	System Generated	Non-NULL selection date defined for the ESDT version of which there are two volume group history sets defined for forward processing and reprocessing data respectively.
New Volume Group Path	Operator	A hidden field that is displayed when the operator clicks "Modify Selected Volume Groups" button.

An authorized Ingest Admin is authorized to add a Volume Group for a new Data Type version or add a Volume Group to an existing Data Type version. When adding a Volume Group for a new Data Type, the following rules apply:

- The Primary path information must be entered.
- **Backup Volume Group, Offsite Volume Group, or Alternative Volume Group History Set** are optional and may be entered at a later time.

Table 13.5-11 provides a description of the fields contained on the **Volume Groups Configuration: Add Volume Group** (Figure 13.5-16) and **Add a Volume Group** (Figure 13.5-17) pages.

Click link to move to previous page.

The screenshot shows a web browser window with the title "Volume Group Configuration: Add Volume Group". At the top left, there is a link "<< back to volume group main page" with a callout box pointing to it that says "Click link to move to previous page." Below the title bar, there is an "Instructions" section with a "[hide]" link. The instructions state: "There are two options when adding Volume Groups: 1. If you want to add a Volume Group for a new Data Type that is not yet configured in Data Pool, click the **Add Volume Groups For A New Versioned Data Type...** button below and manually type in the name of the Data Type and Version ID in the text box that appears underneath. When you are done, click 'ok'. This will bring you to the next page where you can add Volume Groups. If the page loads with Volume Group information already filled in, this means the Data Type already has Volume Groups configured in Data Pool. 2. Pick from the list of Versioned Data Types with existing Volume Group Configurations below. You can add Backup, Offsite, and Alternative Volume Groups to these if they do not already exist." Below the instructions is a "Tip" section: "Tip: To search for a data type use your browser's search function. In Firefox, use Ctrl-F. The data types are listed in alphabetical order. To scan start to type the first few letters of the Short Name into the search box and if necessary click find next." Below the tip is a button labeled "+ Add Volume Groups For A New Versioned Data Type" with a callout box pointing to it that says "Data Type and Version ID entry expands after click." Below this button is a form with a "[cancel]" link, a text input field labeled "Data Type Name and version ID:", and an "ok" button. Below the form is a section titled "Versioned Data Types With Volume Groups" containing a list of data types: AE SI6.001, AE SI6.086, AE WkOcn.001, AE WkOcn.086, AMSR-L1A.002, AMSREL1A.002, AMSREL1A.086, AQEPHDE.001, AQEPHDE.086, and AST EXP.086. A callout box points to the list with the text "Highlights when cursor overlay Volume Group Name." Another callout box points to the scroll bars of the list with the text "Horizontal and Vertical scroll bars."

Figure 13.5-16. Volume Group Configuration: Add Volume Group Page

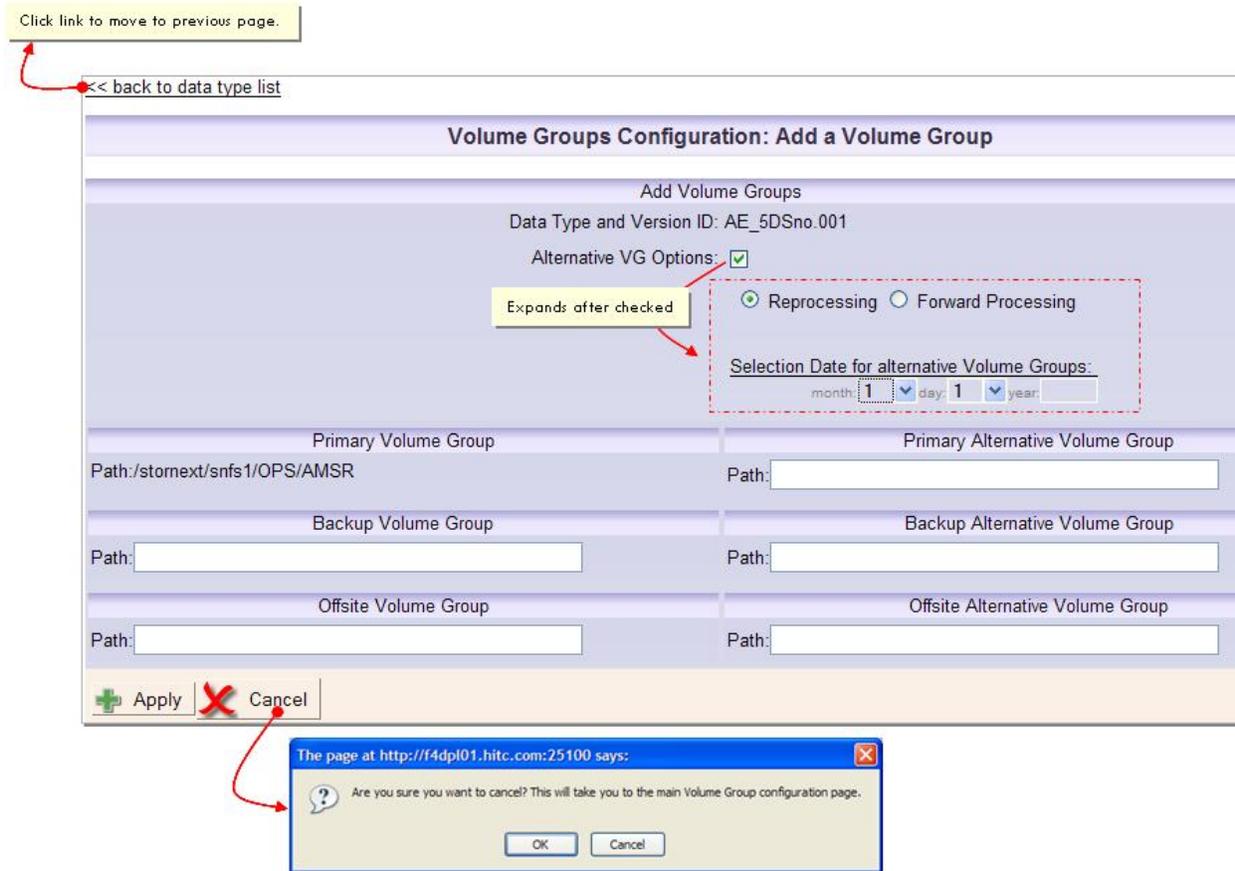


Figure 13.5-17. Volume Group Configuration: Add a Volume Group Page

Table 13.5-11. Add Volume Group Page Field Description (1 of 3)

Field Name	Data Type	Size	Entry	Description
Data Type and Version ID	Character	16	Required	A Data Type short name and version identifier.
Alternative VG Options	Checkbox	N/A	Not Required	Allows operator to enter options for alternative Volume Groups. This can only be checked if an Alternative Volume Group was specified, otherwise, the checkbox is disabled.

Table 13.5-11. Add Volume Group Page Field Description (2 of 3)

Field Name	Data Type	Size	Entry	Description
Selection Date for Alternative Volume Groups	Character	8	Required if adding Alternative Volume Group History Set	When the Alternative VG checkbox is selected, the Selection Date section is enabled and is required to be filled out by the user. Selection Date is a separate date to guide Archive Server to select a appropriate Volume Group History set for storing / retrieving data. When acquisition date is not null and less than the Selection Date, Reprocessing Volume Group history set will be used, otherwise, forward processing Volume Group history set will be used.
Reprocessing, Forward Processing	Option Buttons	N/A	Required if adding Alternative Volume Group History Set	Alternative volume groups can be configured either for Reprocessing or even for Forward Processing. Default is for Reprocessing. Although the flexibility to add a new alternative for forward processing is supported, it should be used with a great caution.
Primary Volume Group Path:	Character	Unlimited	Required	The fully-qualified UNIX path to where data is currently being stored for the specified data type to the Primary Archive.
Backup Volume Group Path:	Character	Unlimited	Required if Backup enabled	The fully-qualified UNIX path to where data is currently being stored for the specified data type to the Backup Archive.
Offsite Volume Group Path:	Character	Unlimited	Required if Offsite enabled	The fully-qualified UNIX path to where data is currently being stored for the specified data type to the Offsite Archive.
Primary Alternative Volume Group Path:	Character	Unlimited	Required if Primary Alternative enabled	The fully-qualified UNIX path to where reprocessing data is currently being stored for the specified data type to the Primary Alternative Archive.

Table 13.5-11. Add Volume Group Page Field Description (3 of 3)

Field Name	Data Type	Size	Entry	Description
Backup Alternative Volume Group Path:	Character	Unlimited	Required if Backup Alternative enabled	The fully-qualified UNIX path to where data is currently being stored for the specified data type to the Backup Alternative Archive.
Offsite Alternative Volume Group Path:	Character	Unlimited	Required if Offsite Alternative enabled	The fully-qualified UNIX path to where data is currently being stored for the specified data type to the Offsite Alternative Archive.

When a Volume Group is added, the name will be created based on the type of Volume Group that was added. There are six types, as explained in Table 13.5-12. Note that “R” indicates an alternative Volume Group for reprocessing. There is no explicit suffix for forward processing.

Table 13.5-12. Volume Group Naming

Volume Group Type	Extension	Example
Primary	none	AST_L1B.003
Primary Alternative	R	AST_L1B.003R
Backup	B	AST_L1B.003B
Backup Alternative	BR	AST_L1B.003BR
Offsite	O	AST_L1B.003O
Offsite Alternative	OR	AST_L1B.003OR

13.5.7.1 Add a Volume Group for a New Versioned Data Type

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2 Click on the **Volume Groups** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Volume Groups Configuration** page is displayed (Figure 13.5-16).

- 3 Scroll to the bottom of the page and select the **Add Volume Groups** button.
 - The **Volume Groups Configuration: Add Volume Group** page is displayed (Figure 13.5.17).
- 4 Click on the **Add Volume Groups For a New Versioned Data Type**.
 - The **Data Type and version ID** field is displayed.
- 5 Click in the **Data Type and version ID** field and enter the new **Data Type and Version ID**. Select **ok**.
 - The **Volume Group Configuration: Add a Volume Group** page is displayed (Figure 13.5-17).
- 6 (Optional) Click the **Alternate VG Options** checkbox.
 - A checkmark is displayed in the checkbox.
- 7 (Optional) Click the **Reprocessing** (or **Forward Processing**) option button.
 - A mark is displayed in the selected option button.
- 8 (Optional) If the **Alternate VG Options:** box is selected; you must enter the date in the provided **Selection Date for alternate Volume Groups** area.
 - A date is displayed in the selected area provided.
- 9 Click in the **Primary Volume Group Path** edit window and enter the fully-qualified UNIX path to where data is currently being stored for the specified new data type to the Primary Archive.
 - Data is displayed in the edit window.
- 10 Click in the **Primary Alternative Volume Group Path** edit window and enter the fully-qualified UNIX path to where data is currently being stored for the specified new data type to the Primary Alternate Archive,
 - Data is displayed in the edit window.
- 11 Click in the **Backup Volume Group Path** edit window and enter the fully-qualified UNIX path to where data is currently being stored for the specified new data type to the Backup Archive.
 - Data is displayed in the edit window.
- 12 Click in the **Backup Alternative Volume Group Path** edit window and enter the fully-qualified UNIX path to where data is currently being stored for the specified new data type to the Backup Alternate Archive.
 - Data is displayed in the edit window.
- 13 Click in the **Offsite Volume Group Path** edit window and enter the fully-qualified UNIX path to where data is currently being stored for the specified new data type to the Offsite Archive.

- Data is displayed in the edit window.
- 14** Click in the **Offsite Alternative Volume Group Path** edit window and enter the fully-qualified UNIX path to where data is currently being stored for the specified new data type to the Offsite Alternate Archive.
- Data is displayed in the edit window.
- 15** Click in the **Apply** button.
- A Confirmation prompt is displayed. Select **OK**
 - The changes are applied.
-

The following rules apply when adding Volume Groups to an existing Data Type version (e.g., Backup, Offsite, etc.):

- The **Volume Group** name will be selected from the **Primary Volume Groups** page. When the **Add Volume Group** page is loaded, the Volume Group name will appear at the top.
- Any previously added **Volume Group** will be displayed, but not editable. For example, if a **Backup Volume Group** has already been added, the **Volume Group** path will be shown, but the operator will not be able to edit this path.
- Similarly, if any **Alternative Volume Groups** have been specified, the **Alternative VG** options and **Volume Groups** will be displayed, but not editable.
- If the operator is adding the **Alternative Volume Group History Set** for the first time, the **Alternative Options** must be selected and the operator may choose the processing type (Forward Processing or Reprocessing) for the **Alternative Volume Group History Set**, as well as a selection date to be applied to the **Reprocessing Volume Groups**.

13.5.7.2 Add a Volume Group for an Existing Versioned Data Type

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2 Click on the **Volume Groups** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Volume Groups Configuration** page is displayed.
- 3 Scroll to the bottom of the page and select the **Add Volume Groups** button.
 - The **Volume Group Configuration: Add Volume Group** page is displayed (Figure 13.5-16).
- 4 Click on the desired existing **Volume Group Name**.
 - The **Volume Groups Configuration: Add a Volume Group** page (Figure 13.5-17) is displayed for the Data Type selected.
- 5 (Optional) Click on the **Alternate VG Options:** checkbox.
 - A checkmark is displayed in the checkbox.
- 6 (Optional) Click on the **Reprocessing** (or **Forward Processing**) option button.
 - A mark is displayed in the selected option button.
- 7 (Optional) If the **Alternate VG Options:** checkbox is selected; you must enter the date in the provided **Selection Date for alternate Volume Groups** area.
 - A date is displayed in the selected area provided.
- 8 Click in the **Primary Volume Group Path** edit window and enter the fully-qualified UNIX path to where data is currently being stored for the specified new data type to the Primary Archive.
 - Data is displayed in the edit window.
- 9 Click in the **Primary Alternative Volume Group Path** edit window and enter the fully-qualified UNIX path to where data is currently being stored for the specified new data type to the Primary Alternate Archive,
 - Data is displayed in the edit window.
- 10 Click in the **Backup Volume Group Path** edit window and enter the fully-qualified UNIX path to where data is currently being stored for the specified new data type to the Backup Archive.
 - Data is displayed in the edit window.
- 11 Click in the **Backup Alternative Volume Group Path** edit window and enter the fully-qualified UNIX path to where data is currently being stored for the specified new data type to the Backup Alternate Archive.

- Data is displayed in the edit window.
- 12 Click in the **Offsite Volume Group Path** edit window and enter the fully-qualified UNIX path to where data is currently being stored for the specified new data type to the Offsite Archive.
 - Data is displayed in the edit window.
 - 13 Click in the **Offsite Alternative Volume Group Path** edit window and enter the fully-qualified UNIX path to where data is currently being stored for the specified new data type to the Offsite Alternate Archive.
 - Data is displayed in the edit window.
 - 14 Click in the **Apply** button.
 - A Confirmation prompt is displayed. Select **OK**
 - The changes are applied.
-

13.5.7.3 Modify Volume Groups

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
 - 2 Click on the **Volume Groups** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Volume Groups Configuration** page (Figure 13.5-15) is displayed.
 - All columns on the **Volume Groups Configuration** page can be sorted in ascending or descending order. To sort on a column, click on the up or down arrow at the top of the column.
 - 3 Click in the checkbox next to the **Volume Group Name** of the desired volume group(s) to be change.
 - A checkmark is placed in the checkbox and the selection is highlighted yellow.
 - Multiple selections may be made using the <Ctrl> key.
 - 4 Scroll to the bottom of the page and select the **Modify Selected Volume Groups** button.
 - A path input field appears at the bottom of the page.
 - 5 Enter the **New Volume Group Path** in the edit field and click the **ok** button.
 - A Confirmation prompt is displayed. Select **OK**
 - The changes to the Volume Group Path will be applied.
-

13.5.8 Operator Configuration

The Operator Configuration page (Figure 13.5-18) consists of a list of operator names and their current permission settings. The security operator configures authorized users for the Data Pool Ingest GUI, and add, edit, or remove users.

Legend: Operator Permissions and related context-sensitive Help Tips.

- view only
The operator can only view pages in this application and can not manage (such as suspend or resume requests) or make changes to configuration parameters. A view-only operator will see most text boxes, buttons, and checkboxes disabled.
- ingest control
The operator can manage requests and interventions - actions like suspend, resume, and change priority. The operator can also clear alerts and fail or retry granules associated with any request and enter operator annotations.
- ingest admin
The operator can configure Providers, Data Types, Remote Hosts, Archive File Systems, and ECS Services.
- ingest tuning
The operator can modify global tuning parameters.
- ingest security
The operator can manage (add, delete, modify) operators.

Figure 13.5-18. Operator Configuration Page

There are five permission levels. An operator assigned the view only permission level, cannot be authorized additional permissions. The other four levels can be added together as they represent the ability to manage an exclusive set of properties associated with data pool ingest. An operator may be assigned multiple permissions, other than view only. The following list reviews the five permission levels for the Data Pool Ingest GUI.

- **View Only** – The operator cannot alter or modify anything on the GUI, nor can he/she take actions. All textboxes, checkboxes, drop-down lists, etc. are disabled.
- **Ingest Control.** The operator can manage Ingest requests and interventions, i.e., he/she has the ability to suspend or resume requests, place on hold and close

interventions, fail or resume granules, etc. This also implies that the operator may suspend and resume services, hosts, file systems, archives, etc.

-  **Ingest Admin.** The operator can alter general configuration parameters such as SCP/FTP Host configuration, providers, data types, etc. This level of operator cannot modify tuning parameters.
 -  **Ingest Tuning.** The operator can alter global and host-specific tuning configuration parameters.
 -  **Security Admin.** The operator can maintain security-related information like passwords and operators.
-

13.5.8.1 Modify Operator Permission Settings

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2 Click on the **Operators** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Operator Configuration** page is displayed.
 - All Operators and their current Permission settings are displayed.
 - Changes to this page can only be made if you have **Security Admin** permissions.
- 3 Click in the checkbox next to the **Operator Name** of the desired operator to change permissions.
 - Multiple selections may be made.
 - A checkmark must be visible before further changes can be made.
- 4 Click in the checkbox next to the desired permission.
 - A checkmark is displayed in the checkbox.
 - Scroll to the bottom of the **Operator Management** section and click on the **Update Operators** button.
 - A Confirmation prompt is displayed. Select **OK**.

NOTE: Changes to an existing operator's permissions will not take effect until the next login by that particular operator.

13.5.8.2 Add Operator Permissions

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
 - 2 Click on the **Operators** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Operator Configuration** page is displayed.
 - All Operators and their current Permission settings are displayed.
 - Changes to this page can only be made if the operator has **Security Admin** permissions.
 - 3 Scroll to the bottom of the **Operator Configuration** page until the **Add Operator** section of this page is visible.
 - 4 Click in the **Operator Name** field and enter the **name of the operator**.
 - 5 Click in the **Password** field and enter the **password**.
 - The **Password** field will be populated with stars.
 - 6 Click in the **Verify Password** field and **re-enter the password**.
 - The **Verify Password** field will be populated with stars.
 - 7 Click the checkbox next to the desired **Permissions**.
 - At least one permission level must be selected.
 - 8 Select the **Add Operator** button.
 - A Confirmation prompt is displayed. Select **OK**.
 - The new operator name will be added to the list of operators in the **Operator Management** section of the **Operator Configuration** page.
-

13.5.8.3 Remove Operator Permission Settings

- 1 Click on the **Configuration** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Configuration** menu is expanded.
- 2 Click on the **Operators** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Operator Configuration** page is displayed.
 - All Operators and their current Permission settings are displayed.
 - Changes to this page can only be made if the operator has **Security Admin** permissions.
- 3 Click in the checkbox next to the **Operator Name** to be removed.
 - Multiple selections may be made.

- A checkmark must be visible before further changes can be made.
- 4 Scroll to the bottom of the Operator Management page and click on the **Remove Operators** button.
- A Confirmation prompt is displayed. Select **OK**

NOTE: Changes to an existing operator’s permissions will not take effect until the next login by that particular operator.

13.6 Reports

13.6.1 Reports

The reporting capability of the Ingest GUI offers the ability to view detailed reports on data providers and data types, as well as request summary and granule summary reports. The report pages are located under the **Reports** menu in the navigation pane.

The report pages (**Detailed**, **Request Summary** and **Granule Summary**) display the information across data providers or data types. As with all types of reports, the operator must select a date range (presets are provided for the last 24 and 48 hours), as well as criteria for the search. These include one or more **Data Providers**, one or more **Data Types**, and one or more **Final Request Statuses**. Additionally, **Ingest Method (DPL or NON-DPL)** can also be selected. All Data Criteria fields are optional, but at least one selection of one field must be made to generate the report. Due to the large volume of data that may be in the database, reports can sometimes take a while to process and generate a display.

Table 13.6-1 provides an activity Checklist for Reports.

Table 13.6-1. Reports

Order	Role	Task	Section
1	Ingest Technician	Generating a Report	(P) 13.6.1.1
2	Ingest Technician	Viewing Volume Group(s) History	(P) 13.6.2.1

13.6.1.1 Generating a Detailed Report

- 1 Click on the **Reports** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Reports** menu is expanded.
- 2 Click on the **Detailed, Request Summary** or **Granule Summary** in the navigation frame of the **DPL Ingest GUI**.
 - **The Detailed Report, Request Summary Report** or **Granule Summary Report** criteria page is displayed.
- 3 In the **Date/Time Criteria** section of the page, select the desired **Start Date/Time** and **End Date/Time**.
 - The date and time information is displayed as selected.
- 4 In the **Data Criteria** section of the page, select one or more **Data Provider**, one or more **Data Type**, one or more **Final Request Status** and the **Ingest Method** (DPL or NON-DPL) by clicking on the the desired selections.
 - The desired selections are highlighted.
- 5 Click on the **Generate Report** button.
 - The **Processing Your Request** transitional screen is displayed.
 - Time to process your request will depend on factors such as time span, number of Data Providers, Data Types and Request Statuses selected.
 - Eventually, one of the following report outputs will be displayed.
 - Detailed Report Page (Figure 13.6-1)

Detailed Report

Date/Time Criteria

Start Date/Time: month: 1, day: 1, year: 2009, hour: 12, min: 8
 End Date/Time: month: 1, day: 30, year: 2009, hour: 12, min: 8
 Presets: Last 24 hours, Last 48 hours, Previous criteria runs.

Data Criteria

Data Provider: --ALL PROVIDERS-- (ArchiveOnline selected)
 Data Type: --ALL DATA TYPES-- (Selected)
 Final Request Status: Successful, Cancelled, Partially_Cancelled, Failed, Partial_Failure, Terminated
 Ingest Method: DPL, NON-DPL

Report Output
 No report generated yet.

Current Report Criteria:

Data Provider(s): [ArchiveOnline] Data Type(s): [ALL]
 Final Request Status: [ALL] Start Date/Time: 1/1/2009 12:8
 End Date/Time: 1/30/2009 12:8

Report Output

Req.ID	Data Provider	Ingest Type	Ingest Method	Request Status	Start Date/Time	End Date/Time	Tot.# grans.	# Succ. grans.	Vol (MB)	File Count	Time to xfer (secs)	Time to preproc (secs)	Time to Archive (secs)	Priority	Restart Flag
274518	ArchiveOnline	Polling_wIDR	DPL	Successful	2009-01-07 10:17:13	2009-01-07 10:17:17	1	1	0.125	2	0	3	0	HIGH	
274519	ArchiveOnline	Polling_wIDR	DPL	Successful	2009-01-07 10:17:13	2009-01-07 10:17:17	1	1	0.360	2	0	3	0	HIGH	
274704	ArchiveOnline	Polling_wIDR	DPL	Successful	2009-01-13 08:13:59	2009-01-13 08:14:05	1	1	0.125	2	0	3	0	HIGH	
274705	ArchiveOnline	Polling_wIDR	DPL	Successful	2009-01-13 08:13:59	2009-01-13 08:14:05	1	1	0.360	2	0	5	0	HIGH	

Figure 13.6-1. Detailed Report Page

- Request Summary Report Page (Figure 13.6-2)

Request Summary Report

Date/Time Criteria

Start Date/Time: month: 12, day: 1, year: 2008, hour: 12, min: 28
 End Date/Time: month: 2, day: 26, year: 2009, hour: 12, min: 28
 Presets: Last 24 hours, Last 48 hours, Previous criteria runs.

Data Criteria

Data Provider: ASTER_OSFS, ASTER_OSF, ArchiveOnline, BMGT, DDIST, ECSBulkExport, FPOS
 Data Type: --ALL DATA TYPES--
 Final Request Status: --ALL STATUSES--
 Ingest Method: DPL, NON-DPL

Generate Report: **Report Output**
 No report generated yet.

Current Report Criteria:

Data Type(s): [ALL]
 Start Date/Time: 12/1/2008 12:28
 Final Request Status: [ALL]
 End Date/Time: 2/26/2009 12:28

Report Output

Data Provider	Ingest Type	Ingest Method	Ttl. Reqs	Ttl. Errors	Ttl. Volume (GB)	Gran Avg	Gran Max	File Avg	File Max	Size Avg (MB)	Size Max (MB)	Xfer time Avg (secs)	Xfer time Max (secs)	Preproc time Avg (secs)	Preproc time Max (secs)	Archive Time Avg (secs)	Archive Time Max (secs)
QAUU_SIPS	Polling_w/DR	DPL	60	0	0.164	1.000	1	2.000	2	2.801	7.869	0.833	6	28.517	35	0.417	2
ArchiveOnline	Polling_w/DR	DPL	96	4	0.082	1.021	2	2.021	3	0.878	8.971	0.240	2	4.083	24	0.208	2
TOTALS:			156	4	0.246	1.013	2	2.013	3	1.617	8.971	0.468	6	13.481	35	0.288	2

Generates "Report Output"

Highlights on cursor overlay.

Figure 13.6-2. Request Summary Report Page

- Granule Summary Report Page(Figure 13.6-3)

Granule Summary Report

Date/Time Criteria

Start Date/Time: month: 1, day: 1, year: 2008, hour: 2, min: 10
 End Date/Time: month: 1, day: 1, year: 2009, hour: 1, min: 2

Presets: Last 24 hours, Last 48 hours, Previous criteria runs.

Data Criteria

Data Provider: --ALL PROVIDERS--
 Data Type: --ALL DATA TYPES--
 Final Request Status: --ALL STATUSES--
 Ingest Method: DPL

Current Report Criteria

Data Provider(s): [ALL] Data Type(s): [ALL]
 Final Request Status: [ALL] Start Date/Time: 1/1/2008 2:10
 End Date/Time: 1/1/2009 1:2

Report Output

Data Provider	Ingest Type	Ingest Method	Data Type	Ttl. Grans	Ttl. Errors	Ttl. Volume (GB)	File Avg	File Max	Size Avg (MB)	Size Max (MB)	Xfer time Avg (secs)	Xfer time Max (secs)	Preproc time Avg (secs)	Preproc time Max (secs)	Archive Time Avg (secs)	Archive Time Max (secs)
JPL	Polling_wDR	DPL	MOD29P1D	124	0	0.025	2.000	2	0.205	0.535	1.427	90	15.524	34	0.161	2
BMGT_CRIT_30_L1A	Polling_wDR	DPL	MYD13A3	3	3	0.003	2.000	2	1.157	1.189	0.667	1	0.000	0	0.000	0
MODAPS_COMBINE	Polling_wDR	DPL	MOD29P1D	4	0	0.024	2.000	2	6.110	6.110	0.000	0	0.000	0	0.000	0
Bender	Polling_wDR	DPL	DAP	2	1	0.002	2.000	2	1.250	1.2	0.000	0	0.000	1	0.000	0
JPL	Polling_wDR	DPL	AE_DySno	1	0	0.002	2.000	2	2.055	2.0	0.000	0	25.000	25	1.000	1
Bender	Polling_wDR	DPL	MYD14	213	2	0.052	2.000	2	0.249	0.745	0.901	21	4.803	12	0.643	4
JPL	Polling_wDR	DPL	AE_Si25	1	0	0.020	2.000	2	20.954	20.954	0.000	0	25.000	25	1.000	1
MODAPS_TERRA	Polling_wDR	DPL	MOD29	2	1	0.022	2.000	2	11.398	11.398	45.500	91	1.000	2	0.000	0
NSIDC_DAAC	Polling_wDR	DPL	MOD29P1D	5190	25	1.063	2.000	2	0.210	0.850	1.028	60	8.545	367	0.840	18
pchen	Polling_wDR	DPL	AST_L1A	1	1	0.108	1.000	1	110.922	110.922	2.000	2	0.000	0	0.000	0
BMGT	Polling_wDR	DPL	MYD29P1N	10	0	0.001	2.000	2	0.124	0.291	0.100	1	11.000	13	0.200	1
LeoProvider	Polling_wDR	DPL	MOD14	10	0	0.002	2.000	2	0.198	0.412	0.500	4	45.900	50	0.400	2
BMGT_CRIT_30_L1A	Polling_wDR	DPL	MOD11A2	3	3	0.003	2.000	2	1.151	1.163	0.667	2	0.000	0	0.000	0
TOTALS:				120179	881	248.778	1.719	98	2.120	307.082	2.004	1059	16.665	50531	1.378	1076

Figure 13.6-3. Granule Summary Report Page

13.6.2 Viewing the Volume Groups History Page

The **Volume Groups History** page displays the history of the configuration changes that have occurred to volume groups. Table 13.6-2. displays the information contained on the **Volume Groups History** page.

Table 13.6-2. Volume Groups History Page Field Description

Field Name	Data Type	Size	Entry	Description
VersionedData Type (Data Type. Version ID)	Character	16	Required	The name of a Volume Group.
Path	Character	Unlimited	System Generated	In reverse chronological order, the fully qualified UNIX paths to where data has been stored for the specified data type. The current path is listed first.
Start Date	Date	16	System Generated	The date on which this configuration became active for the listed data type.
End Date	Date	16	System Generated	The date on which this configuration was superseded by new configuration information. If blank, this row reflects the current configuration for the volume group. If any row has a blank end date, the volume group is closed, and no further data is accepted for that volume group.

13.6.2.1 Viewing Volume Group(s) History

- 1 Click on the **Reports** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Reports** menu is expanded.
- 2 Click on the **Volume Groups History** link in the navigation frame of the **DPL Ingest GUI**.
 - The **Volume Groups History** page is displayed (Figure 13.6-4).

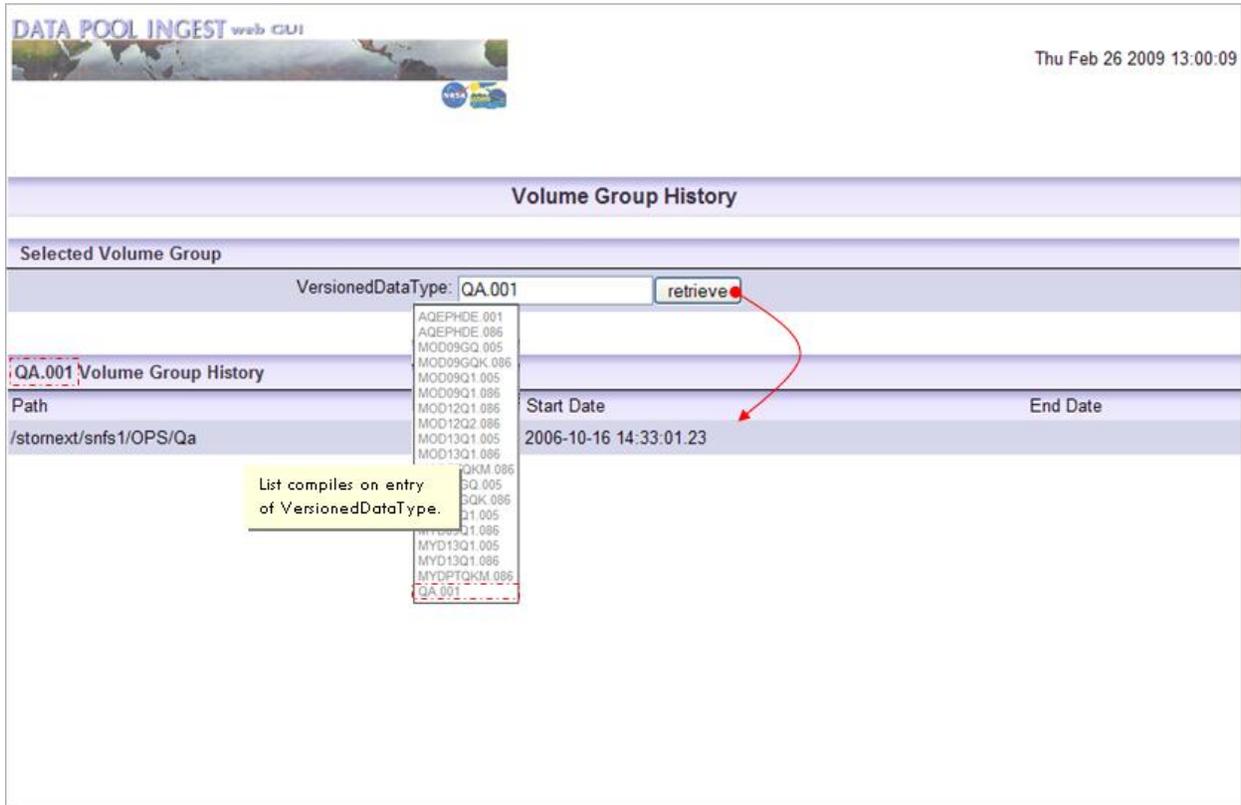


Figure 13.6-4. Volume Group History Page

- 3 In the **Selected Volume Group** section, click in the field next to the **VersionedData Type** and enter (or select from the drop-down list)the name of the **Volume Group** to be retrieved.
 - The **Volume Group** name is displayed as entered.
- 4 Click the **retrieve** button.
 - The **Path**, **Start Date** and **End Date**, are displayed in **[Name] Volume Group History** section.

13.7 Help Pages and Context Help

The **Help** section contains information the operator can have readily available while operating the Data Pool Ingest GUI. Included in this section are three pages: General Topics, Context Help and About.

The **General Topics** page includes an index of topics that should be useful to the operator in understanding how the GUI and Data Pool Ingest system work (Figure 13.7-1). The operator can press on the name of a section from the index in order to jump to the section text.

DPL Ingest GUI (DEV09) - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Home
Monitoring
Interventions & Alerts
Configuration
Reports
Help
General Topics
Context Help
About

You are logged in as IngAdmin
Operator Actions:
[log out]
[change password]
[show my permissions]

[reload page]

DATA POOL INGEST web GUI

Thu Feb 1 2007 15:43:35

Index

Click on a topic title below to jump to that topic. You can also search for desired information by using your browser's built-in search function (Ctrl-F).

- Request State Transition
- Granule State Transition

Request State Transition

Requests go through various states as they are processed by the DPL Processing Service. Below are the paths that a request can take during its processing lifecycle. Some things to note:

- If a request is "stuck" and does not move to the next state after a reasonable amount of time, then the Processing Service may be down. This is normally, but not always, indicated on the GUI's home (Ingest Status) page under the Processing Service Status.
- If requests are being submitted and not being picked up, it is possible the Polling Service or Quick Server may down or suspended.

Possible Request Paths:

Normal Transition	Cold Restart	Validation Failed
<ol style="list-style-type: none">Newvalidated - validation successfulActive - dispatchedSuccessful - all granules successful, PAN notif. created	<ol style="list-style-type: none">Newvalidated - validation successfulTerminated - cold restart	<ol style="list-style-type: none">NewFailed - validation failed

Possible Request Paths (cont.):

Failed Granules	Suspended Granules	Operator Cancellation
<ol style="list-style-type: none">Newvalidated - validation successfulActive - dispatchedone of:<ul style="list-style-type: none">Partial_Failure - not all granules failedFailed - all granules failed.	<ol style="list-style-type: none">Newvalidated - validation successfulActive - dispatchedOne of:<ul style="list-style-type: none">Partially_Suspended - at least one granule suspended, one activeSuspended - at least one suspended, none activeOperator resumes granule from checkpoint, at which point the states would go to:<ul style="list-style-type: none">Resuming - at least one granule suspended, one active	<ol style="list-style-type: none">Newvalidated - validation successfulActive - dispatchedCancelling - operator cancels requestone of:<ul style="list-style-type: none">Partially_Cancelled - not all granules cancelledCancelled - all granules cancelled.

Granule State Transition

Granules also go through various states as they are processed by the DPL Processing Service. Below are the paths that a granules can take during its processing lifecycle.

Possible Granules Paths:

Normal Transition	Possible Error States
<ol style="list-style-type: none">Processing (START)Transferring	

Figure 13.7-1. Help – General Topics

The **Context** page explains another tool provided by the operator to assist him in effectively using the Data Pool Ingest GUI. Throughout most pages on the DPL GUI, you can get relevant, context-sensitive help by hovering your mouse (no need to click) over the [**help**] text. In many

cases this is to explain the significance of a parameter or to provide instructions on what to do on the page. A blue pop-over window will appear and disappears as soon as the mouse is moved.

13.8 Data Pool Maintenance GUI

The Data Pool Maintenance GUI is responsible for monitoring and maintaining the Data Pool. Data Pool Ingest requires the use of the Data Pool Maintenance (DPM) GUI to perform the following tasks:

- Managing Data Pool Collection Groups
- Managing Data Pool Collections within Collection Groups

Table 13.8-1 provides an activity Checklist for Data Pool Maintenance.

Table 13.8-1. Data Pool Maintenance

Order	Role	Task	Section
1	Ingest Technician	Launching the DPM GUI	(P) 13.8.1.1
4	Ingest Technician	View Collection Groups	(P) 13.8.2.1
5	Ingest Technician	Modify Collection Groups	(P) 13.8.2.2
6	Ingest Technician	Add a Collection Group	(P) 13.8.2.3
7	Ingest Technician	Add an ECS Collection to a Collection Group	(P) 13.8.2.4
8	Ingest Technician	Modify an ECS Collection	(P) 13.8.2.5

13.8.1 Data Pool Maintenance GUI

The **DPM GUI** is used for Data Pool maintenance tasks. Of course, the first thing to do is launch the 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.

13.8.1.1 Launch the DPM GUI

-
- 1 At the UNIX command line prompt enter: **setenv DISPLAY <client name>:0.0**
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 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 x0acs03 as user cmops enter:

/tools/bin/ssh -l cmops x4oml01

- 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 x4oml01

- or -

ssh -l cmops x4oml01

- Examples of Data Pool Maintenance GUI host names include **x4hel01**.
- 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 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 4.
- 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 4.

4 If a prompt for **<user@remotehost>'s password:** appears, enter:
<password>

- A command line prompt is displayed.
 - Log-in is complete.
- 5 Type **firefox &** then press **Return/Enter**.
- 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 Mozilla Firefox 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 pull-down window.
- The **Login:** prompt is displayed.
- 7 If no bookmark has been created for the **DPM GUI**, type **http://host:port** in the browser's **Location (Go To)** field then press **Return/Enter**.
- For example: `http:// f4hel01.hitc.com:22181/`.
- 8 Type the appropriate user name in the **User** textbox of the security **Login** prompt.
- 9 Type the appropriate password in the **Password** textbox of the security **Login** prompt.
- 10 Click on the **Login** button:
- The dialogue box is dismissed.
 - The **DPM GUI** ["Home" Page] is displayed (Figure 13.8-1).

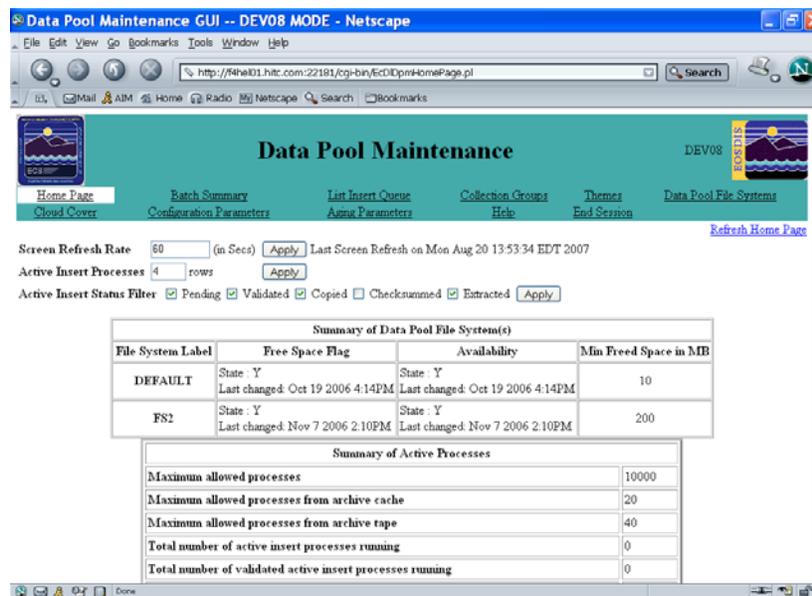


Figure 13.8-1. DPM GUI Home Page

13.8.2 Managing Data Pool Collection Groups

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 Group 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.

13.8.2.1 View Collection Groups

- 1 Launch the **DPM GUI**.
 - For detailed instructions refer to the **Launch the DPM GUI** procedure (previous procedure of this lesson).
 - The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems, Cloud Cover, List Insert Queue, Batch Summary, Collection Groups, Themes, Configuration Parameters, Aging Parameters, Help** and **End Session**).
- 2 Click on the **Collection Groups** link.
 - The Collection Group page is displayed (Figure 13.8-2).

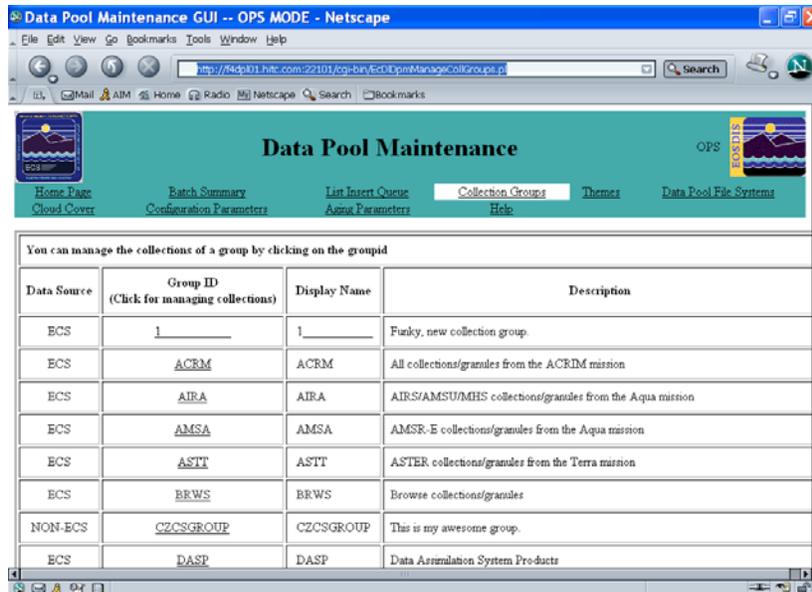


Figure 13.8-2. Collection Group Page

- 3 Observe data displayed on the Collection Group page.
 - The table on the Collection Group page has columns containing the following types of collection group information:
 - **Data Source.**
 - **Group ID (Click for managing collections).**
 - **Display Name.**
 - **Description.**
 - The following links are available on the Collection Groups page:
 - **Group ID (Click for managing collections)** - Links to a **List of Collections** contained in that group.
 - **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 (Click for managing collections)** column.
 - The **List of Collection** page is displayed (Figure 13.8-3).

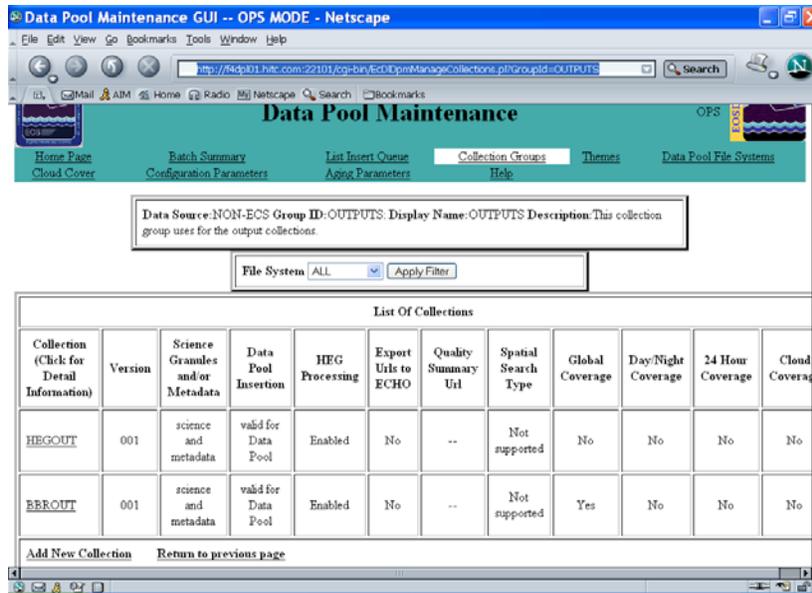


Figure 13.8-3. List of Collection

- 5 Observe data displayed on the **List of Collections** page.
 - Near the top of the **List of Collections** page contains the following basic collection group information:
 - **Data Source.**
 - **Group ID.**
 - **Display Name.**
 - **Description.**
 - There is a file system filter (and associated **Apply Filter** button) for displaying data on the **Collection Detail Information** page for all file systems or by individual file system.
 - The **List of Collection** page has columns containing the following types of collection group information:
 - **Collection (Click for Detail Information) link.**
 - **Version.**
 - **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 **List of Collection** 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 **List of Collections** page, click on the **File System** filter option button.
- Options are displayed.
- 7** 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 Detail** link, click on the **Apply Filter** button.
- The **Collection (Click for Detail Information)** column is displayed with the filtered collection group information.
- 9** To obtain more information about one of the collections in the collection group, click on its link in the **Collection (Click for Detail Information)** column.
- The **Detail Information** page for the selected collection is displayed (Figure 13.8-4).

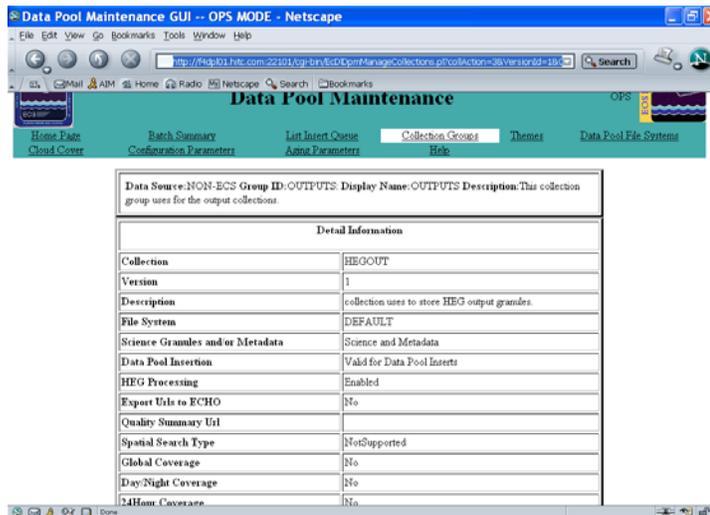


Figure 13.8-4. Detail Information

- 10 Observe data displayed on the **Detail Information** page.
- Near the top of the **Detail Information** page is the following basic collection group information:
 - **Data Source.**
 - **Group ID.**
 - **Display Name.**
 - **Description.**
 - The **Detail Information** page has rows containing the following types of collection information:
 - **Collection.**
 - **Version.**
 - **Description.**
 - **File System.**
 - **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 **Information Detail** page:
 - **Modify Collection.**
 - **Return to previous page.**
- 11** To view a description for another collection in the same group first click on the **Return to previous page** link.
- The **List of Collections** page is displayed again.
- 12** To view a description for another collection in the same group return to Step 9.
- 13** To view a description for another collection in another group return to Step 2.
-

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 following procedure to modify collection groups:

13.8.2.2 Modify Collection Groups

- 1** Launch the **DPM GUI**.
 - For detailed instructions refer to the **Launch the DPM GUI** procedure (previous section of this lesson).
 - The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems, Cloud Cover, List Insert Queue, Batch Summary, Collection Groups, Themes, Configuration Parameters, Aging 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., **Data Source, Group ID (Click to Manage Collections), Display Name, and Description**.

- 3 Click on the **Modify Collection Group** link at the bottom of the page.
 - The **Modify Collection Group** page is displayed (Figure 13.8-5), providing a table of collection group information showing five columns: **Data Source**, **Group ID (Click to Manage Collections)**, **Display Name**, **Description**, and **Checkbox to Modify** (containing a checkbox to mark the collection group for change).

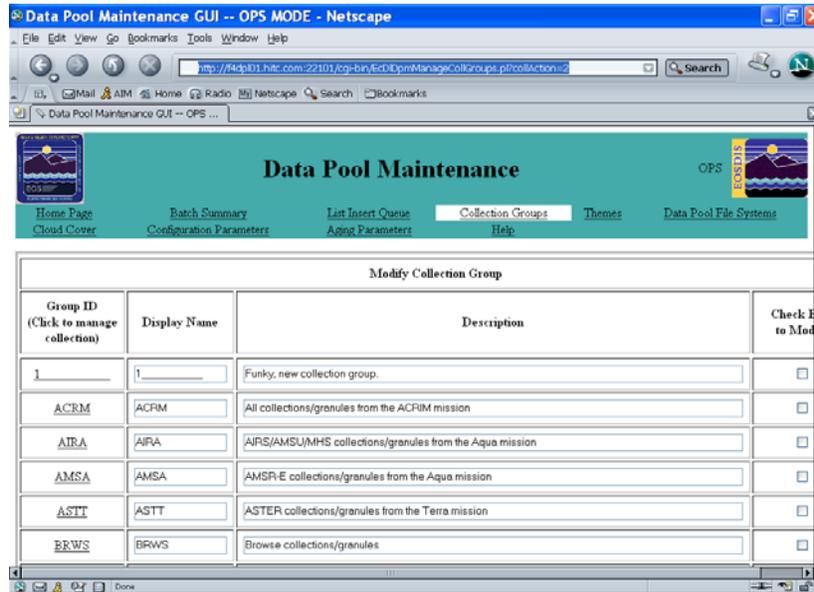


Figure 13.8-5. Modify Collection Group

- 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 checkbox 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 Group page is displayed with the modified collection group information.
-

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.

13.8.2.3 Add a Collection Group

- 1** Launch the **DPM GUI**.
 - For detailed instructions refer to the **Launch the DPM GUI** procedure (previous procedure of this lesson).
 - The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems, Cloud Cover, List Insert Queue, Batch Summary, Collection Groups, Themes, Configuration Parameters, Aging 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., **Data Source, Group ID (Click to Manage Collections), Display Name, and Description**.
- 3** Click on the **Add Collection Group** link at the bottom of the page.
 - The **Add Collection Group** page is displayed (Figure 13.8-6) providing a page with three columns of text-entry fields, **Data Source, Group ID, Display Name, and Description**.

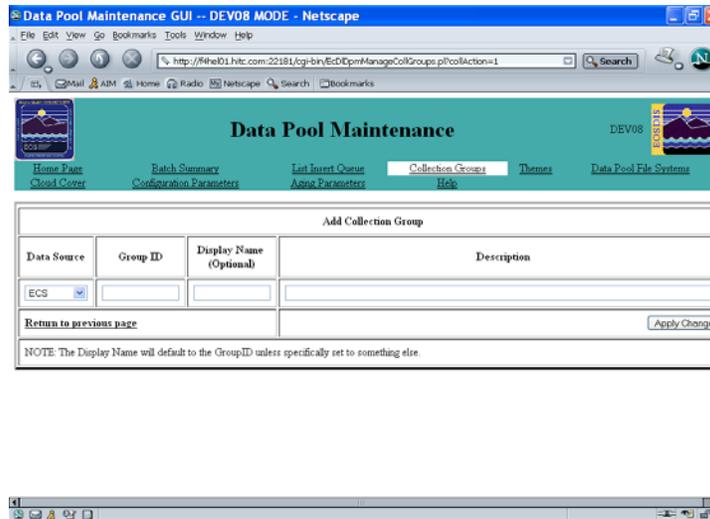


Figure 13.8-6. Add Collection Group

- 4 Select the **Data Source** from the pull-down window.
 - **ECS** or **NONECS** is displayed in the field.
 - 5 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.
 - 6 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.
 - 7 Type the description for the new collection group in the **Description** field.
 - The **Description** may have no more than 255 characters.
 - 8 Click on the **Apply Change** button.
 - The new collection group information is entered in the Data Pool database.
 - The Collection Group page is displayed with the new collection group information.
-

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. Full-capability operators (only) can use the following procedure to add an ECS collection to an existing collection group:

13.8.2.4 Add an ECS Collection to a Collection Group

- 1 Launch the **DPM GUI**.
 - For detailed instructions refer to the **Launch the DPM GUI** procedure (previous section of this lesson).
 - The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems**, **Cloud Cover**, **List Insert Queue**, **Batch Summary**, **Collection Groups**, **Themes**, **Configuration Parameters**, **Aging Parameters**, and **End Session**).
- 2 Click on the **Collection Groups** link.
 - The Collection Group page is displayed, providing a table listing collection group information; i.e., **Data Source**, **Group ID (Click to Manage Collections)**, **Display Name**, and **Description**.
- 3 Click on the **Group ID** link for the ECS collection group to which the collection is to be added.
 - The **List of Collections** page is displayed (Figure 13.8-7).

Collection (Click for Detail Information)	Version	Science Granules and/or Metadata	Data Pool Insertion	HEG Processing	Expert Urls to ECHO	Quality Summary Url	Spatial Search Type	Global Coverage	Day/Night Coverage	24 Hour Coverage	Cloud Coverage
ASTLIADG	001	science and metadata	valid for Data Pool	Disabled	No	--	GPolygon	No	Yes	No	No
ASTLIXP1	001	science and metadata	valid for Data Pool	Disabled	No	--	Not supported	No	Yes	No	No
		science	valid for				Not supported	No	Yes	No	No

Figure 13.8-7. List of Collections

- 4 Click on the **Add New Collection** link at the bottom of the **List of Collections** page.
 - The **Collections Not in Data Pool** page is displayed (Figure 13.8-8).

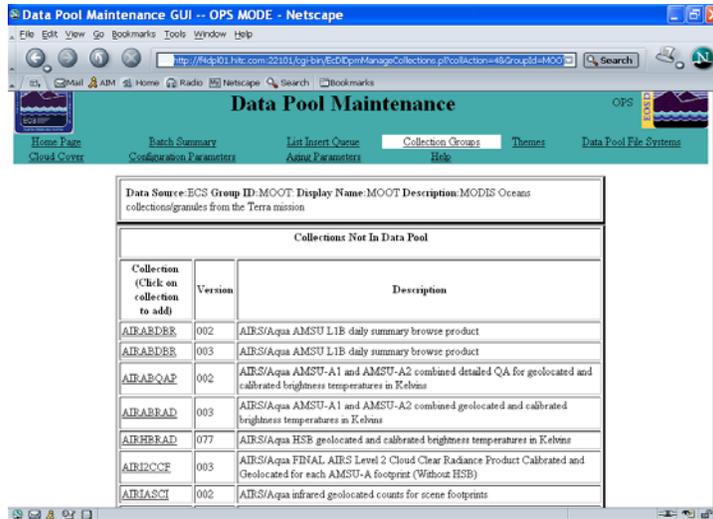


Figure 13.8-8. Collections Not In Data Pool Page

- 5 Click on the link in the **Collection (Click on collection to add)** column of the collection to be added to the collection group.
 - The **Add New Collection** page is displayed (Figure 13.8-9).

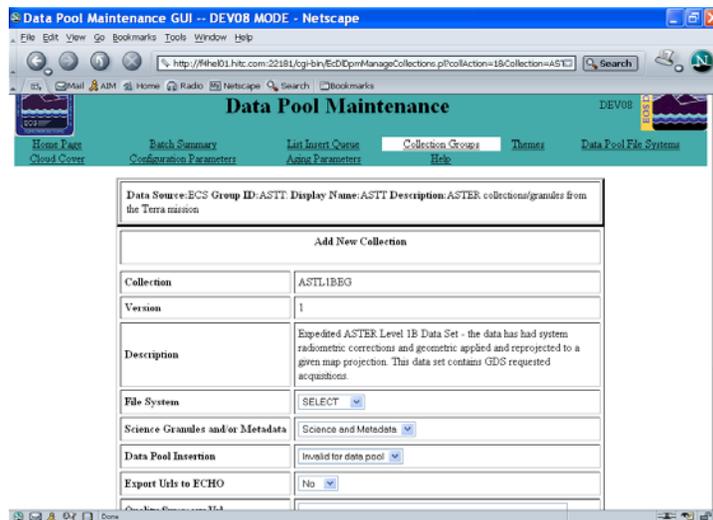


Figure 13.8-9. Add New Collection Page

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 select a file system option (if applicable), click on the appropriate choice from the **File System** option list.
- 7 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.
- 8 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.
- 9 To select an ECHO export option, click on the appropriate choice from the **Export Urls to ECHO** option list.
 - **No** is the default option.
 - **Yes** must be selected if collection URLs are to be eligible for export to ECHO.
- 10 If the collection is to be linked to a quality summary web site, enter the URL in the **Quality Summary Url** text entry field.
 - Ensure that **http://** is included in the **Quality Summary Url** text entry field.
- 11 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.
- 12 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.
- 13 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.
- 14 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 procedure **Add New Cloud Cover Information Using the DPM GUI** (previous section of this lesson).
- 15 To view details of cloud cover type and source, click on the **View Details** link adjacent to the **Cloud Cover Type & Source** option list.

- 16** Click on the **Apply Change** button.
- The new collection information is entered in the Data Pool database.
 - The **List of Collection** page is displayed with the new collection information.
-

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.

13.8.2.5 Modify an ECS Collection

- 1** Launch the **DPM GUI**.
 - For detailed instructions refer to the **Launch the DPM GUI** procedure (previous section of this lesson).
 - The **Home Page** is the default display, offering links for access to Data Pool maintenance function pages (i.e., **Data Pool File Systems, Cloud Cover, List Insert Queue, Batch Summary, Collection Groups, Themes, Configuration Parameters, Aging Parameters, and End Session**).
- 2** Click on the **Collection Groups** link.
 - The Collection Group page is displayed, providing a table listing collection group information; i.e., **Data Source, Group ID (Click to Manage Collections), Display Name, and Description**.
- 3** Click on the **Group ID** link for the ECS collection group to which the collection is to be added.
 - The **List of Collections** page is displayed.
- 4** Click on the desired link found in the **Collection (Click on collection to add)** column.
 - The **Detail Information** page is displayed.
- 5** Click on the **Modify Collection** link.
 - The **Modify Collection** page is displayed (Figure 13.8-10).

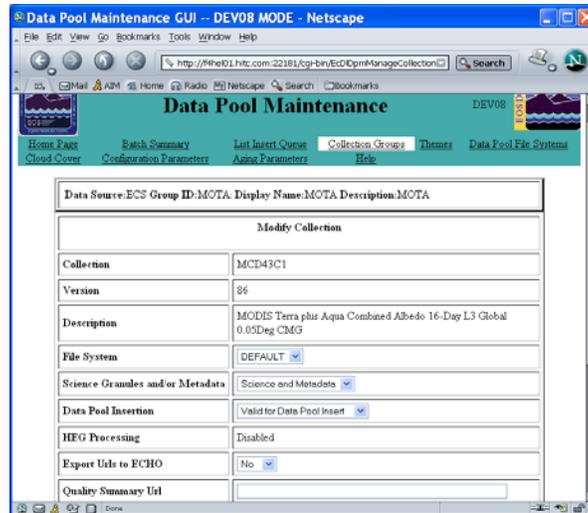


Figure 13.8-10. Modify Collection Page

NOTE: On the ECS collection version of the **Modify Collection** page, the **Collection**, **Version**, **Description**, **Spatial Search Type**, and **HEG Processing** fields cannot be edited.

- 6 To select a file system option (if applicable), click on the appropriate choice from the **File System** option list.
- 7 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.
- 8 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.
- 9 To select an ECHO export option, click on the appropriate choice from the **Export Urls to ECHO** option list.
 - **No** is the default option.
 - **Yes** must be selected if collection URLs are to be eligible for export to ECHO.
- 10 If the collection is to be linked to a quality summary web site, enter the URL in the **Quality Summary Url** text entry field.
 - Ensure that **http://** is included in the **Quality Summary Url** text entry field.

- 11 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.
 - 12 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.
 - 13 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.
 - 14 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 procedure **Add New Cloud Cover Information Using the DPM GUI** (previous section of this lesson).
 - 15 To view details of cloud cover type and source, click on the **View Details** link adjacent to the **Cloud Cover Type & Source** option list.
 - 16 Click on the **Apply Change** button.
 - The new collection information is entered in the Data Pool database.
 - The **List of Collection** page is displayed with the new collection information.
-

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