4.7 User Services Tools

This section describes the User Services Tools used by DAAC operators:

4.7.1 Database Installation and Maintenance Scripts
4.7.2 Using the Spatial Subscription Server (NBSRV) GUI
4.7.3 Spatial Subscription Server Command Line Interface
4.7.4 Bulk Metadata Generation Tool (BMGT)
4.7.5 Bulk Metadata Generation Tool GUI
4.7.6 Data Pool Maintenance GUI
4.7.7 Using the Order Manager GUI
4.7.8 Order Manager Command Line Utility (DELETE for Release 7.23)
4.7.9 OMS Configuration Command Line Interface
4.7.10 OmPdCleanup GUI (DELETE for Release 7.23)
4.7.11 Science Command Line Interface (SCLI) in OMS
4.7.12 Overview of the ESDT Maintenance GUI
4.7.13 AIM Granule Deletion Utilities
4.7.14 DataPool Checksum Verification Utility
4.7.15 Inventory Validation Tool
4.7.16 Link Checker Tool (duplicate reference – Section 4.8.20)
4.7.17 Publish Utility
4.7.18 Unpublish Utility
4.7.19 Archive Checksum Validation Utility
4.7.20 XML Check Utility
4.7.21 RestoreOlaFromTape Utility
4.7.22 RestoreTapeFromOla Utility
4.7.23 Migration Stat Viewer Tool (DELETE for Release 7.23)
4.7.24 Migration Checksum Error Support Tool (DELETE for Release 7.23)
4.7.25 Migration Migrate Error Support Tool (DELETE for Release 7.23)
4.7.26 Migration Stage Error Support Tool (DELETE for Release 7.23)
4.7.27 Migration Insert Error Support Tool (DELETE for Release 7.23)
4.7.28 EMS Dataset Extract Utility

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4.7.1 Database Installation and Maintenance Scripts

A set of eleven standard database scripts have been created to facilitate database installation and database administration activities for the ECS databases (DPL, INGEST, OMS, MSS, SSS and AIM). These scripts are designed to be accessible from both the command line and the Stage Install function of ECS Assist. The scripts follow a standard naming convention across each subsystem consisting of a prefix, of the format ***EcXXXX***, identifying the subsystem component and a root identifying the primary database command or purpose performed by the script. For example a script to define login IDs used by the Ingest subsystem would be called EcInDbLogin.

A description of each of the suggested standard scripts is given Table 4.7.1-1. The DbLogin, DbUser, DbBuild, and DbPatch scripts are available for each ECS database. Other scripts are available for some or all of the ECS databases. Details on the applicable scripts for each subsystem can be found in the corresponding subsystem-specific 311-database documentation.

Table 4.7.1-1. Common ECS Operator Functions Performed with Database Installation and Maintenance Scripts (1 of 2)

Operating Function	Command	Description	When and Why to Use
Add Login	DbLogin	Add existing system login to the SQL server.	Use when installing an ECS custom application to add the pre-defined set of database user ids into the master tempdb table used by the application to the appropriate SQL server.
Add User	DbUser	Add user ID to a database.	Use when installing an ECS custom application to add the pre-defined set of User IDs used by the application to the appropriate database.
Create Database	DbBuild	Build a new empty database and load with initial start-up data.	Use when installing an upgraded Release/drop or an ECS custom application into a mode where there is no existing data that needs to be retained.
Upgrade Database	DbPatch	Upgrade tables to new schema while retaining existing data.	Use when installing an upgraded Release/Drop of an ECS custom application into a mode containing existing data that needs to be retained.

Table 4.7.1-1. Common ECS Operator Functions Performed with Database Installation and Maintenance Scripts (2 of 2)

Operating Function	Command	Description	When and Why to Use
Drop objects	DbDrop	Remove all database objects (tables, triggers, stored procedures, domains, rules, user-defined data types) from a database.	Should not be used independently by the Operator. Used by DbBuild script during installation to remove obsolete objects from the database.
Backup database	DbDump	Create a backup file for the database.	Use to create a backup of the database that can be used in the event of database corruption or disk failure.
Restore database	DbLoad	Restore a database from a backup file.	Use to recover from database corruption or disk failure.
Update database statistics	DbStat	Updates the database statistics used by the Sybase query optimizer.	Use on a regular frequency to update database statistics to optimize query response times.

4.7.1.1 Quick Start Using Database Installation and Maintenance Scripts

The database installation and maintenance scripts are a custom developed utility and should be used only by database administration personnel.

To execute Database Installation and Maintenance Scripts from the command line prompt use:

Scriptname <*mode*> <*dbo_id*> <*sqlserver*> <*dbname*> where:

Scriptname specifies the name of the database script to be executed.

The <***mode***> parameter specifies the mode (e.g., OPS, TS1, or TS2) in which the database to be used is found.

The <***dbo_id***> parameter specifies the user ID of the database owner for the database to be used.

The <***sqlserver***> parameter specifies the name of the SQL server under which the database to be used is found.

The <***dbname***> parameter specifies the name of the database to be used.

NOTE: Password entry will be prompted during script execution.

4.7.1.1.1 Invoking Database Installation and Maintenance Scripts using ECS Assist

Database Build, Patch, Migrate, Dump, Load, Drop and Valid scripts, can be invoked using the ECS Assist installation tool using the DATABASE command button. All other database utility scripts must be invoked from the command line. Further information on using ECS Assist can be found elsewhere in this document (see sub-section 4.1.5).

4.7.1.2 Required Operating Environment

The Database Installation and Maintenance Scripts can run on Linux 2.x platforms.

Table 4.7.1-2 identifies the supporting products this tool depends upon to function properly.

Table 4.7.1-2. Support Products for Database Installation and Maintenance Scripts

Interface (facility)
Sybase SQL Server

4.7.1.2.1 Interfaces and Data Types

None

4.7.1.3 Databases

The Database Installation and Maintenance Scripts use the DPL, INGEST, OMS, MSS, SSS and/or AIM database as applicable. Descriptions of each of these databases are found in the following documents:

311-EEB-001, *Release 7.23 INGEST (INS) Database Design and Schema Specifications for the EEB Project*

311-EEB-002, *Release 7.23 Order Manager Database Design and Schema Specifications for the EEB Project*

311-EEB-003, *Release 7.23 Spatial Subscription Server Database Design and Schema Specifications for the EEB Project*

311-EEB-004, Release 7.23 Data Pool Database Design and Schema Specifications for the EEB Project

311-EEB-005, Release 7.23 Archive Inventory Management (AIM) Database Design and Schema Specifications for the EEB Project

4.7.1.4 Special Constraints

None

4.7.1.5 Outputs

Script outputs can be found in the "/usr/ecs/<MODE>/CUSTOM/logs" directory on the sybase database server.

4.7.1.6 Event and Error Messages

The Sybase Database Installation and Maintenance Scripts issue error messages, which are reported on the Sybase error log. All custom code database utilities provide output reports to the "/usr/ecs/<MODE>/CUSTOM/logs" directory on the sybase database server where the report name is (script/utility name).log.

4.7.1.7 Reports

None

4.7.2 Using the Spatial Subscription Server (NBSRV) GUI

The NBSRV GUI provides an operator interface to place a standing order (hereinafter called "subscription") on an ECS event. Capabilities provided to an operator depend on the operator access level. A full capability operator has access to all NBSRV GUI features while a read only operator has access to all non-management features. Specifically, the capabilities of NBSRV GUI are as follows:

- List the types of subscribable events.
- Add a subscription with an action for distribution of standard ECS products from the ECS archive holding or email notification. The subscription can be qualified with spatial, temporal, integer, string and floating point qualifiers Θ
- Associate a Data Pool insert action with a subscription. Θ
- Associate a Data Pool theme with a Data Pool insert action (Available to only full capability Operator).
- List the subscriptions which have been previously entered.
- View an existing subscription.
- Update and Delete an existing subscription. Θ
- Suspend and Resume an existing subscription. Θ
- Suspend, resume, or delete the subscriptions associated with a Data Pool theme. **
- Add, update, or cancel a bundling order. Θ
- Associate a bundling order with a subscription. Θ
- List the bundling orders associated with a user.
- List the subscriptions associated with a bundling order.
- Determine the number of subscribed events left to dequeue.
- Determine the number of actions left to dequeue.
- List the status of email notification and distribution actions in the action queue. [Θ]
- List statistics relating to Spatial Subscription Server performance.

4.7.2.1 Starting the NBSRV GUI

Pre-conditions:

- Javascript must be enabled for the Web Browser.
- The designated size of the Web Browser cache should be at least 5000 kbytes for Disk and Memory cache.

Consult with your Web Administrator, if you have any problems verifying or setting these parameters.

Bring up a Web Browser and then access the URL for the NBSRV GUI web page.
For example: http://yourserver.domain/NBSRV.html

[Θ] Only available to full capability operators.

4.7.2.2 NBSRV Home Page

The NBSRV Home Page screen, shown in Figure 4.7.2.2-1 allows the operator to navigate to the List Events, Manage Subscriptions, Manage Bundling Orders, Monitor Queues and Help pages. See Table 4.7.2.2-1 for a brief description of the functions.

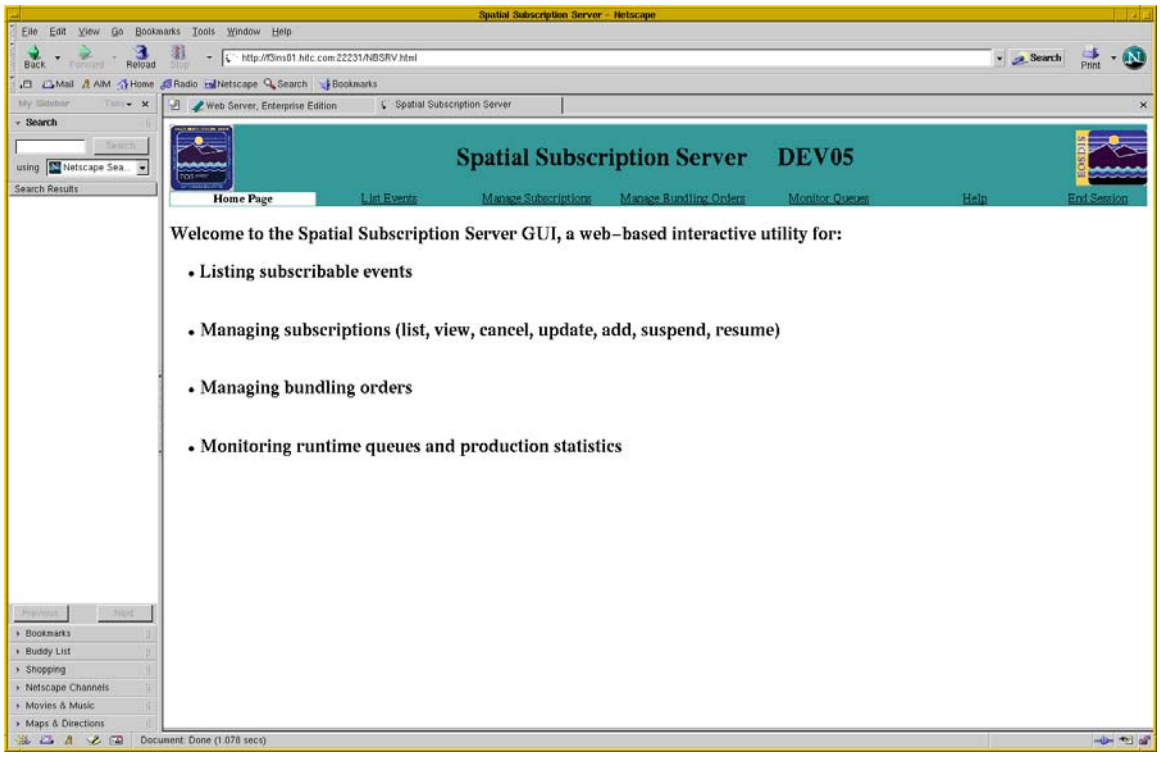

Figure 4.7.2.2-1. NBSRV Home Page

Table 4.7.2.2-1. Spatial Subscription Server (NBSRV) GUI Operator Functions (1 of 2)

GUI/Command	Description	When and Why to Use
List Events tab	View the types of subscribable events.	If operator needs to view ECS events before entering a subscription.
Manage Subscriptions tab	List, view, add, cancel, update subscriptions.	If operator needs to view, add, change, suspend, resume or delete subscriptions.
Manage Bundling Orders tab	List, view, add, cancel, update bundling orders.	If operator needs to view, add, change, cancel bundling orders or list the subscriptions for a bundling order.

Table 4.7.2.2-1. Spatial Subscription Server (NBSRV) GUI Operator Functions (2 of 2)

GUI/Command	Description	When and Why to Use
Monitor Queues tab	View action queue or statistics relating to Spatial Subscription Server performance.	If operator needs to view statistics or look at the action queue.
Help tab	Describes the NBSRV GUI functions.	If operator needs help in navigating through the NBSRV GUI.
End Session	Allows Operator to End a session.	Whenever an Operator wishes to end the current session.

4.7.2.3 List Events Tab

The List Events screen shown in Figure 4.7.2.3-1 allows the operator to view the subscribable events in the ECS system. The operator can sort the list by Collection, EventType or Version by clicking on the **Collection**, **Version** or **Event Type** link. The operator can also filter the list by any combination of Collection, Version and EventType. After selecting the filtering criteria from the pull-down list(s), click on the **Filter** button.

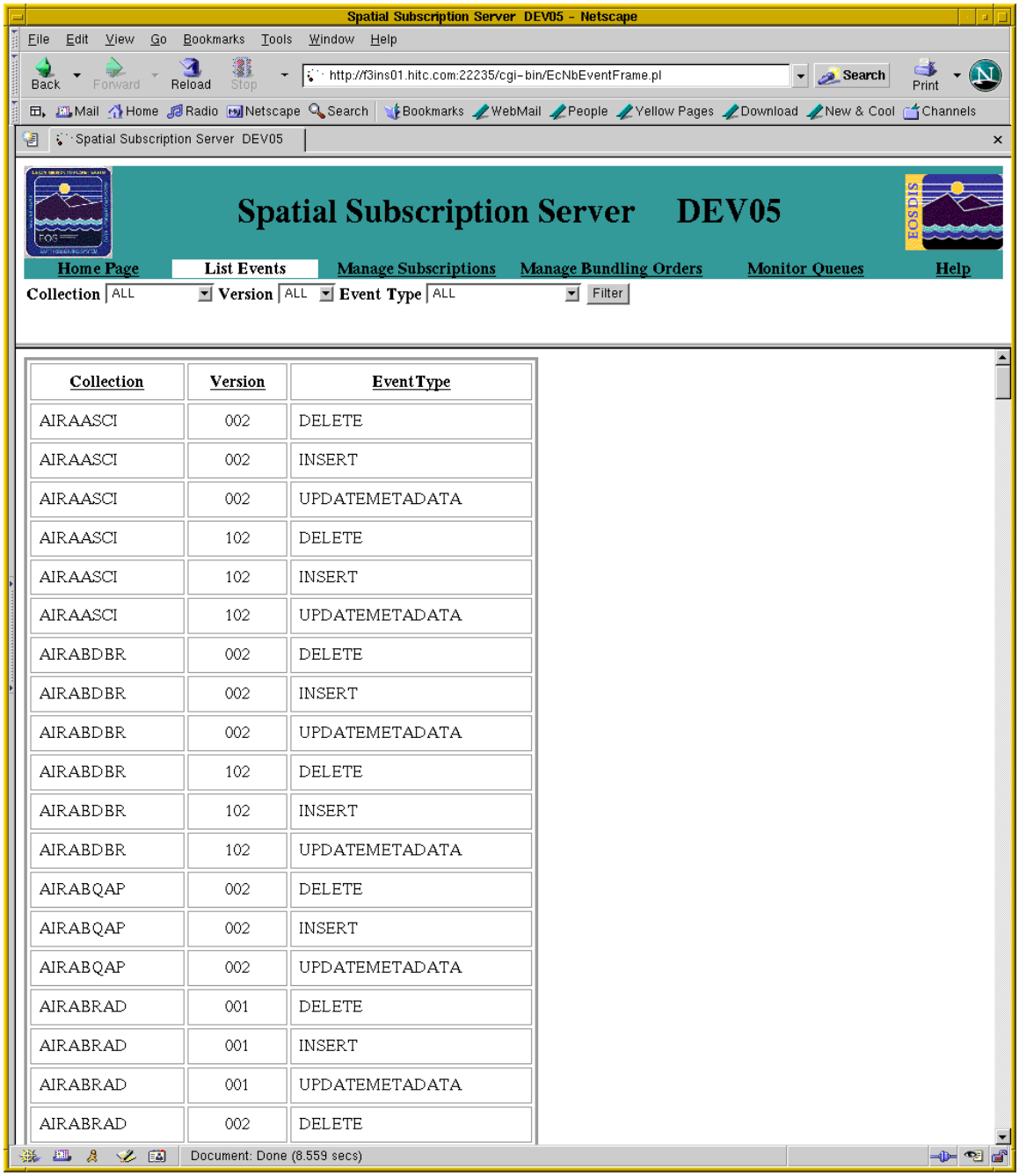

Figure 4.7.2.3-1. SSS – List Events

4.7.2.4 Manage Subscriptions Tab

The Manage Subscriptions screen shown in Figure 4.7.2.4-1 allows the operator to list the subscriptions in the NBSRV database. The list can be sorted by clicking on the **Subscription Id**, **User**, **Collection**, **Status**, **TimeLastUpdated** or **Expiration Date** link. The operator can also

filter the list by any combination of User, Collection and Status. After selecting the filtering criteria from the pull-down list(s), click on the **Filter** button.

The operator can view the contents of a subscription by clicking on the **View** button associated with that subscription and pressing the **Apply** button. This will take the operator to the screens shown in Figures 4.7.2.4-2a and 4.7.2.4-2b.

The operator can cancel a subscription by clicking on the **Cancel** button associated with that subscription and pressing the **Apply** button. This will take the operator to the deletion confirmation screen shown in Figure 4.7.2.4-3. If the operator clicks on the Yes button, the screen shown in Figure 4.7.2.4-4 will be displayed. If the operator clicks on the No button, the screen shown in Figure 4.7.2.4-1 will be displayed.

The operator can update a subscription by clicking on the **Update** button associated with the subscription and pressing the **Apply** button. This will take the operator to the screens in Figures 4.7.2.4-5a through 4.7.2.4-5d, followed by the screen in Figure 4.7.2.4-6a or 4.7.2.4-6b.

The operator can add a new subscription by clicking on the **Add Subscriptions** tab. This will take the operator to the screens in Figures 4.7.2.4-7 through 4.7.2.4-13. Tables 4.7.2.4-1 through 4.7.2.4-5 lists the field descriptions for the identified screens used in this activity.

Please note that **Cancel, Update and Add Subscriptions** functionality is accessible to only full capability Operators.

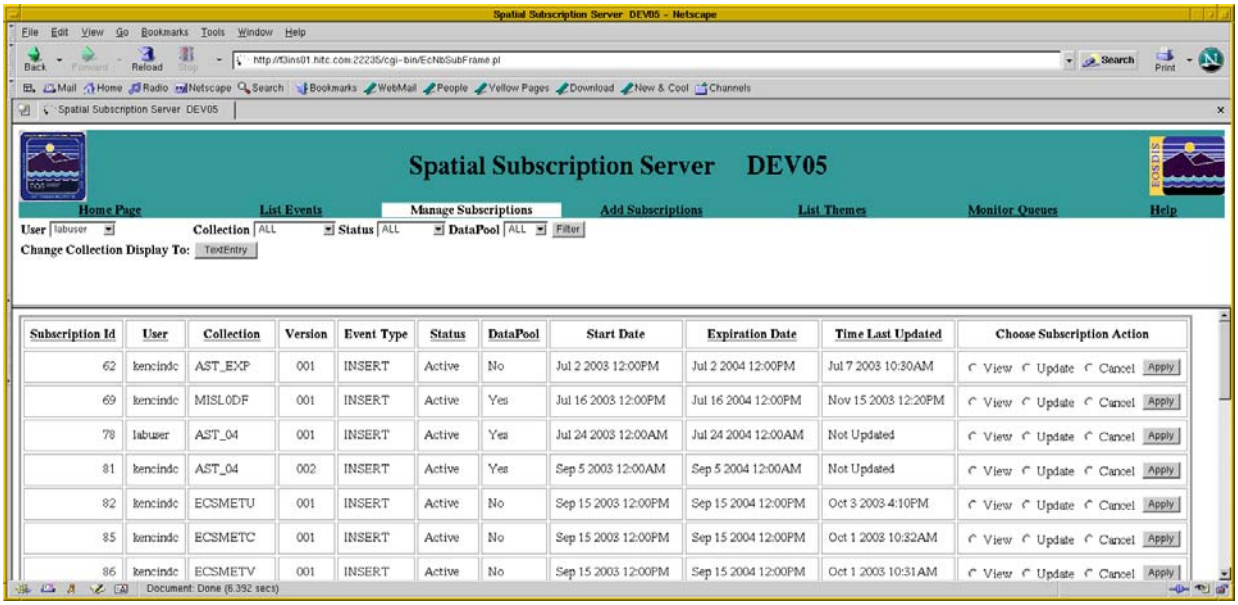

Figure 4.7.2.4-1. Manage Subscriptions: List of All the Subscriptions in the NBSRV Database. Note that Cancel, Update and Add Functionality are Accessible Only to Full Capability Operators.

Limited Capability Users

Limited Capability users cannot use **Cancel, Update and Add** functionality.

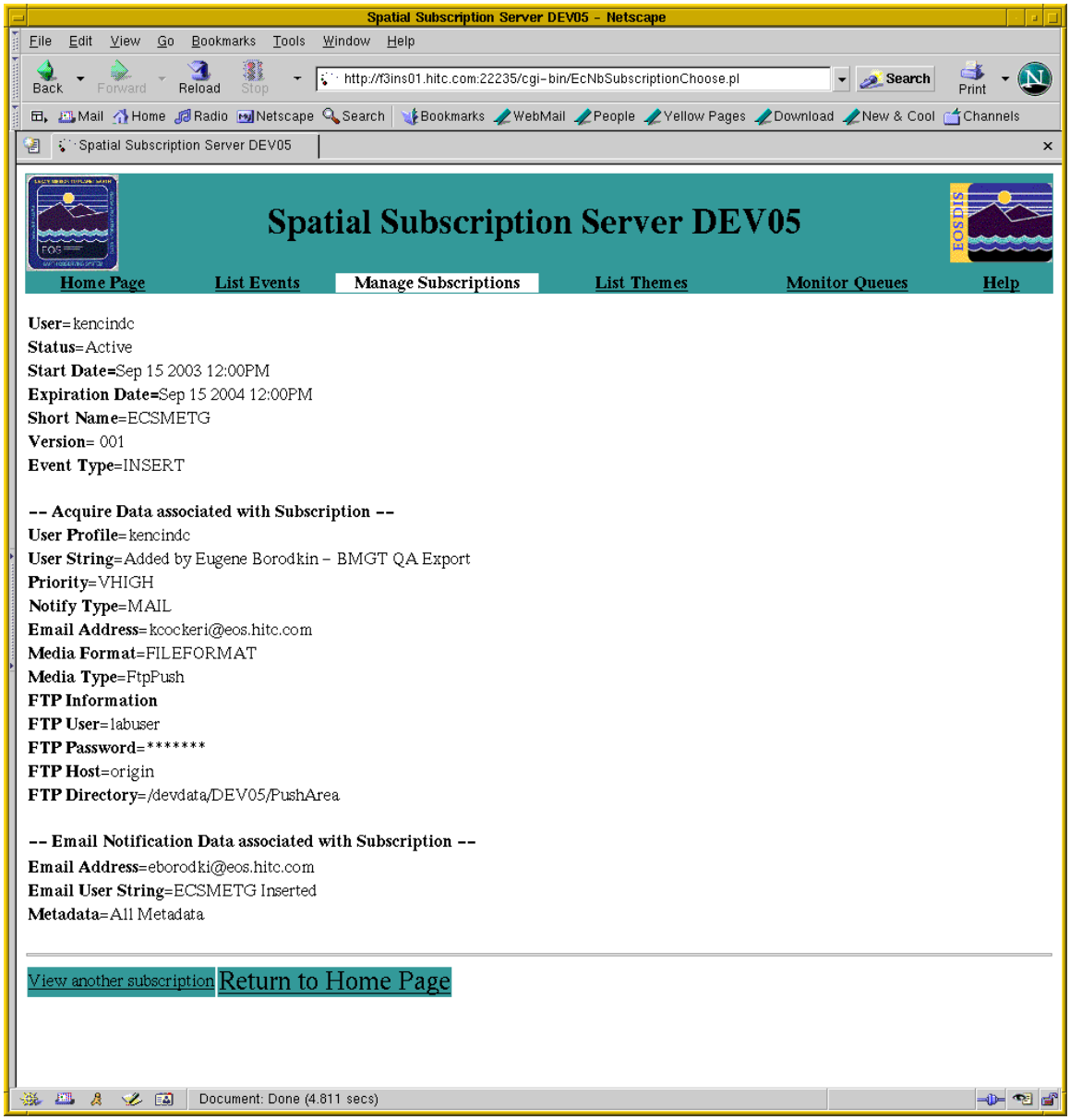

Figure 4.7.2.4-2a. View Contents of a Subscription in the NBSRV Database

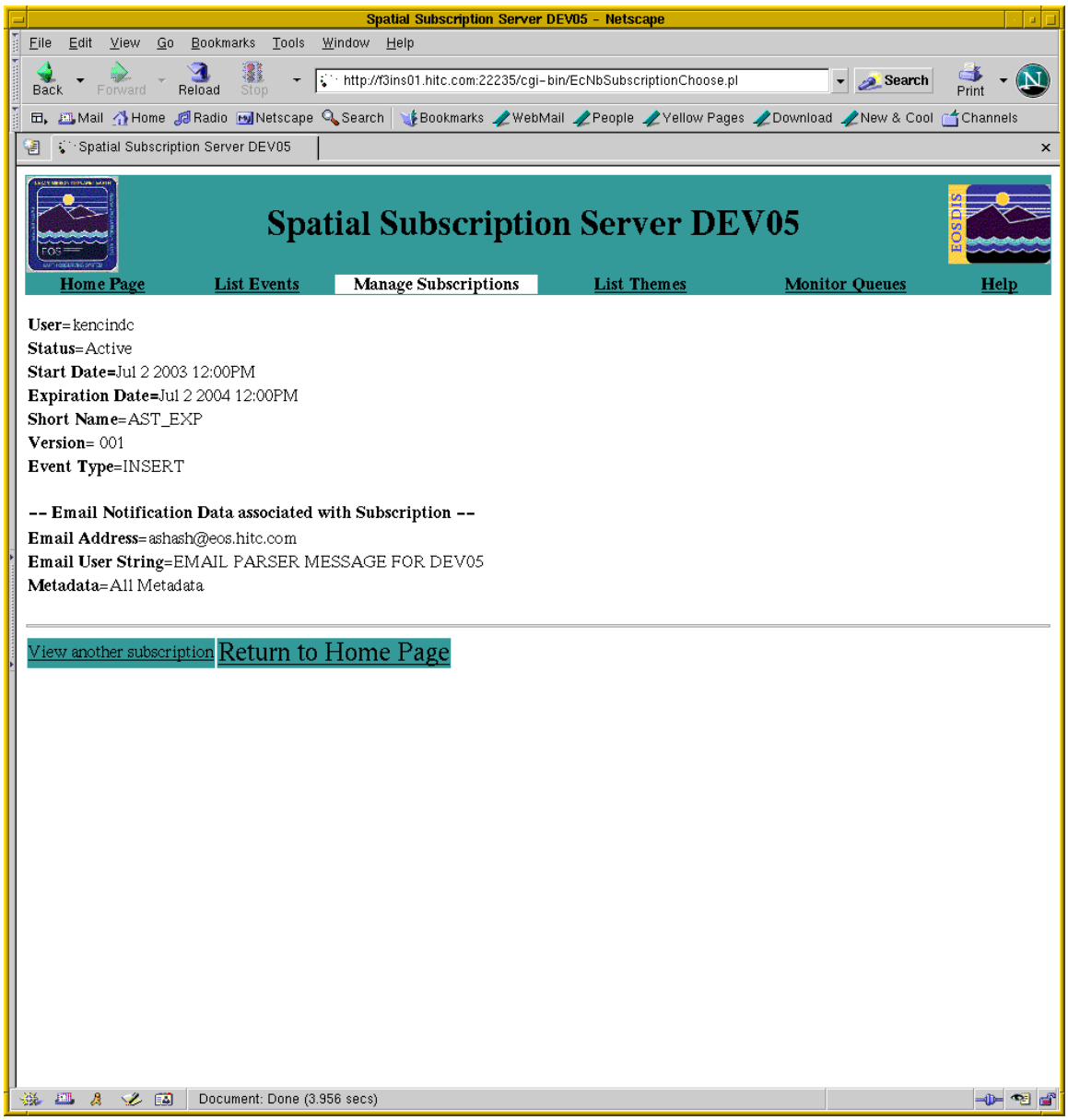

Figure 4.7.2.4-2b. View Contents of a Subscription with Associated Email Notification Action (Continuation)

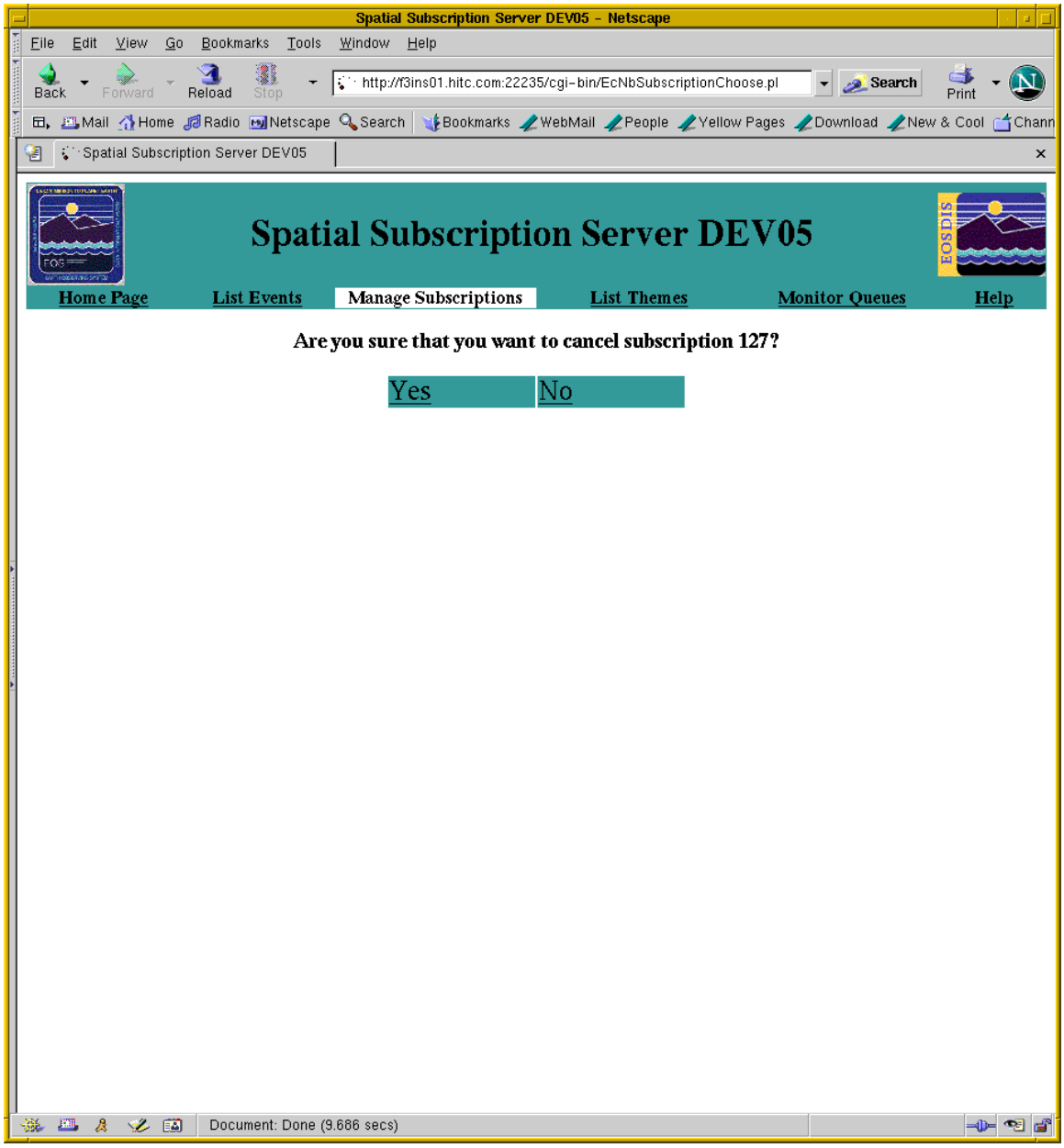

Figure 4.7.2.4-3. Cancel Subscription Confirmation Request. Note that Cancel Functionality is Accessible to Only Full Capability Operator.

Limited Capability Operators

Limited Capability operators cannot use/access this functionality.

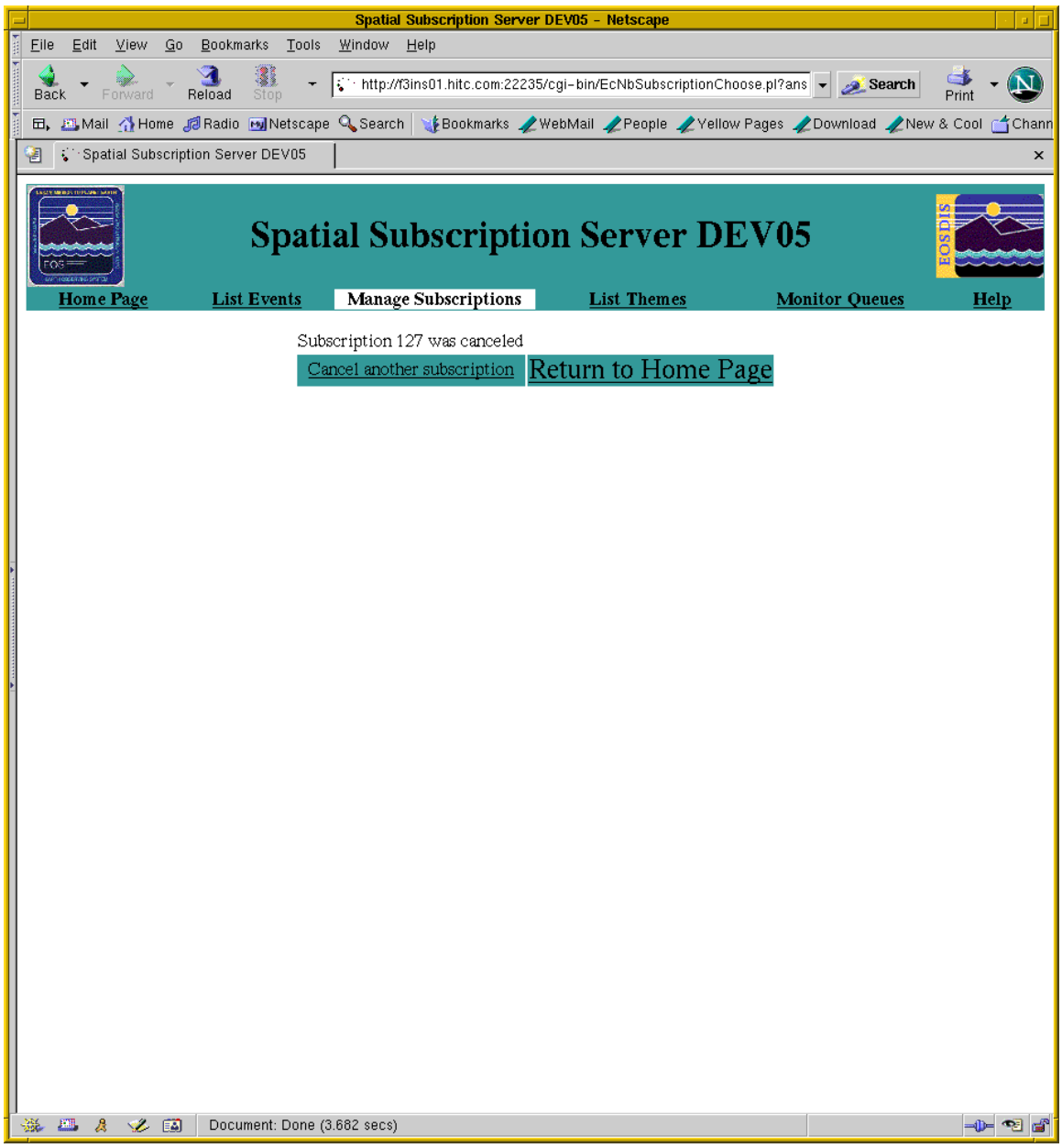

Figure 4.7.2.4-4. Cancel Subscription Confirmation Acknowledgement. Note that This Functionality is Accessible Only to Full Capability Operator.

Limited Capability Users

Limited Capability users cannot use this functionality.

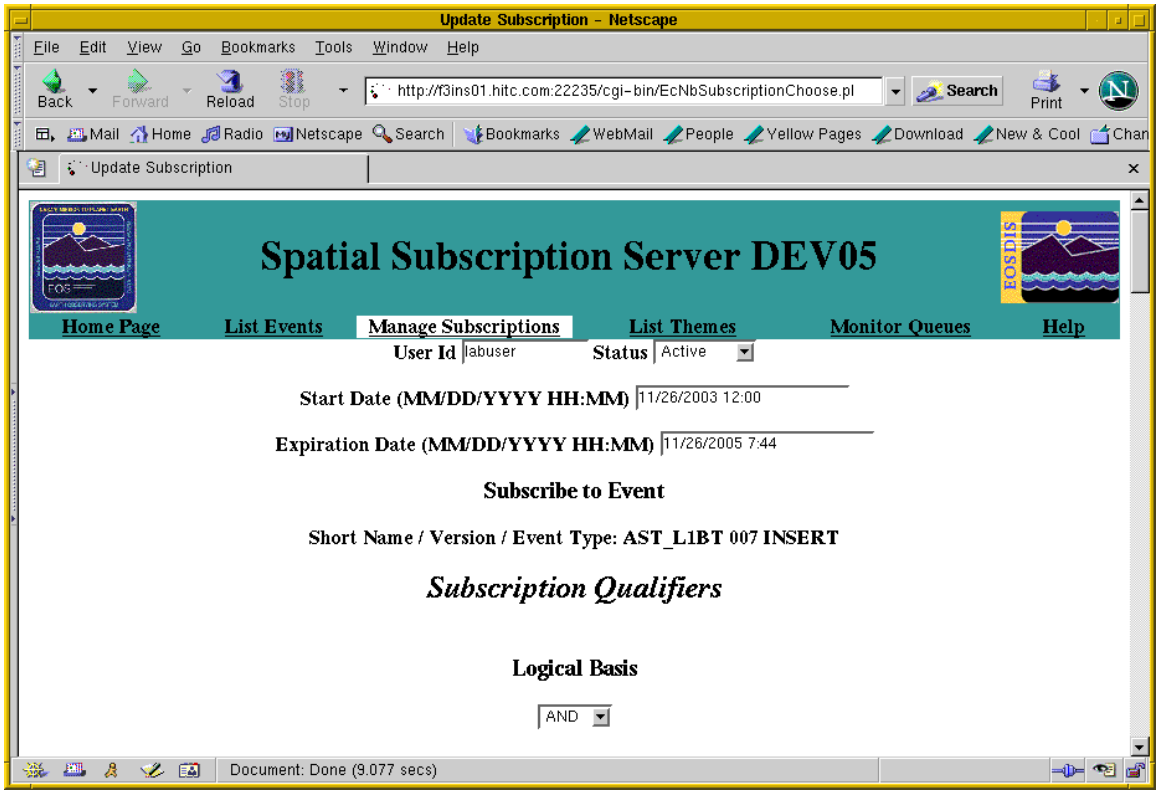

Figure 4.7.2.4-5a. Update a Subscription in the NBSRV Database. Note that This Functionality is Available Only to Full Capability Operator.

Limited Capability Users

Limited Capability users cannot use this functionality.

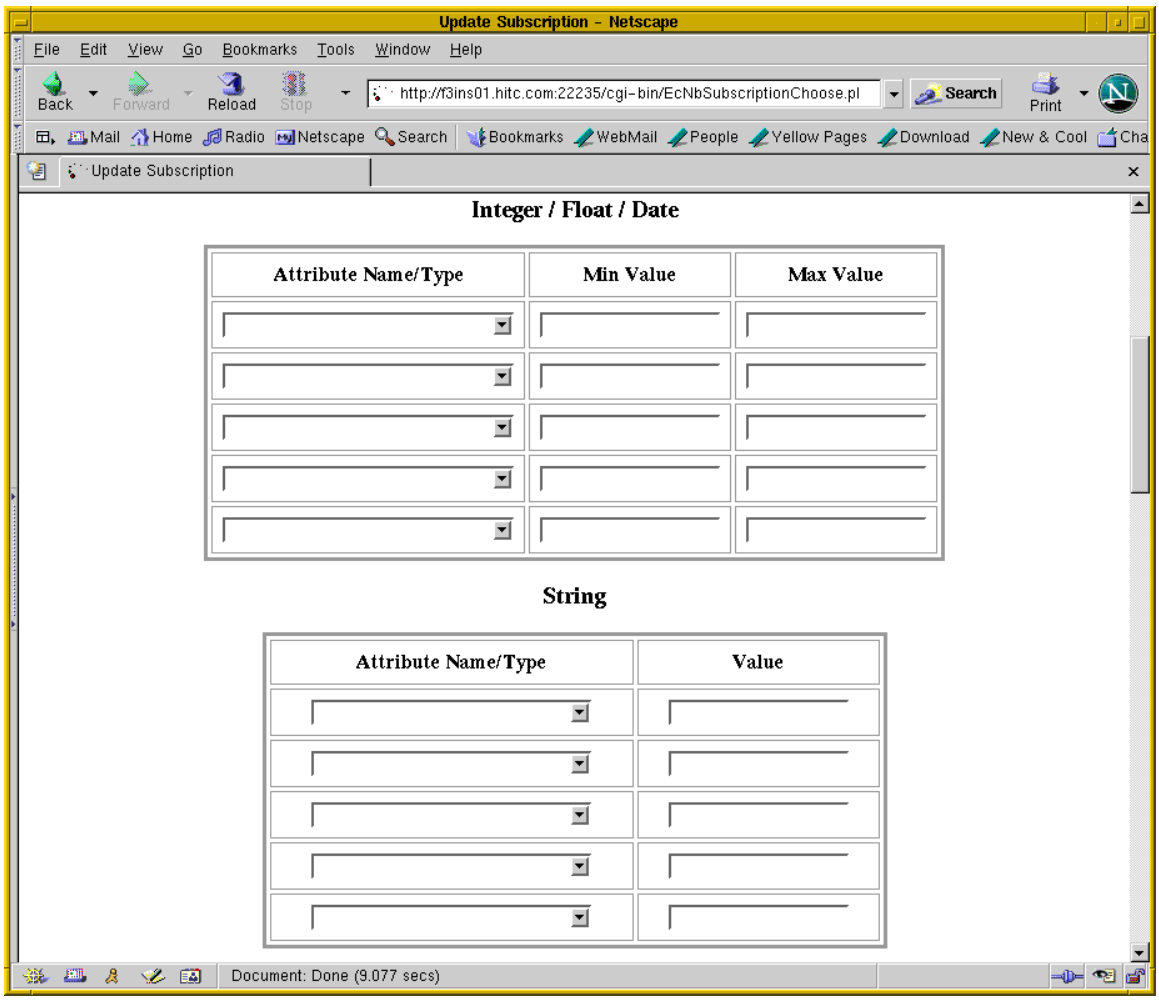

Figure 4.7.2.4-5b. Update a Subscription in the NBSRV Database. Note that This Functionality is Available Only to Full Capability Operator. (Continuation to Add or Modify String or Spatial Qualifiers Associated with an Existing Subscription)

Limited Capability Users

Limited Capability users cannot use this functionality.

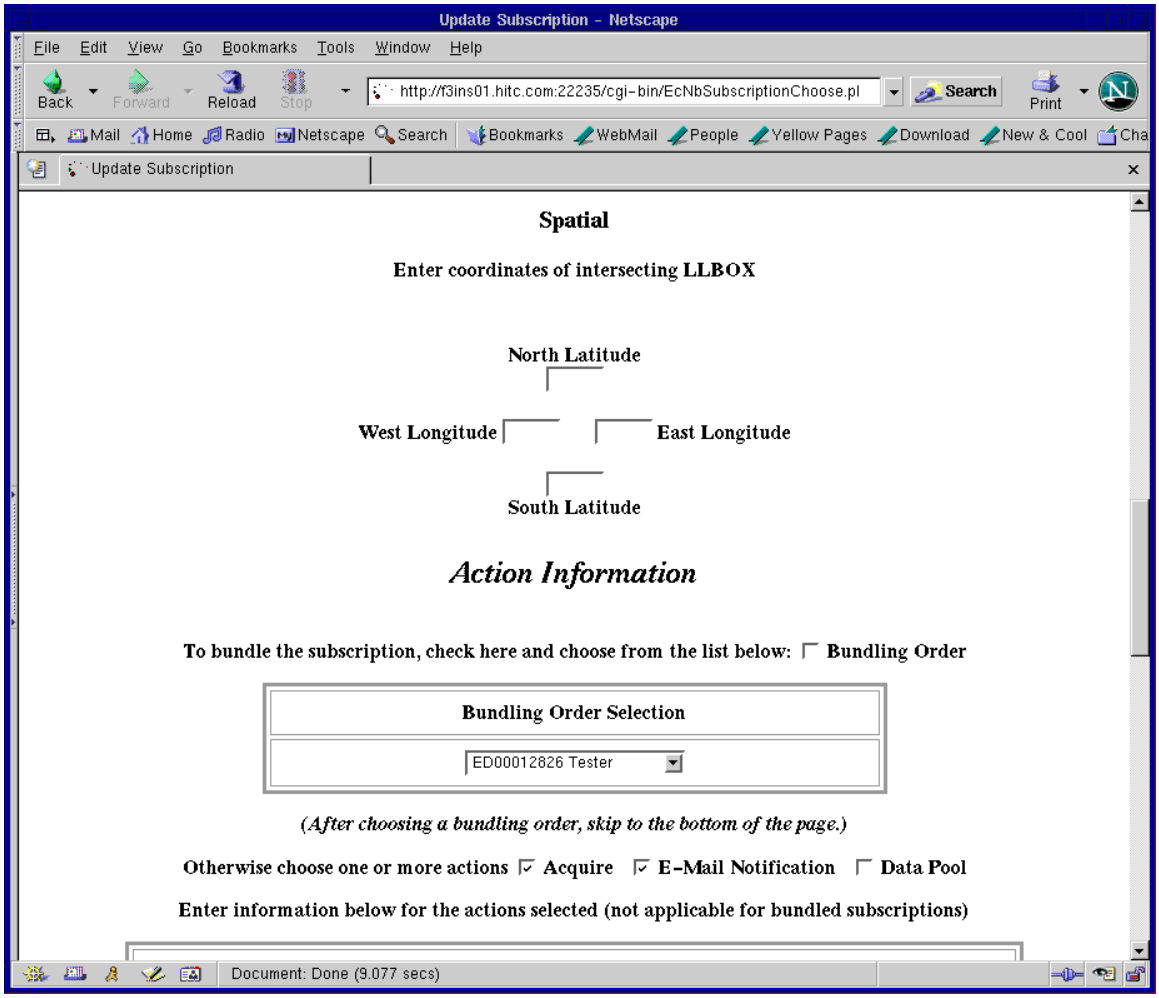

Figure 4.7.2.4-5c. Update a Subscription in the NBSRV Database. Note that This Functionality is Only Available to Full Capability Operators. (Continuation to Add or Update Action Information for an Existing Subscription)

Limited Capability Users

Limited Capability users cannot use this functionality.

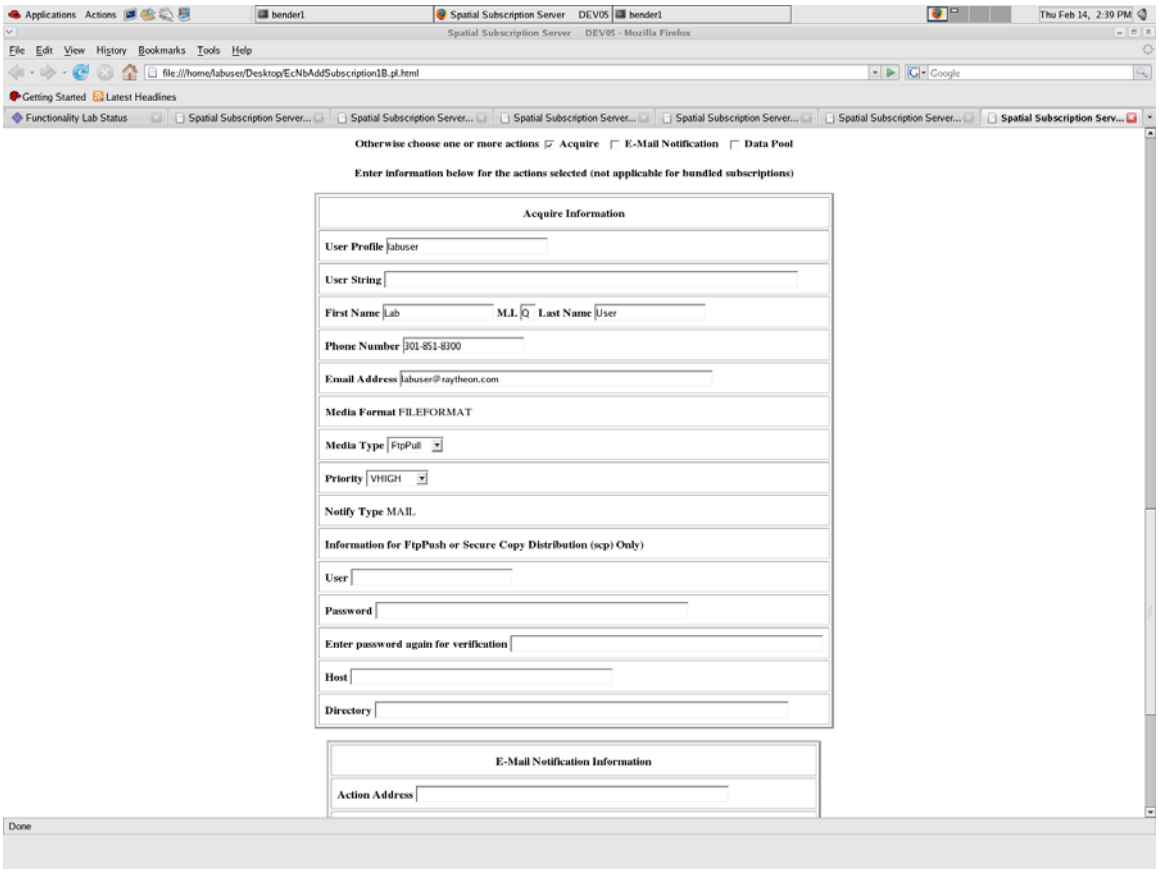

Figure 4.7.2.4-5d. Update a Subscription in the NBSRV Database. Note that This Functionality is Available to Only Full Capability Operators. (Continuation to Update Ftp Action Information for an Existing Subscription.)

Limited Capability Users

Limited Capability users cannot use this functionality.

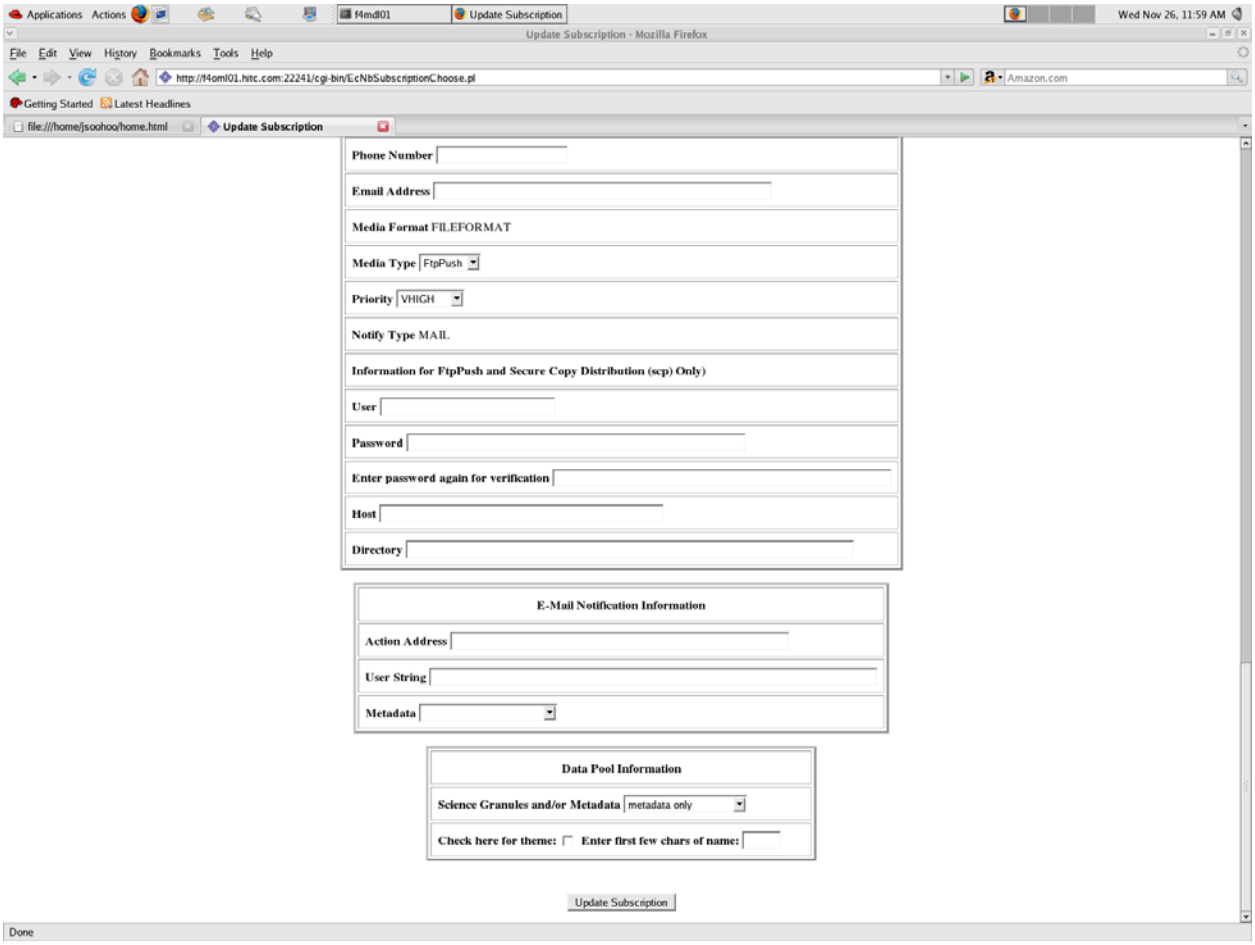

Figure 4.7.2.4-5e. Update a Subscription in the NBSRV Database (Continuation to Update E-Mail Action Information, Data Pool Information, or the Bundling Order Selection for an Existing Subscription)

Note: The operator must click on the Update Subscription button to initiate the updating of a subscription.

Limited Capability Users

Limited Capability users cannot use this functionality.

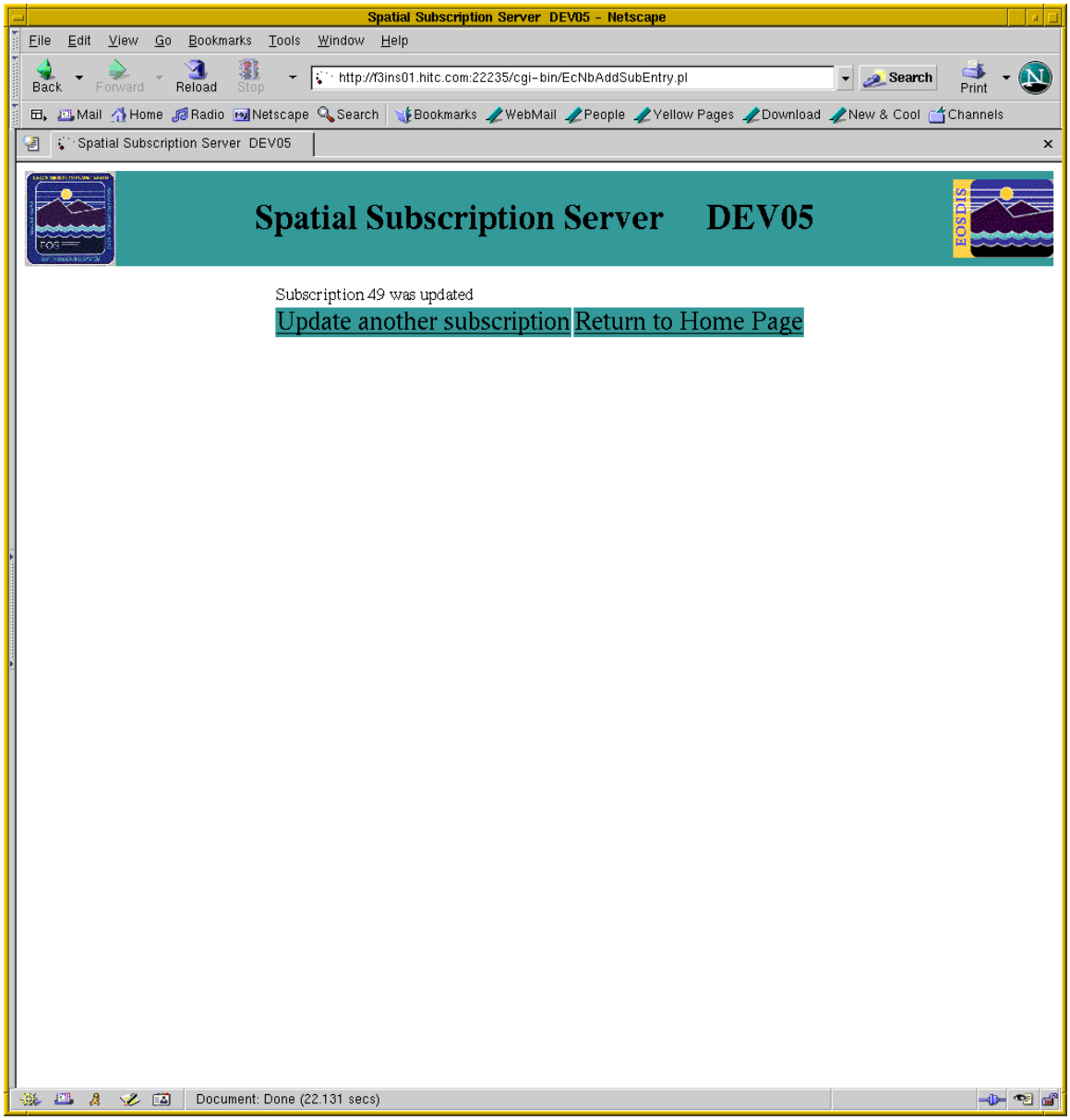

Figure 4.7.2.4-6a. Update Confirmation Screen. Note that This Screen is Seen by Only Full Capability Operator (Confirms Successful or Unsuccessful Updating of the Subscription)

Note: If invalid or missing data is detected for the subscription the errors will be displayed to the operator for correction. If a theme was to be associated with a data pool action, the screen will appear as in Figure 4.7.2.4-6b.

Limited Capability Users

Limited Capability users cannot use this functionality.

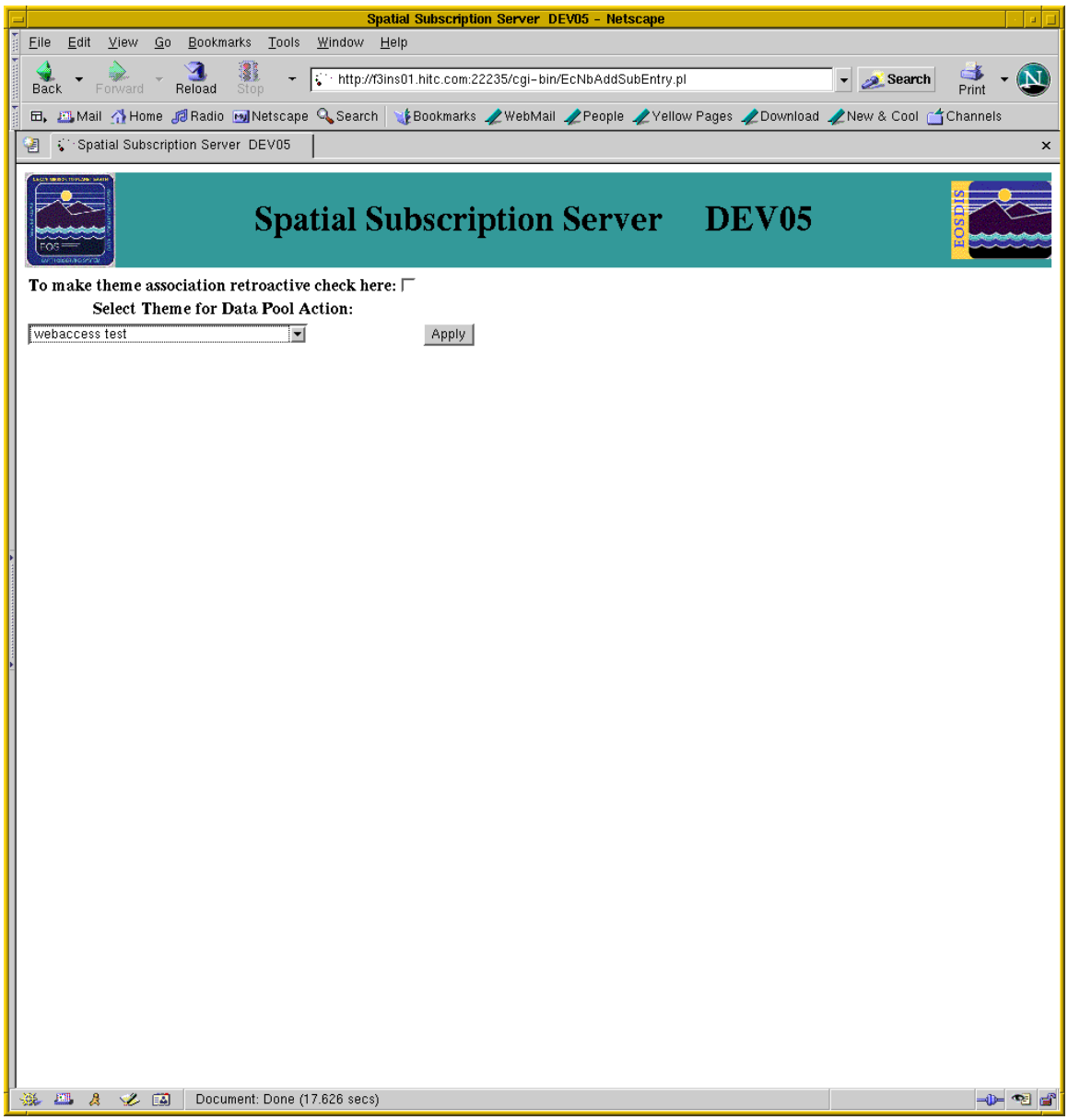

Figure 4.7.2.4-6b. Data Pool Action Associated with a Theme. Note that This Screen is Seen by Only Full Capability Operator. (Alternative to Update Confirmation Screen Figure 4.7.2.4-6a)

Note: The user first indicates whether the association is to be retroactive. Retroactive means that any granules already in the Data Pool due to the subscription being updated will be associated with the theme. The user then selects a theme from the pulldown list and clicks on Apply. The screen in Figure 4.7.2.4-6a will be displayed, signaling a successful update.

Limited Capability Users

Limited Capability users cannot use this functionality.

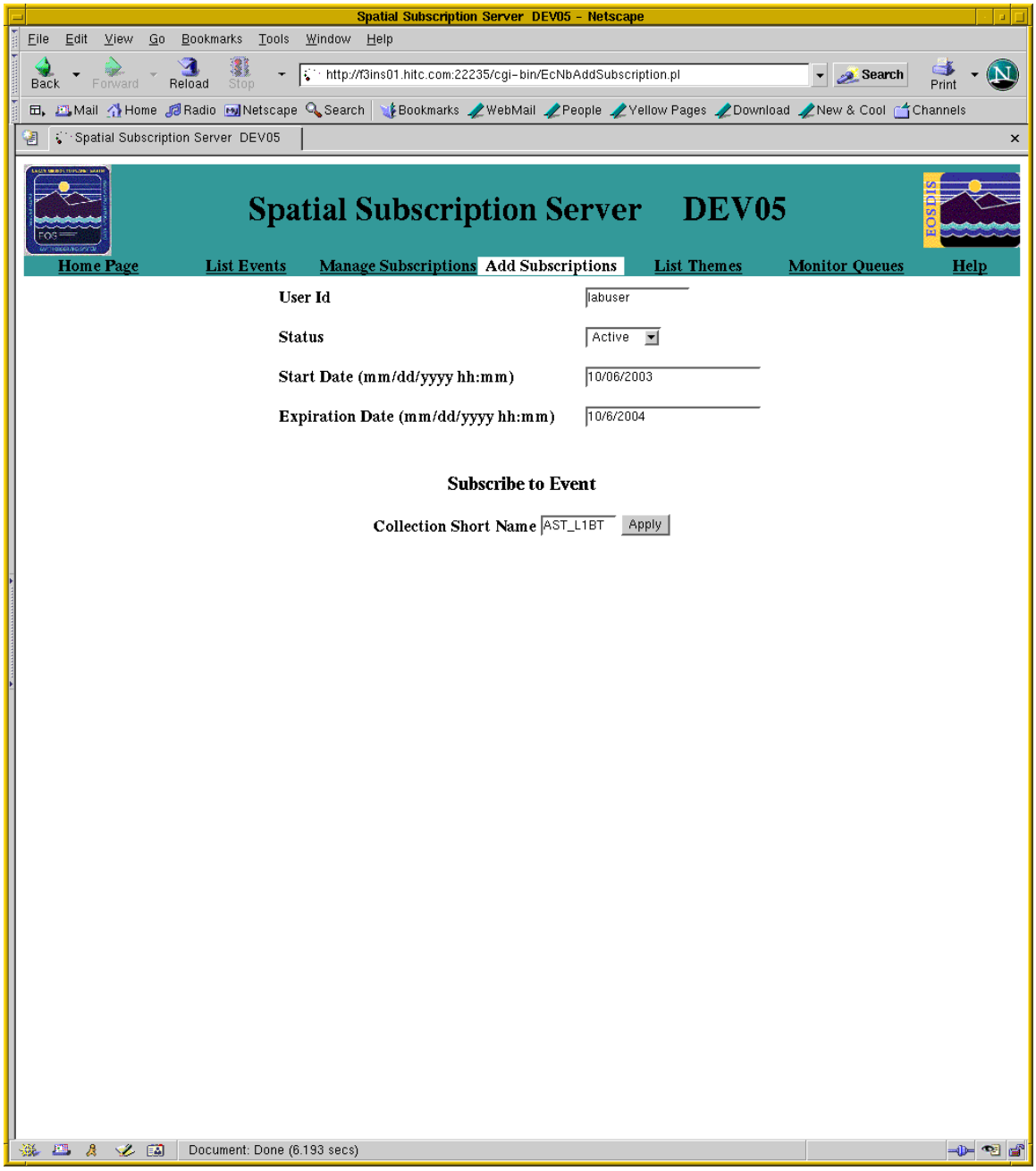

Figure 4.7.2.4-7. Add a New Subscription for a Valid ECS User. Note that This Functionality is Accessible to Only Full Capability Users.

Limited Capability Users

Limited Capability users cannot use this functionality.

Table 4.7.2.4-1. Add Subscriptions Screen Field Description

Field Name	Data Type	Size	Entry	Description
User Id	character	14	required	Allows the operator to enter a valid ECS user.
Status	n/a	n/a	required, selection from dropdown list	Allows the operator to select 'Active', 'Inactive' or "Canceled". Normally, the operator will choose 'Active'. 'Inactive' means that the subscription exists but has been temporarily suspended. 'Canceled' means that the subscription has been planned for deletion and will be deleted by the Deletion Driver once a configurable amount of time has passed. The default value for the status field is 'Active'.
Expiration Date	dateTime	12	required	Allows the operator to enter the date on which the subscription will expire. The default is one year from the current date (although this is configurable).
Collection Short Name	character	10	optional	Allows the operator to enter the first few characters of the Collection for the event that will be subscribed to. If left blank all Collections will be retrieved. The operator must click on the **APPLY** button to obtain a pull-down list of collection, version, event type combinations.

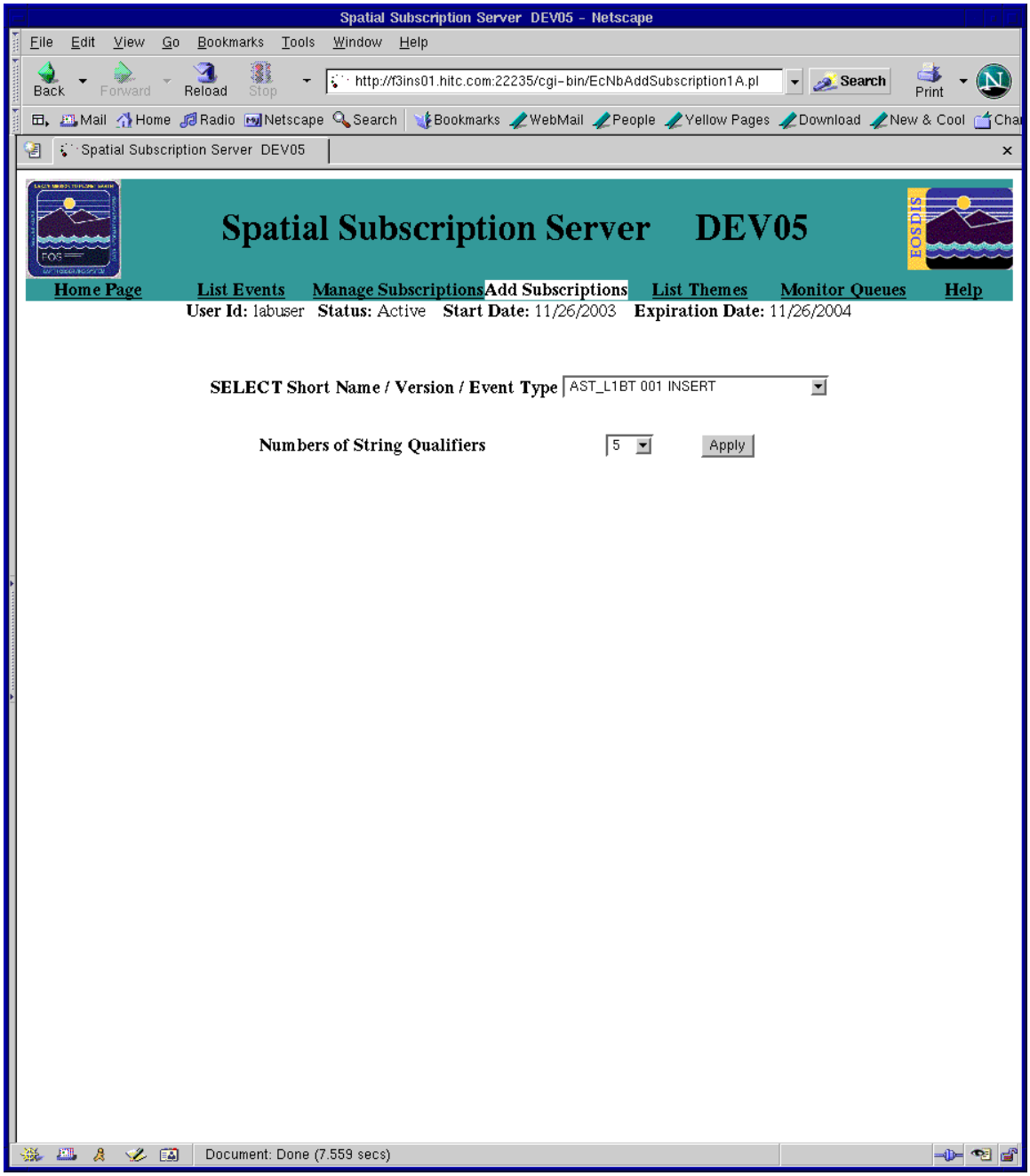

Figure 4.7.2.4-8. Event Selection (Continuation of Figure 4.7.2.4-7). Note that This Functionality is Accessible to Full Capability Operators.

Note: This screen depicts the operator selecting the 'AST_L1BT 001 INSERT' event from the pull-down list.

Limited Capability Users

Limited Capability users cannot use this functionality**.**

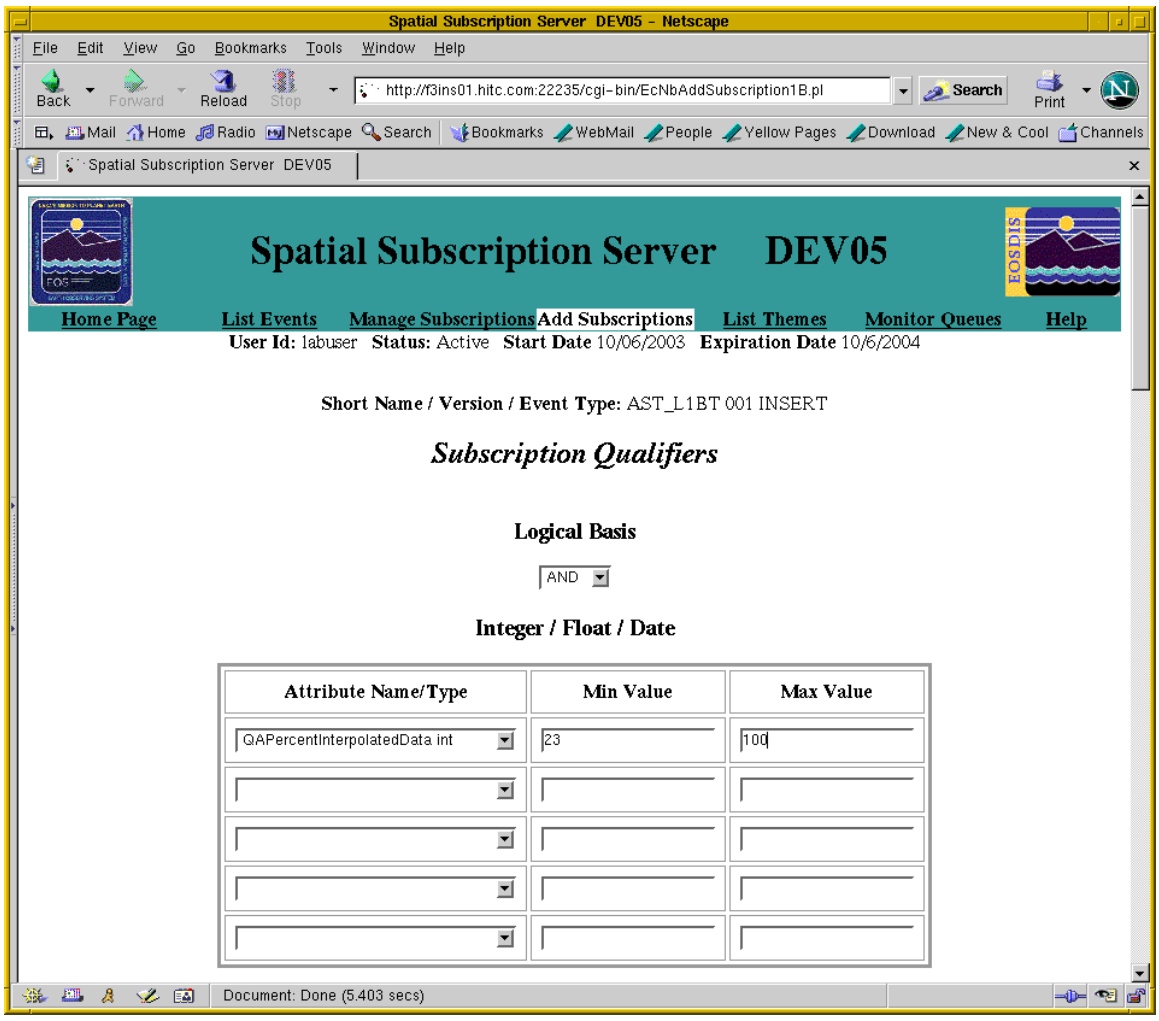

Figure 4.7.2.4-9. Add Subscription Continuation Information. Note that This Functionality is Accessible to Only Full Capability Operators.

Note: This screen is displayed after the operator clicks on the Apply button in Figure 4.7.2.4-8. It depicts the operator adding an integer qualifier to the new subscription.

Limited Capability Users

Limited Capability users cannot use this functionality**.**

Table 4.7.2.4-2. Add Subscriptions Screen Continuation Field Description

Field Name	Data Type	Size	Entry	Description
Attribute Name/ Type	n/a	n/a	optional, selection from dropdown list	Allows the operator to select Integer, Float or date qualifier. Note that only attributes associated with the current collection will be displayed. If the measured Parameter QAPercentCloudCover is valid for the Collection and the operator elects to qualify on it as part of the subscription, a pop-up window will be displayed requesting that the operator enter a valid parameter name for the attribute.
Min Value	character	20	optional	Allows the operator to enter valid minimum value for the qualifier selected.
Max Value	character	20	optional	Allows the operator to enter valid maximum value for the qualifier selected. For exact matching, enter the same value for the minimum and maximum.

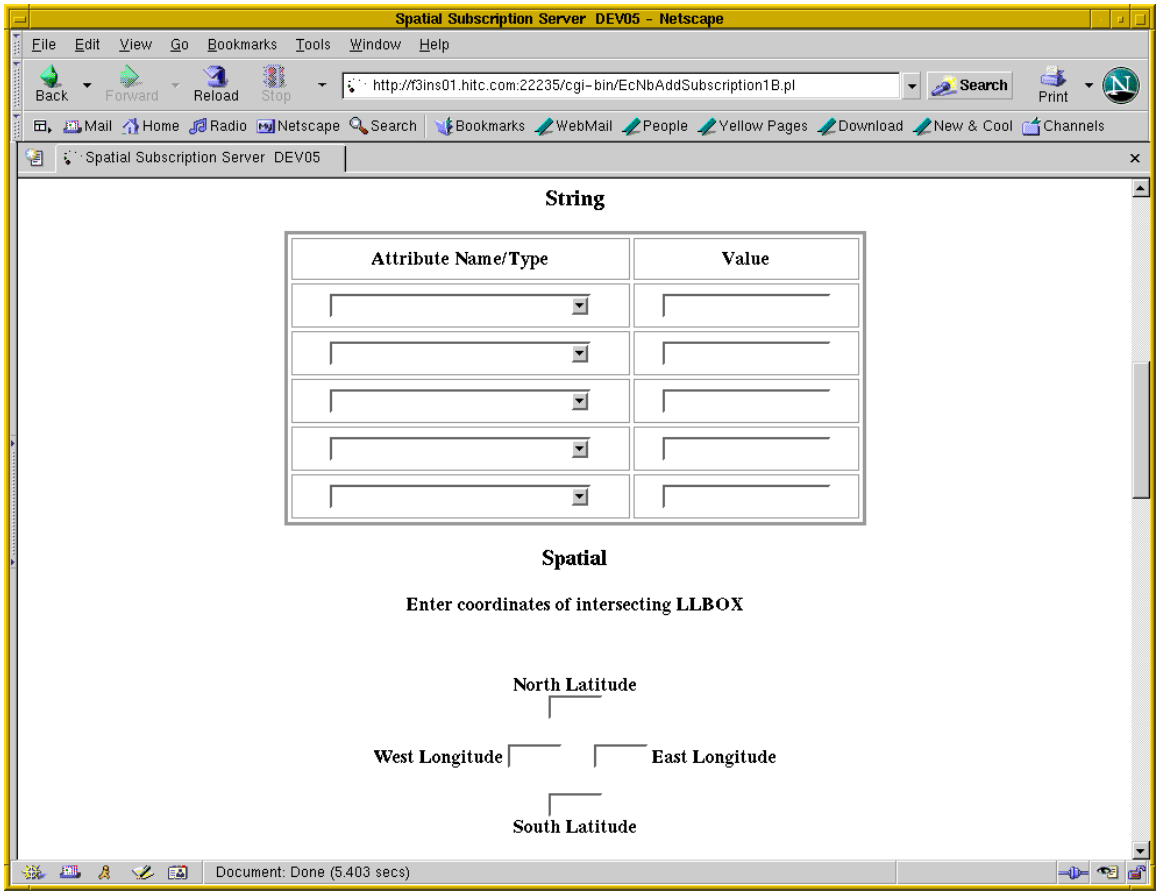

Figure 4.7.2.4-10. Add Subscription Screen Continuation (Adding String and Spatial Qualifiers)

Limited Capability Users

Limited Capability users cannot use this functionality.

Table 4.7.2.4-3. Add Subscriptions Continuation Field Description

Field Name	Data Type	Size	Entry	Description
Attribute Name / Type	n/a	n/a	optional, selection from dropdown list	Allows the operator to select String qualifier.
Value	character	20	optional	Allows the operator to enter valid string value for qualifier selected.
Lat/Long Coordinates	character	6	optional	Allows the operator to define the latitude and longitude coordinates for an intersecting LLBOX. The coordinates are entered in degrees.

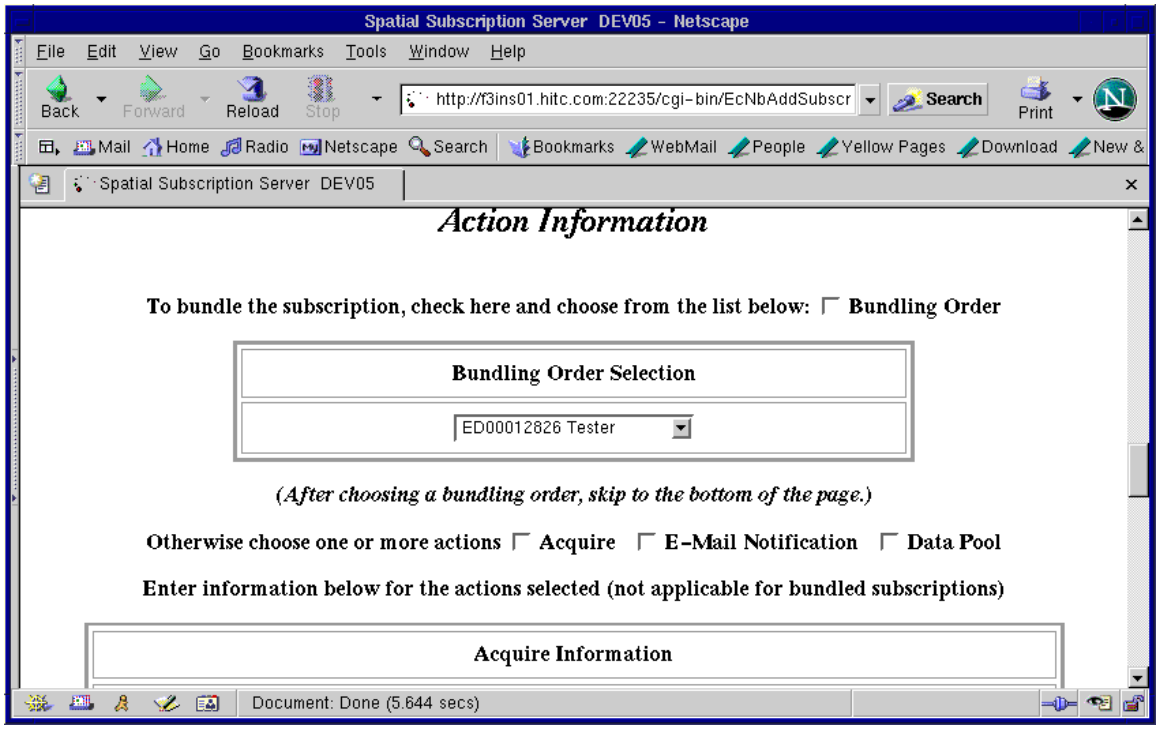

Figure 4.7.2.4-11. Add Subscription Screen Continuation (Bundling Order). Note that This Functionality is Accessible to Only Full Capability Operators.

Limited Capability Users

Limited Capability users cannot use this functionality.

Table 4.7.2.4-4. Add Subscriptions Continuation Field Description

Field Name	Data Type	Size	Entry	Description
User Profile	character	30	required, for Acquire	This will default to the User Id from the Add Subscriptions form.
User String	character	30	optional, for Acquire	A secondary qualifier used to distinguish this request from others with the same user profile. The user string will appear in the distribution notice.
First Name	character	20	optional	First name of the user receiving the data.
Middle Initial	character	1	optional	Middle initial of user receiving the data.
Last Name	character	20	optional	Last name of the user receiving the data.
Phone Number	character	22	optional	Phone number of the user receiving the data.
Email Address	character	50	required, for Acquire	The e-mail address that is used by the Data Distribution to e-mail notification of the acquire. NOTE: a granule will be distributed at most once to a given email address, regardless of the number of matching subscriptions.
Media Format	n/a	n/a	required, for Acquire	The format of the Media. The only default value is FILEFORMAT.
Media Type	n/a	n/a	required, for Acquire	The type of the Media. The valid values are FtpPull, FtpPush and Secure Copy. The default value is FtpPush.
Priority	n/a	n/a	required, for Acquire	The distribution priority of the acquire. The valid values are VHIGH, HIGH, NORMAL, LOW, XPRESS. The default priority value is the distribution priority in the user profile of the userID associated with the subscription.
Notify Type	n/a	n/a	required, for Acquire	The method of notification for the acquire. The only default value is MAIL. (When the Media Type is scp, notifications are also sent via scp).
FTP User	character	30	optional, for Acquire	The Unix login ID of the FTP recipient. **Required for FtpPush and SecureCopy**.
FTP Password	character	16	optional, for Acquire	The Unix password for the FTP recipient. **Required for FtpPush and SecureCopy**.
FTP Password Verification	character	16	optional, for Acquire	The Unix password verification for the FTP recipient. **Required for FtpPush and SecureCopy.**
FTP Host	character	80	optional, for Acquire	The Unix hostname of the FTP recipient. **Required for FtpPush and SecureCopy**.
FTP Directory	character	80	optional, for Acquire	The pathname of the Unix directory where the acquired files are to be stored. **Required for FtpPush and SecureCopy**.

Figure 4.7.2.4-12a and 4.7.2.4-12b show the Add Subscription Screen Continuation.

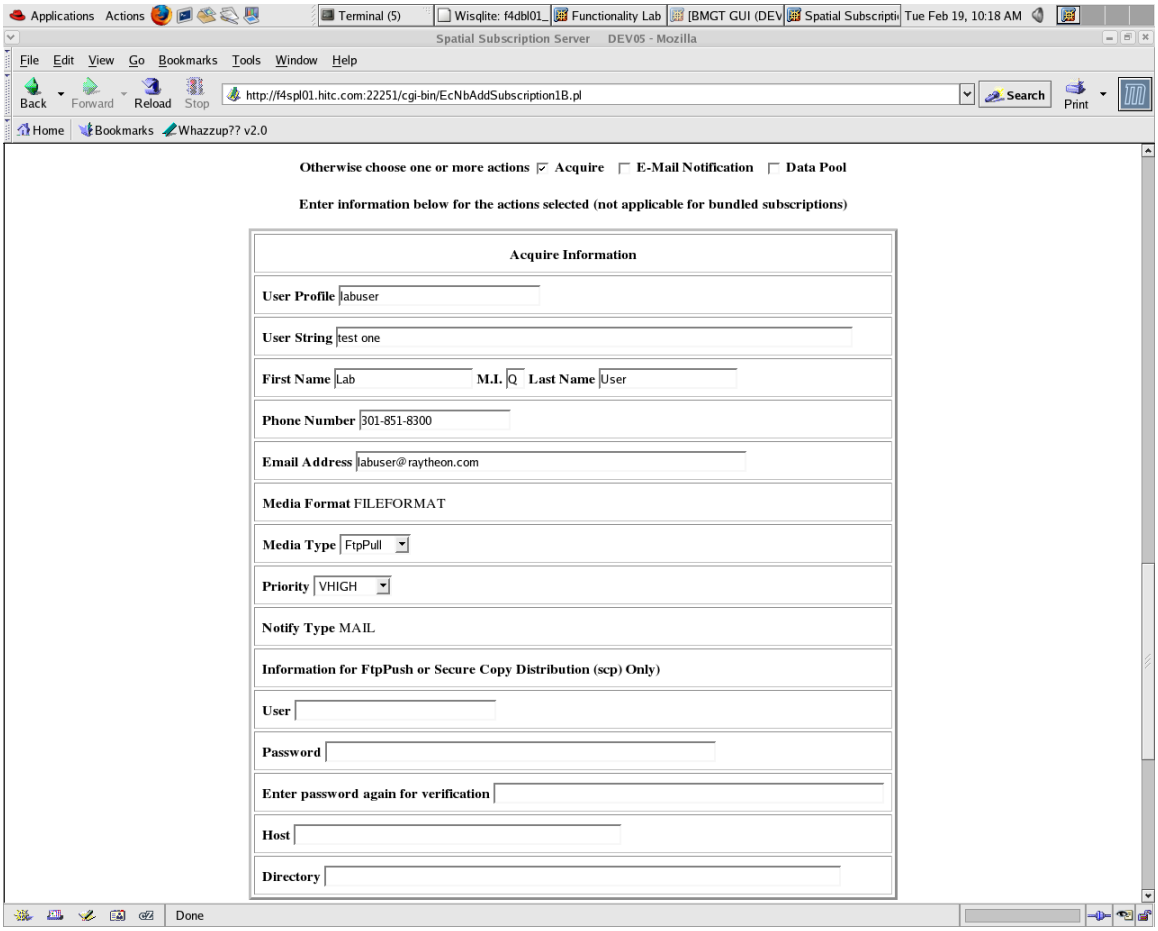

Figure 4.7.2.4.-12a. Add Subscription Screen Continuation. Note that This Functionality is Accessible to Only Full Capability Operators. (Information for the E-Mail Notification or Data Pool Actions)

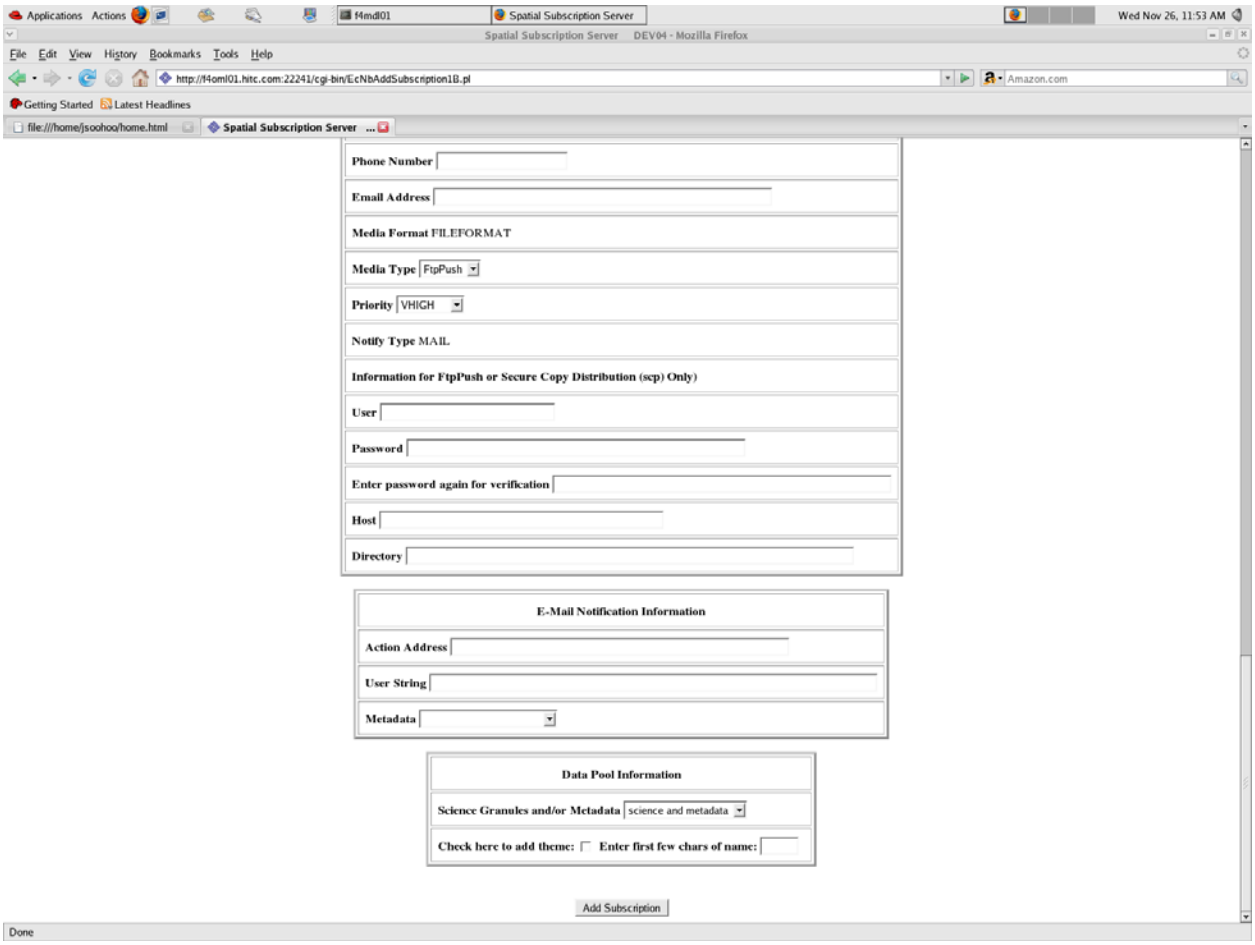

Figure 4.7.2.4-12b. Add Subscription Screen Continuation. Note that This Functionality is Accessible to Only Full Capability Operators. (Information for the E-Mail Notification or Data Pool Actions)

Limited Capability Users

Limited Capability users cannot use this functionality**.**

Note: A data pool action may be associated with a theme by clicking the theme box. The theme will be chosen in the next screen. The operator can optionally enter the first few characters of the theme name in order to shorten the list of possibilities. The operator must click on the Add Another Subscription button to initiate the addition of the subscription to the NBSRV database.

Table 4.7.2.4-5. Add Subscriptions Continuation Field Description

Field Name	Data Type	Size	Entry	Description
Action Address	character		required for Notify	The email address of the registered ECS user associated with the subscription.
User String	n/a	n/a	optional, for Notify	The user string to be included in the message text for each email notification.
Metadata	n/a	n/a	required, for Notify	Allows the operator to include names and values for all metadata attributes or only include names and values for the metadata attributes associated with the subscription qualifiers in the email notification text. The valid values are Qualifying Metadata Only and All Metadata.
Science Granules and/or Metadata	enumeration		required	Indicates whether both the granule and its metadata are to be inserted into the Data Pool or just the metadata.
Associated Theme	character	40	optional	Theme associated with the subscription.
Bundling Order	character	10	optional	Associates the subscription with a previously defined bundling order. The pulldown list displays the bundling order ID followed by its user string, if defined.
Check Here To Add Theme	checkbox	n/a	optional	Add theme associated with the subscription.
Enter First Few Chars of Name	character	5	optional	The first few characters of the associated theme's name.

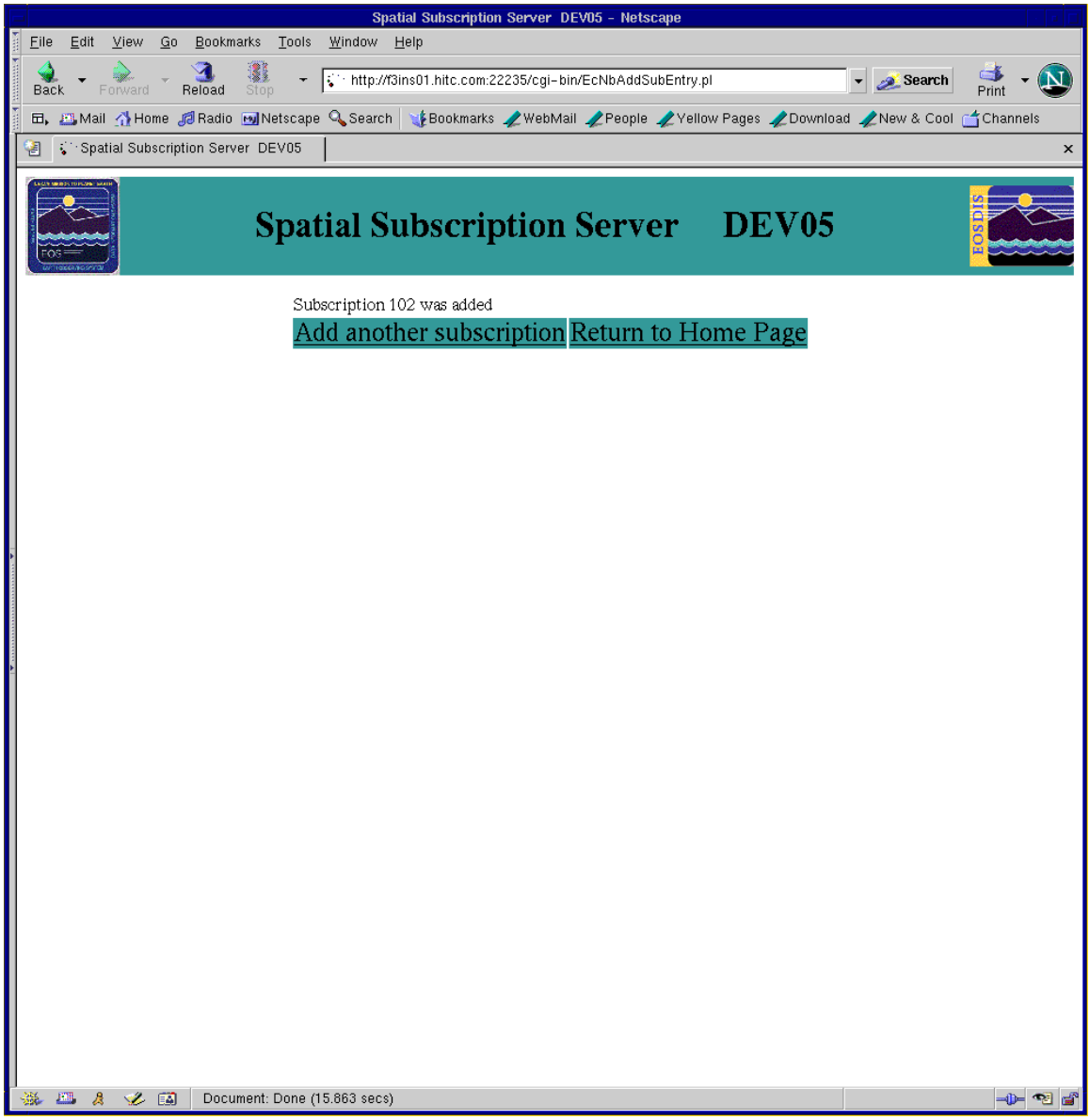

Figure 4.7.2.4-13a. Add Confirmation Screen. Note that This Functionality is Accessible to Only Full Capability Operators. (Confirms Successful or Unsuccessful Adding of the Subscription)

Limited Capability Users

Limited Capability users cannot use this functionality**.**

Note: If invalid or missing data is detected for the subscription, the errors will be displayed to the operator for correction.

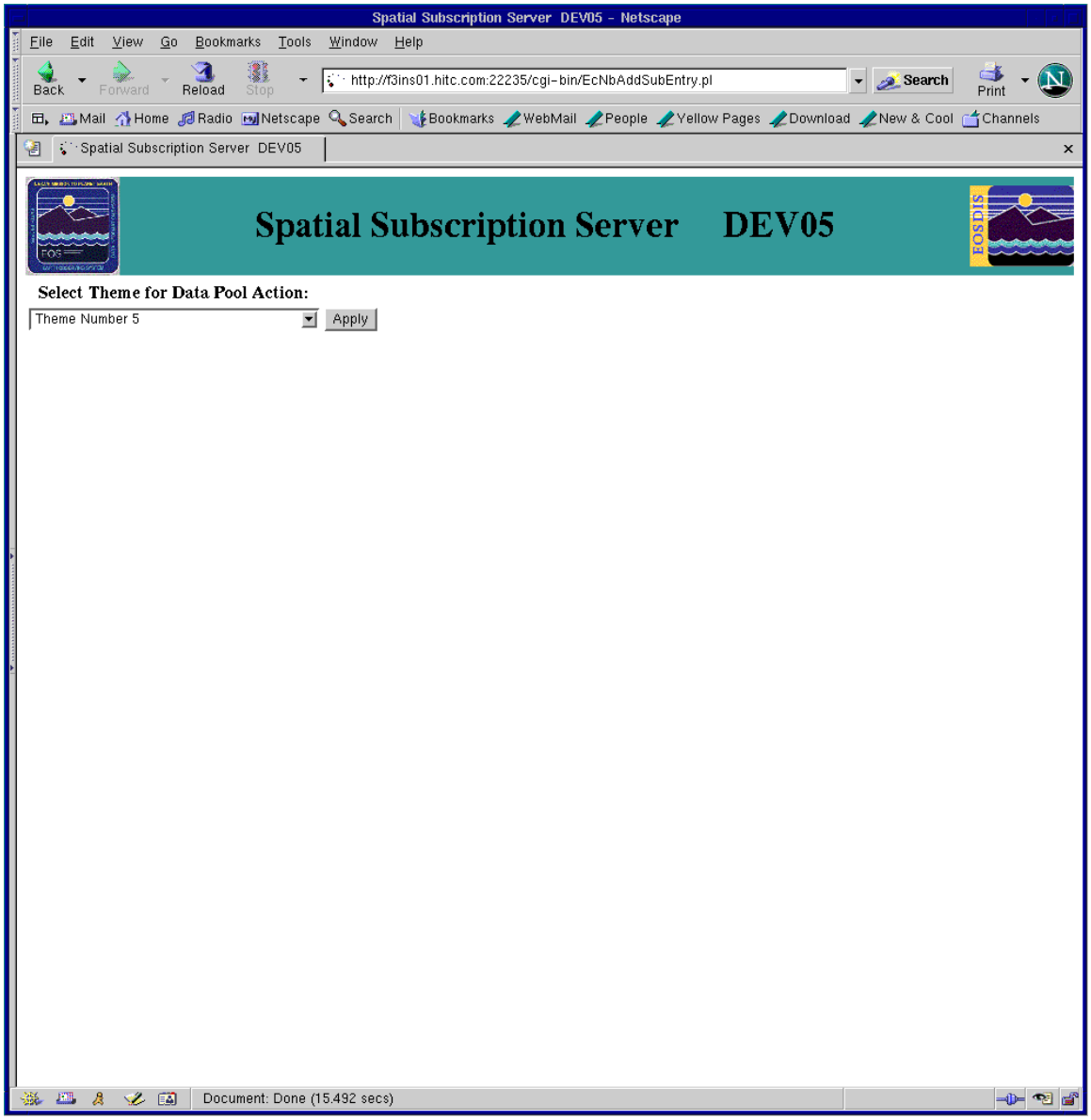

Figure 4.7.2.4-13b. Data Pool Action Associated with a Theme (Alternative to Add Confirmation Screen Figure 4.7.2.4-13a). Note that This Functionality is Accessible to Only Full Capability Operators.

Limited Capability Users

Limited Capability users cannot use this functionality**.**

Note: The operator selects a theme name from the pulldown list and clicks on the Apply button. Confirmation that the subscription was successfully added appears as in Figure 4.7.2.4-13a. **NOTE**: The subscription is actually created prior to displaying this screen, and the association of the theme with the subscription is implemented as an update operation.

4.7.2.5 List Themes Tab

The List Themes screen, called from Monitor Subscriptions and shown in Figure 4.7.2.5-1 allows the operator to see a list of known themes which are enabled for insert. Table 4.7.2.5-1 lists the field descriptions for the List Themes Request screen.

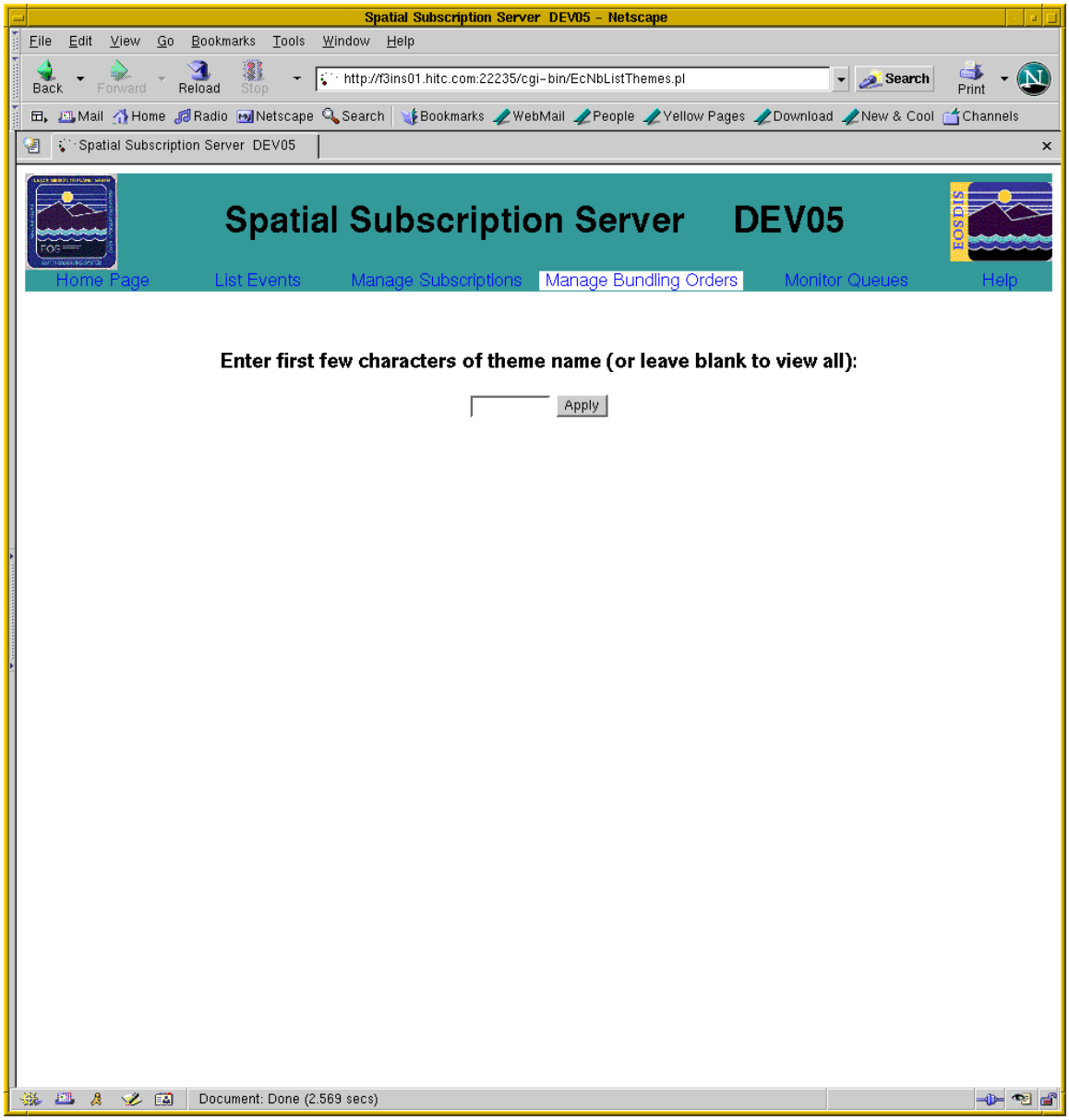

Figure 4.7.2.5-1. List Themes Screen Request

Note: The list may be filtered by entering the first few characters of the theme name.

Figure 4.7.2.5-2 below is the screen that is displayed after the operator enters information in the list themes screen (Figure 4.7.2.5-1).

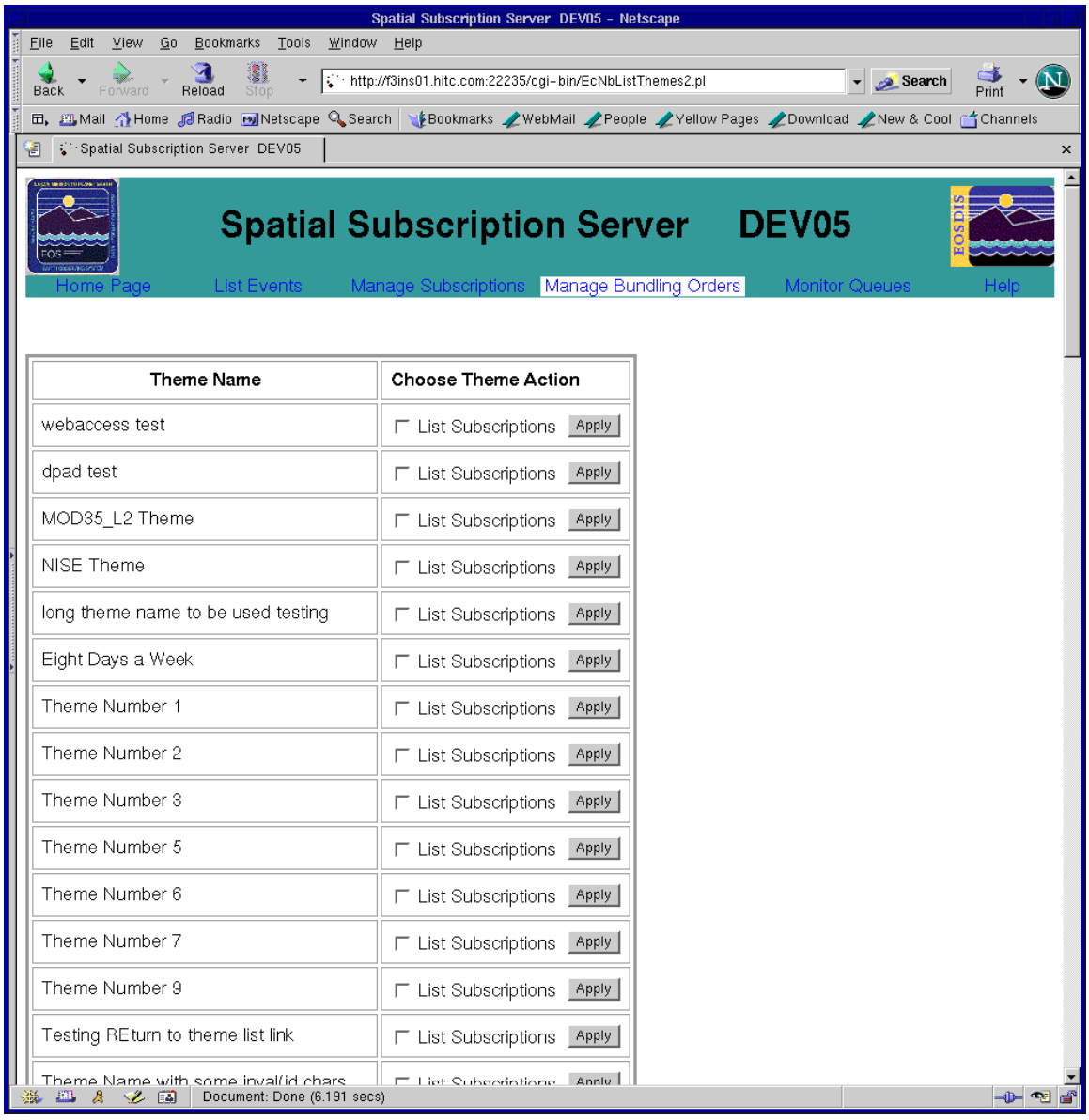

Figure 4.7.2.5-2. Theme List and Associated Action

Note: This screen allows the operator to see the list of themes enabled for insert and to view the list of subscriptions associated with a particular theme.

Table 4.7.2.5-1. Theme List Field Description

Field Name	Data Type	Size	Entry	Description
Choose Theme Action	checkbox	1	optional	To view the subscriptions associated with a particular theme, check the box and click on Apply.
Continue	link	n/a	optional	To continue viewing the list of theme names, click on the continue link.

4.7.2.6 List Subscriptions box

The List Subscriptions for Theme screen, called from List Themes and shown in Figure 4.7.2.6-1 allows the operator to see a list of subscriptions associated with a particular theme.

Please note that **Update, Cancel, Suspend All, ResumeAll** and **Cancel All** functionality is accessible only to full capability Operators.

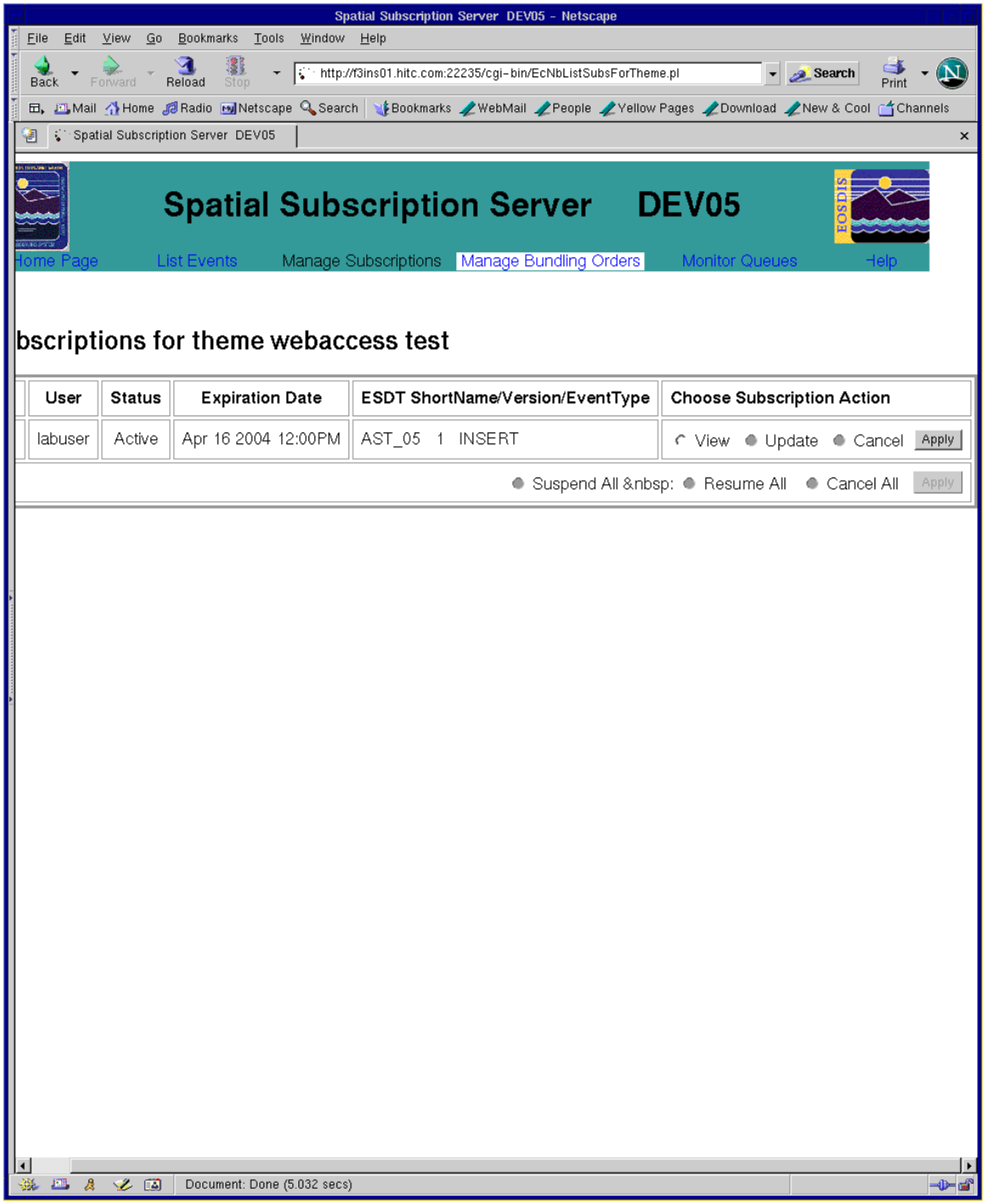

Figure 4.7.2.6-1. Theme and Associated Subscriptions

Note: This screen allows the operator to see the list of subscriptions associated with a particular theme and to select one of them for View, Update, or Cancel. The operator also has the option to suspend, resume, or cancel all subscriptions by clicking on the appropriate link.

4.7.2.7 Manage Bundling Orders tab

The Manage Bundling Orders screen shown in Figure 4.7.2.7-1 allows the operator to View, Update, or Cancel bundling orders or to create new bundling orders. The operator can also list the subscriptions associated with a particular bundling order.

Please note that **Update** and **Cancel** functionality can only be performed by an Operator with full capability access.

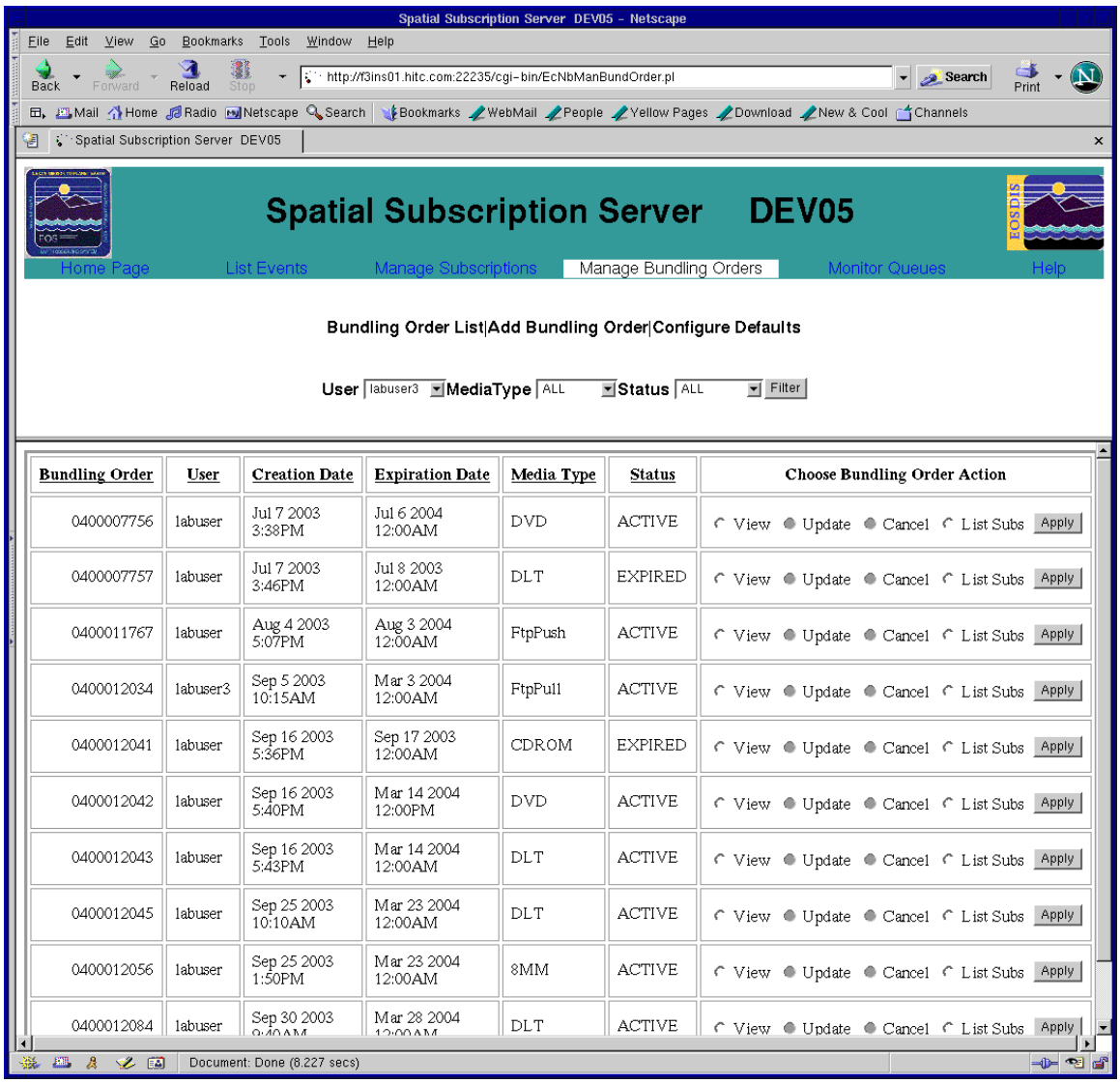

Figure 4.7.2.7-1. Bundling Orders List

Limited Capability Users

Limited Capability users use **Update** and **Cancel** functionality.

Note: This screen allows the operator to view previously defined bundling orders; to view, update, or cancel a particular bundling order; or to list the subscriptions associated with a particular bundling order.

Figure 4.7.2.7-2 displays the configured defaults for a bundling order, which is accessible to full capability operators.

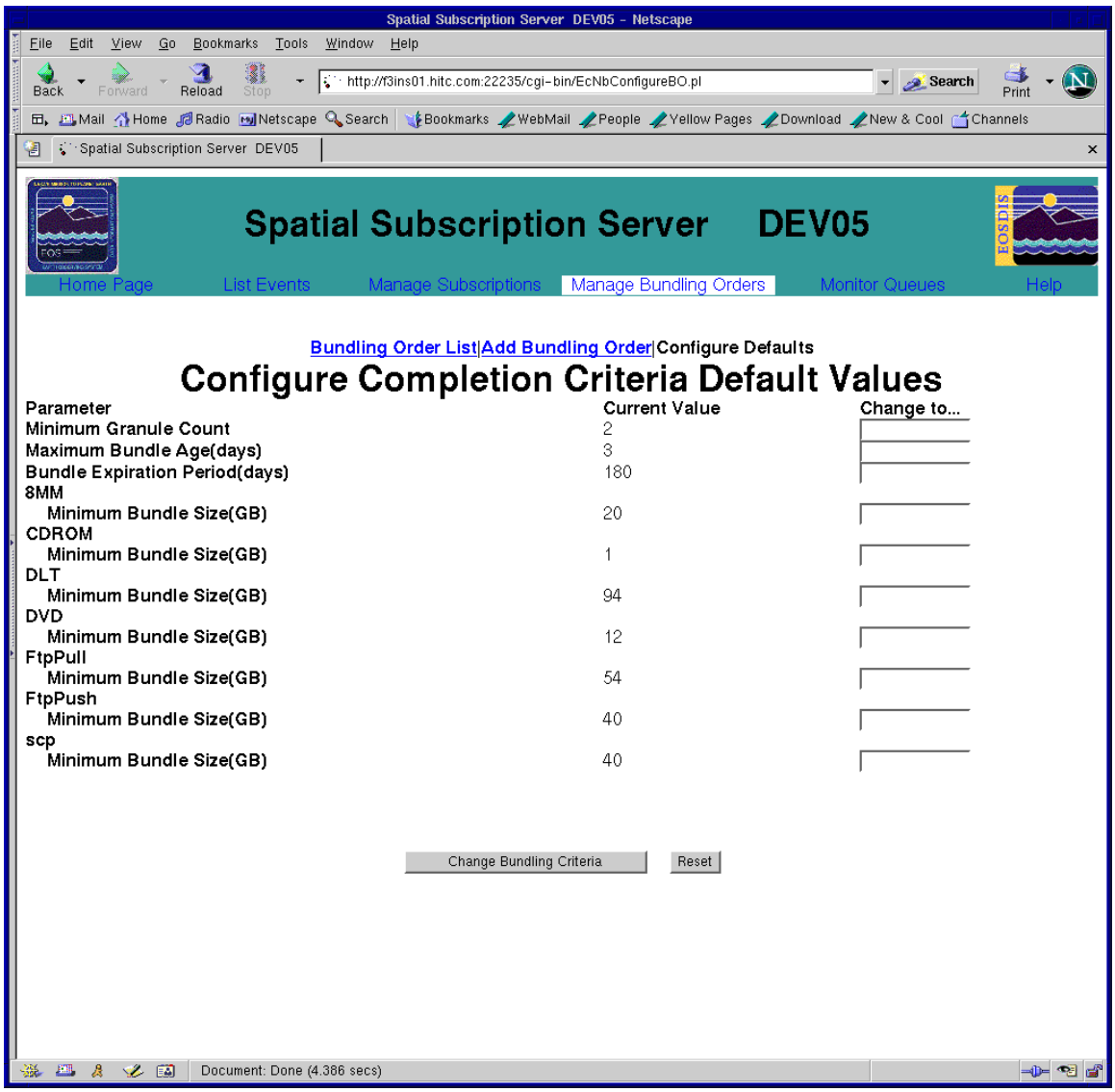

Figure 4.7.2.7-2. Configure Defaults for Bundling Order. This Screen is Only Accessible to Full Capability Operator.

Limited Capability Users

Limited Capability users cannot use this functionality.

Note: This screen is called from Figure 4.7.2.7-1 when the operator selects the Configure Defaults tab. It allows the operator to configure default values for bundling orders. The completion criteria values may vary among media types. To change a value the operator enters the new value in the Change to… column. When all changes have been made the operator clicks the Change Bundling Criteria button.

Figure 4.7.2.7-3 displays the bundling criteria change confirmation screen, which is accessible to full capability operators.

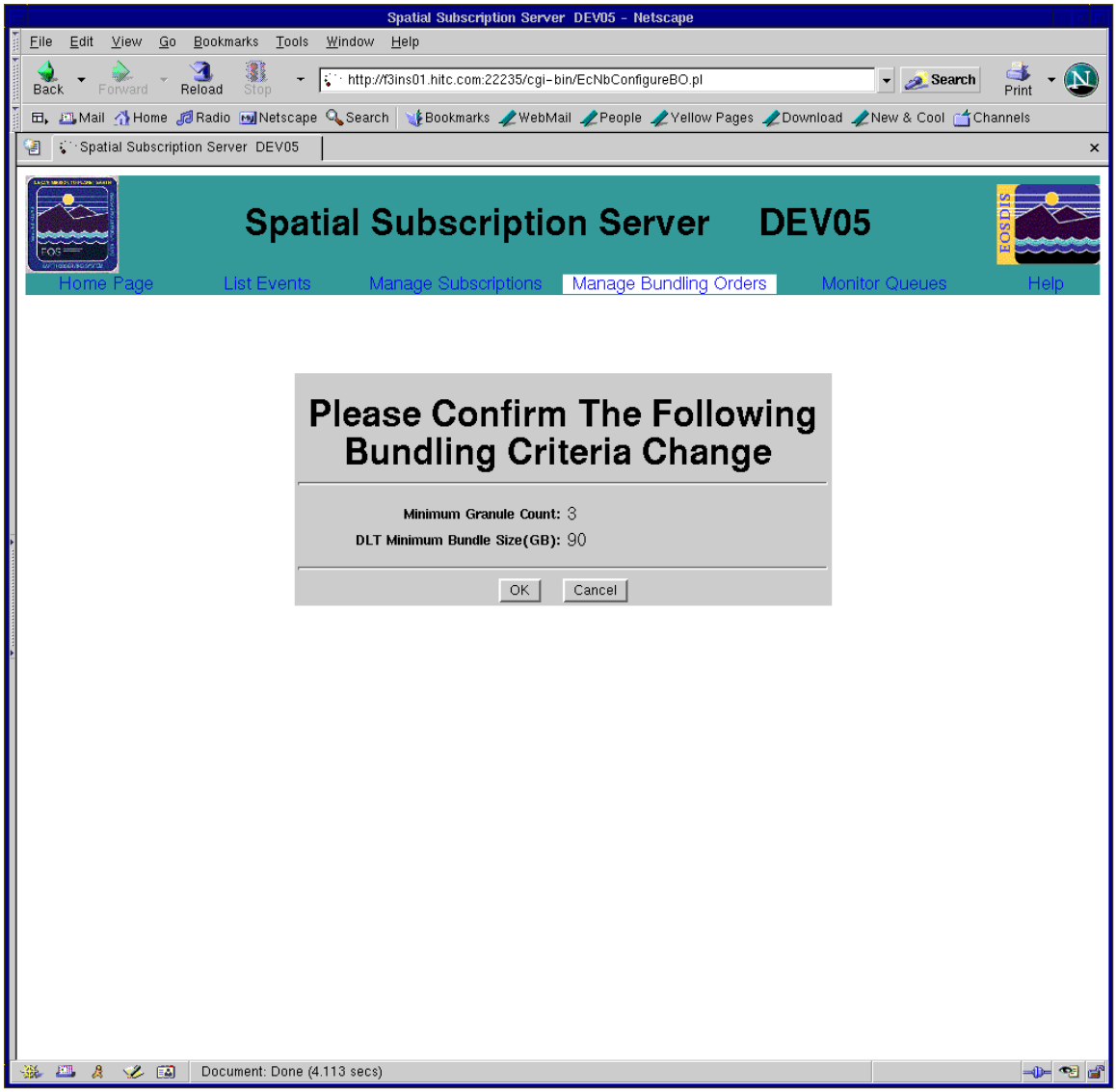

Figure 4.7.2.7-3. Bundling Criteria Change Confirmation Screen. This Screen is Only Accessible to Full Capability Operators.

Limited Capability Users

Limited Capability users cannot use this functionality.

Note: This screen asks for confirmation for the new configuration value(s). The operator would click OK to confirm. The configuration page will appear again after the parameter has been updated.

4.7.2.8 Add Bundling Order

The Add Bundling Order screen shown in Figure 4.7.2.8-1 allows the operator to create a new bundling order. There are two screens involved. In the first screen (Figure 4.7.2.8-1), the user enters name, an expiration date (a default is provided), and the physical media type. Based on this information, further information is requested in the second screen (Figure 4.7.2.8-2). Figures 4.7.2.8-3 and 4.7.2.8-4 show the screen provided when media types FTPPULL and FTPPUSH, respectively, are selected. Table 4.7.2.8-1 lists the description of the fields associated with the bundling order screens.

When the applicable bundling order information has been entered, the operator clicks the Add Bundling Order button. The screen in Figure 4.7.2.8-5 is displayed when the result is successful.

Please note that **Add Bundling Order** functionality is only accessible to full capability Operators.

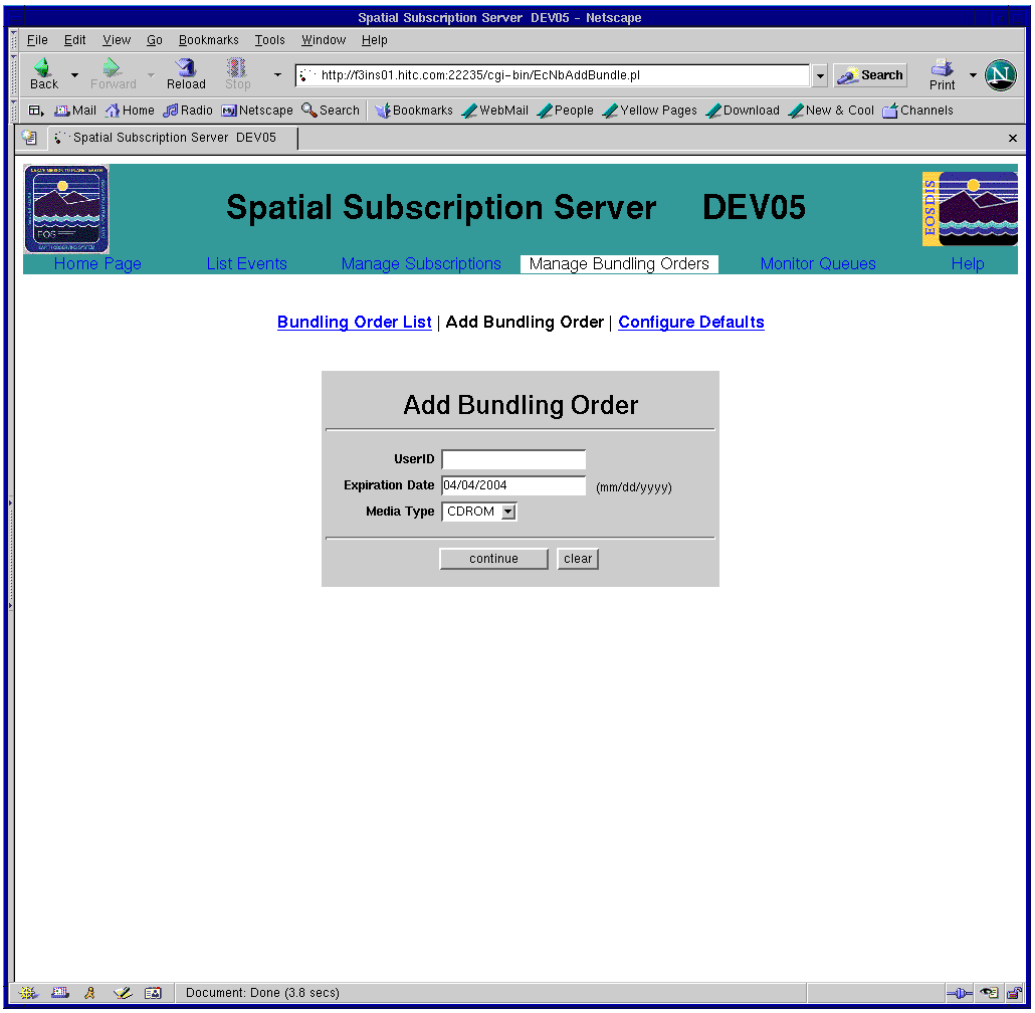

Figure 4.7.2.8-1. Add New Bundling Order Screen (Part 1). This Screen is Only Accessible to Full Capability Operators.

Limited Capability Users

Limited Capability users cannot use this functionality**.**

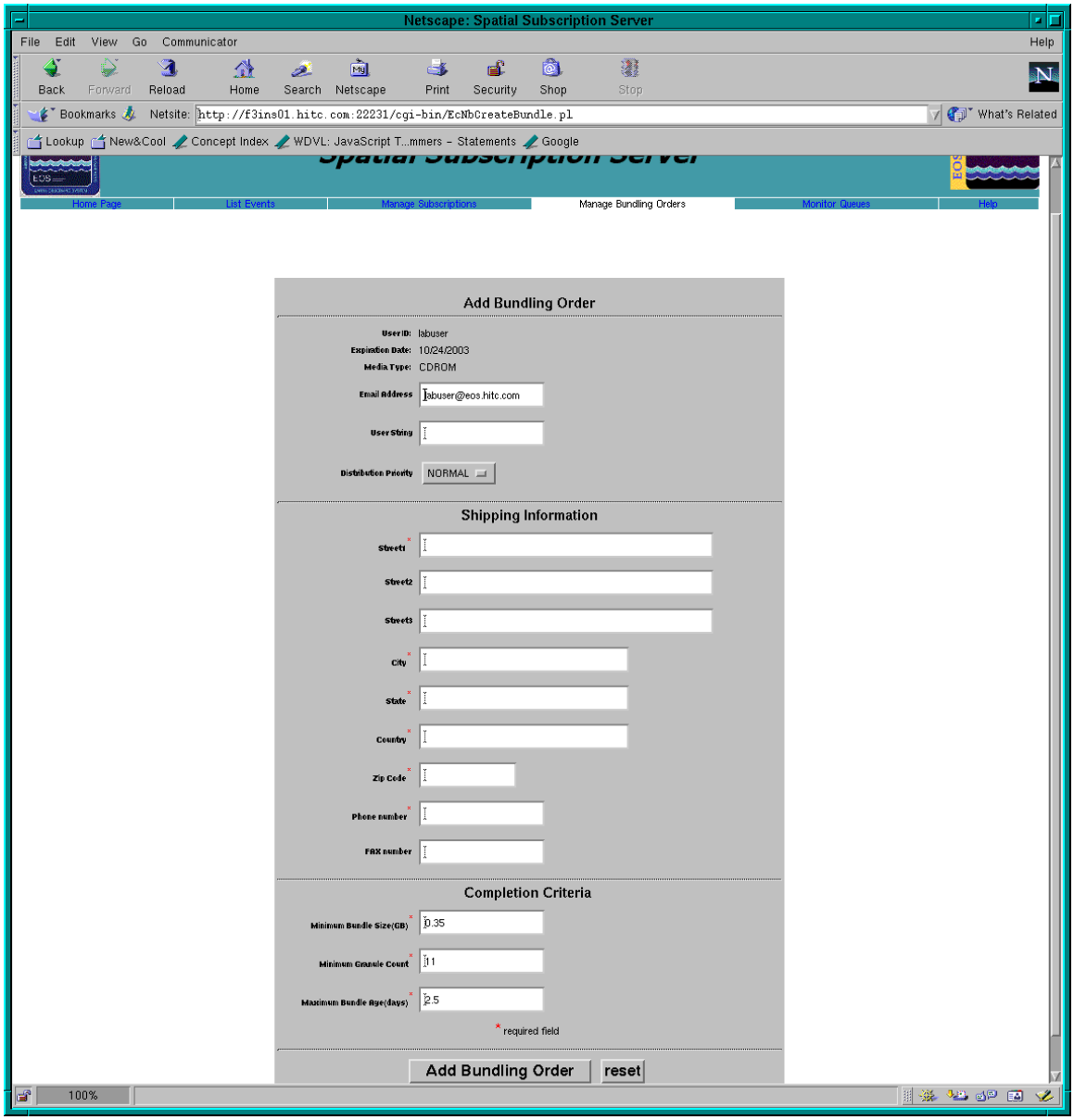

Figure 4.7.2.8-2. Add New Bundling Order Screen (Part 2). This Screen is Only Accessible to Full Capability Operators.

Limited Capability Users

Limited Capability users cannot use this functionality.

Note: Information entered in the previous screen is used to provide options in the current screen. For example, for a physical media type, shipping information will be displayed.

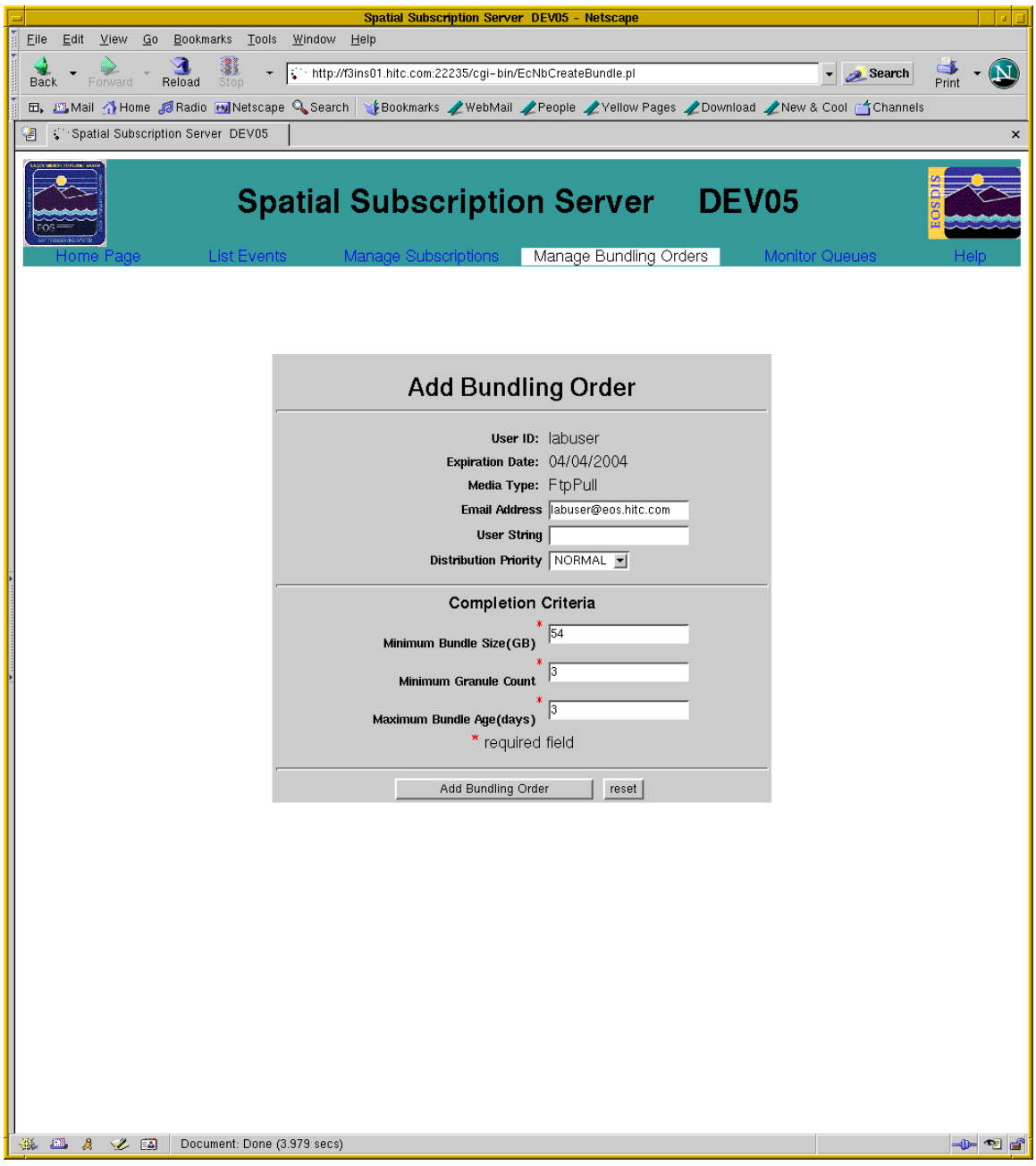

Figure 4.7.2.8-3. Add Bundling Order - Media Type Selected is FTPPULL. This Screen is Only Accessible to Full Capability Operators.

Limited Capability Users

Limited Capability users cannot use this functionality.

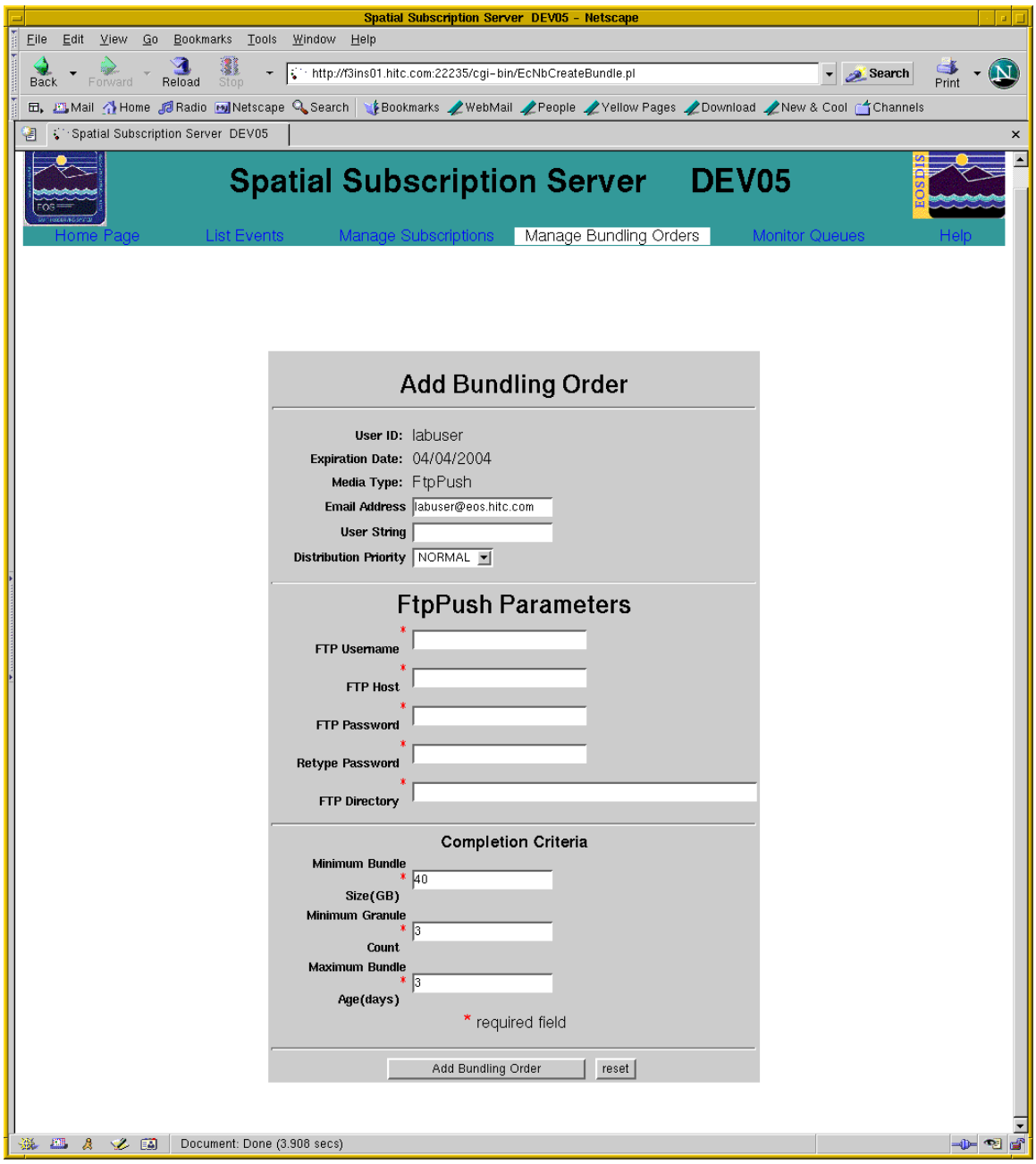

Figure 4.7.2.8-4. Add Bundling Order - Media Type Selected is FTPPUSH. This Screen is Only Accessible to Full Capability Operators.

Limited Capability Users

Limited Capability users cannot use this functionality.

Table 4.7.2.8-1. Field Descriptions for the Bundling Order Screens (1 of 2)

Field Name	Description	When and Why to Use
User Id	Name of the owner of the bundling order	Required for creating a bundling order.
Expiration Date	Date of expiration for the bundling order.	The bundling order and any associated subscriptions will be canceled after this date.
Media Type	The type of media on which the granules will be stored.	The bundle of granules will be delivered in this format.
Email Address	User's email notification.	Notification will be sent to this address when the bundle is complete.
User String	An optional string associated with the bundling order.	This string will be included in the email notification. It is also used as a secondary identifier when listing bundling orders to associate with a subscription.
Distribution Priority	The priority level associated with the distribution of the order.	Defaults to the priority found in the user profile.
Street1	Street address where media is to be shipped.	Shipping information is required for physical media distributions.
Street2	A continuation of the Street1 field.	Shipping information is required for physical media distributions.
Street3	A continuation of the Street2 field.	Shipping information is required for physical media distributions.
City	City where media is to be shipped.	Shipping information is required for physical media distributions.
State	State where media is to be shipped.	Shipping information is required for physical media distributions.
Country	Country where media is to be shipped.	Shipping information is required for physical media distributions.
Zip Code	The zip code for the shipping address.	Shipping information is required for physical media distributions.
Phone Number	Phone number of recipient.	Shipping information is required for physical media distributions.
FAX Number	FAX number of recipient.	Shipping information is required for physical media distributions.
FTP Username	For an FTP Push, the user login name to be used.	Required for FTP Push distributions.
FTP Host	For an FTP Push, the hostname to be used.	Required for FTP Push distributions
FTP Password	For an FTP Push, the password for the user/host.	Required for FTP Push distributions
Retype Password	Same as FTP password.	The password is typed twice for validation purposes.

Table 4.7.2.8-1. Field Descriptions for the Bundling Order Screens (2 of 2)

Field Name	Description	When and Why to Use
FTP Directory	For an FTP Push, the directory on the host where the data is to be pushed.	Required for FTP Push distributions
Minimum Bundle Size (GB)	The minimum total size of all granules before the bundle can be considered complete.	See the Order Manager design documentation for further details.
Minimum Granule Count	The minimum number of individual granules before the bundle can be considered complete.	See the Order Manager design documentation for further details
Maximum Bundle Age (days)	The maximum length of time that any granule can remain in the bundle before the bundle is considered complete.	See the Order Manager design documentation for further details

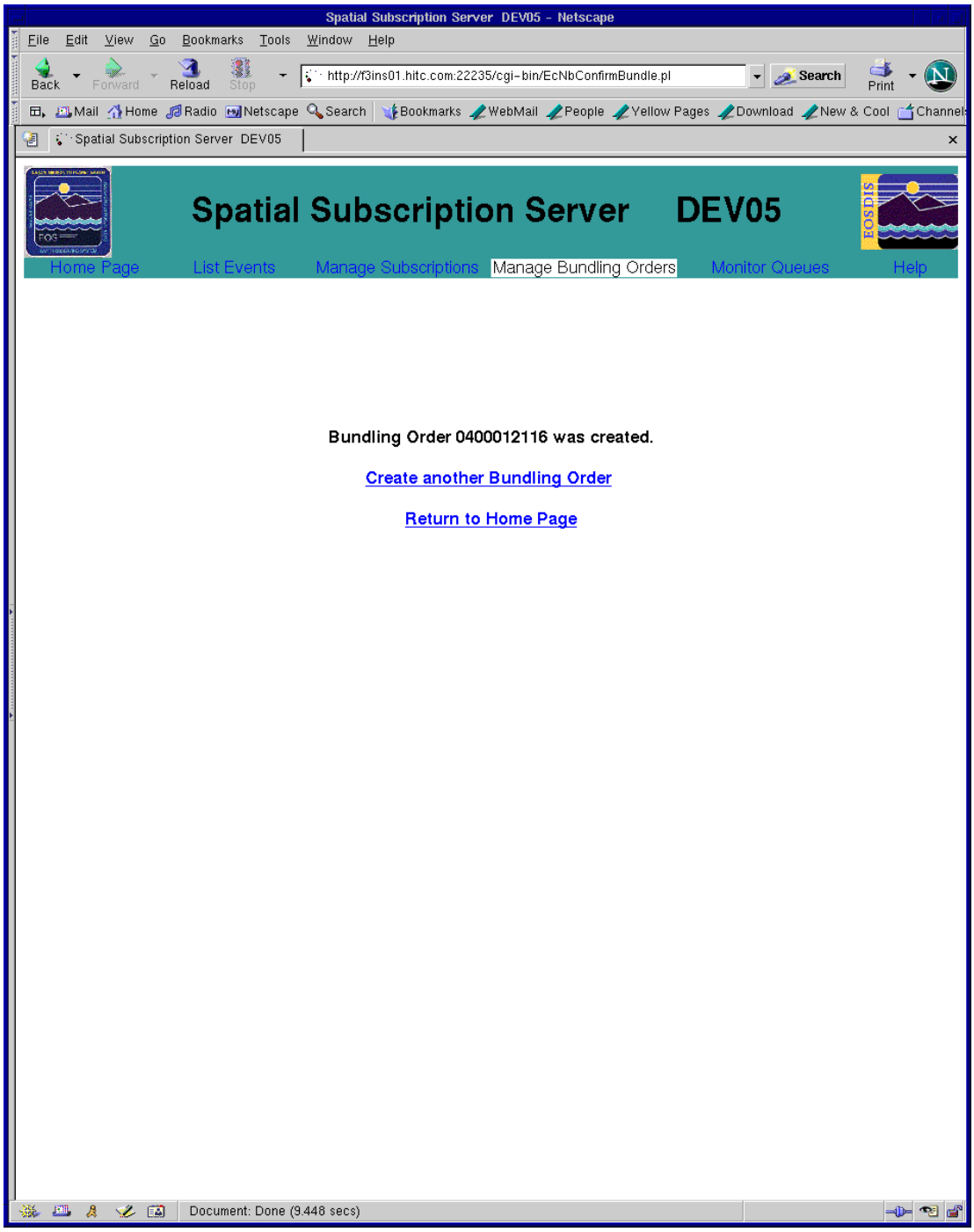

Figure 4.7.2.8-5. Successful Results for Bundling Order. This Screen is Only Accessible to Full Capability Operator.

Limited Capability Users

Limited Capability users cannot use this functionality.

4.7.2.9 View Bundling Order

The View Bundling Order screen shown in Figure 4.7.2.9-1 allows the operator to view the details of a particular bundling order.

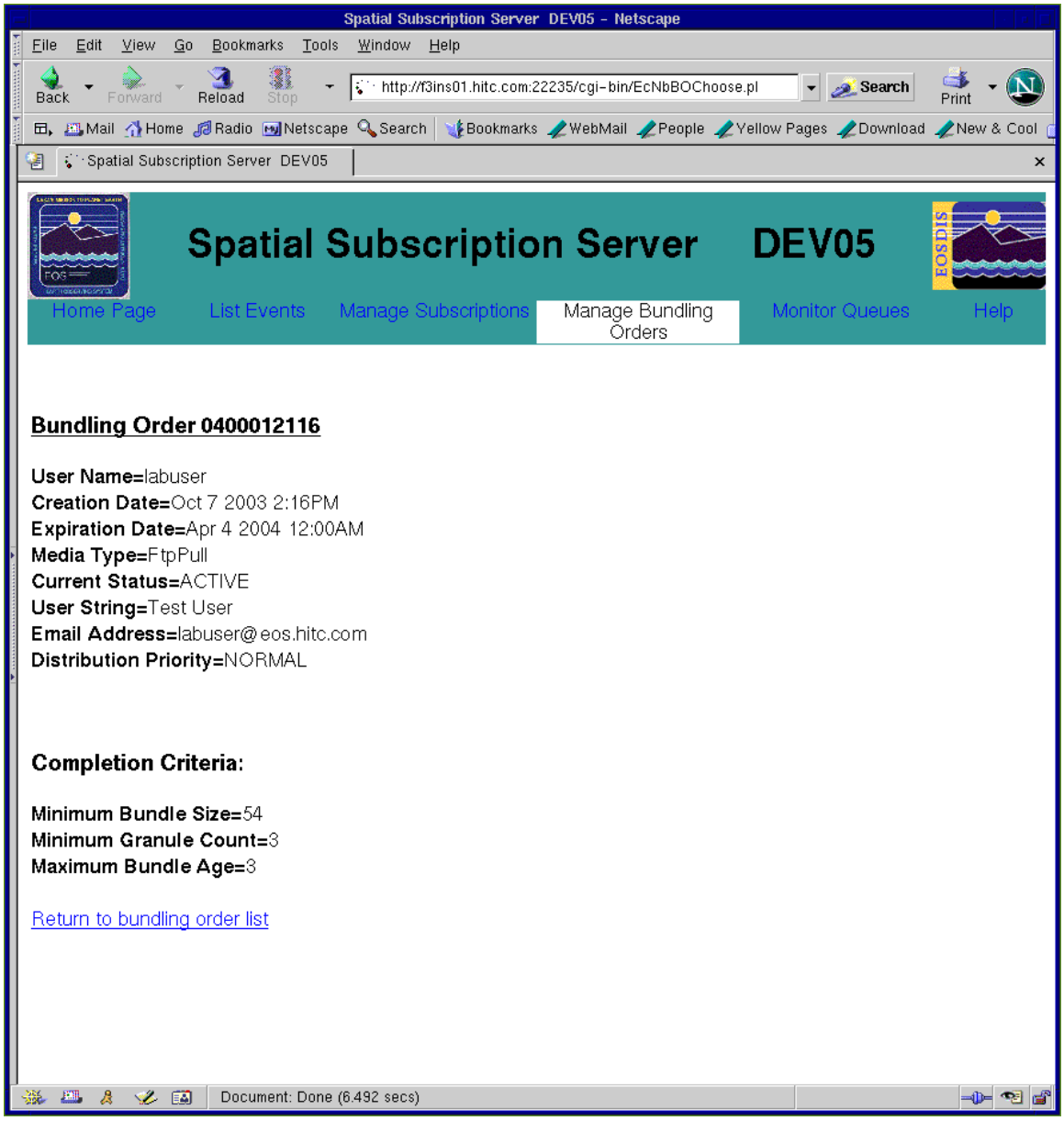

Figure 4.7.2.9-1. Bundling Order Detailed Information

Note: From this screen, the operator may choose to return to the list of bundling orders.

4.7.2.10 Update Bundling Order

The Update Bundling Order screen shown in Figure 4.7.2.10-1 allows the operator to update an existing bundling order. There are two screens involved. In the first screen (Figure 4.7.2.10-1), the user selects the physical media type for the order selected. Based on the media type, a second screen is displayed (Figure 4.7.2.10-2). Figures 4.7.2.10-3 and 4.7.2.10-4 show the specific screen provided when media types FTPPULL and FTPPUSH, respectively, are identified

When the applicable update bundling order information has been entered, the operator clicks the Update Bundling Order button. The screen in Figure 4.7.2.10-5 is displayed when the result is successful.

Please note that **Update Bundling Order** functionality is only available to full Capability Operators.

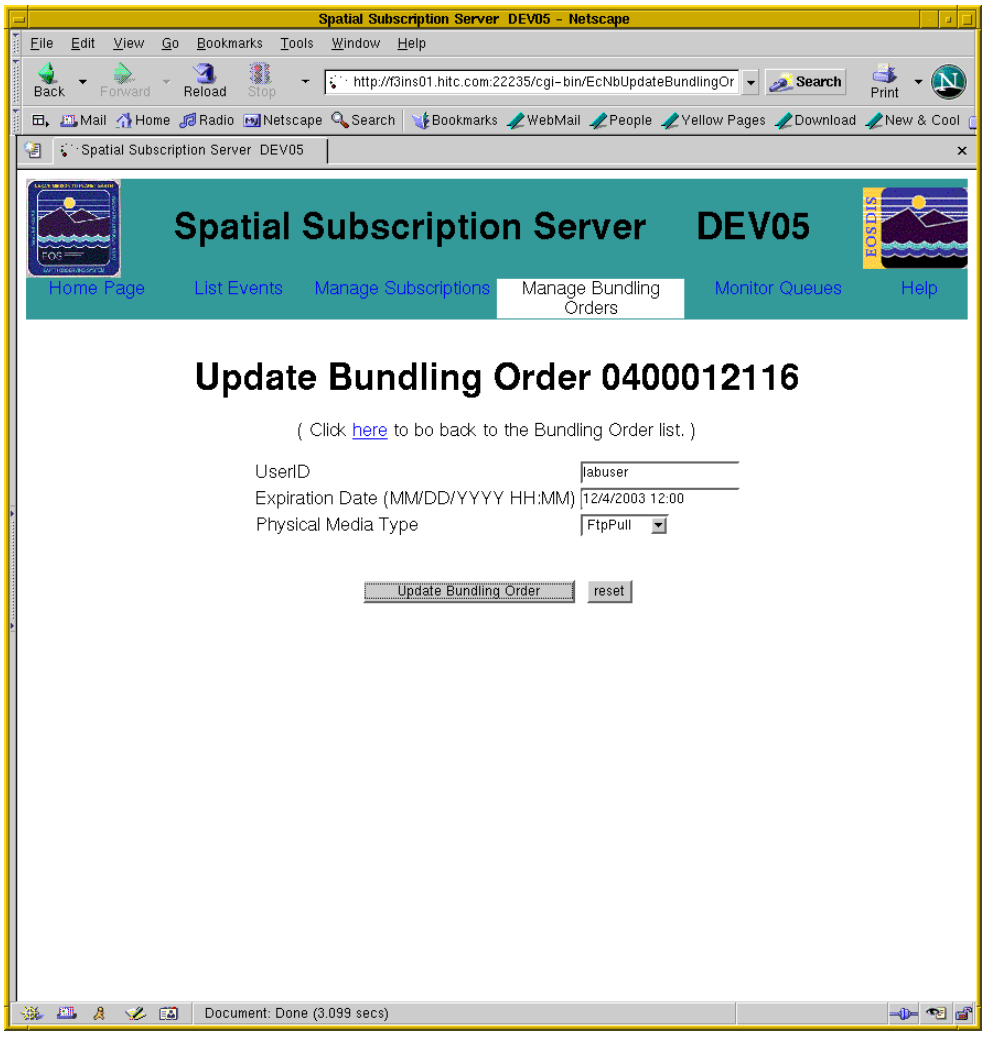

Figure 4.7.2.10-1. Update Existing Bundling Order (Part 1). This Screen is Only Accessible to Full Capability Operator.

Limited Capability Users

Limited Capability users cannot use this functionality.

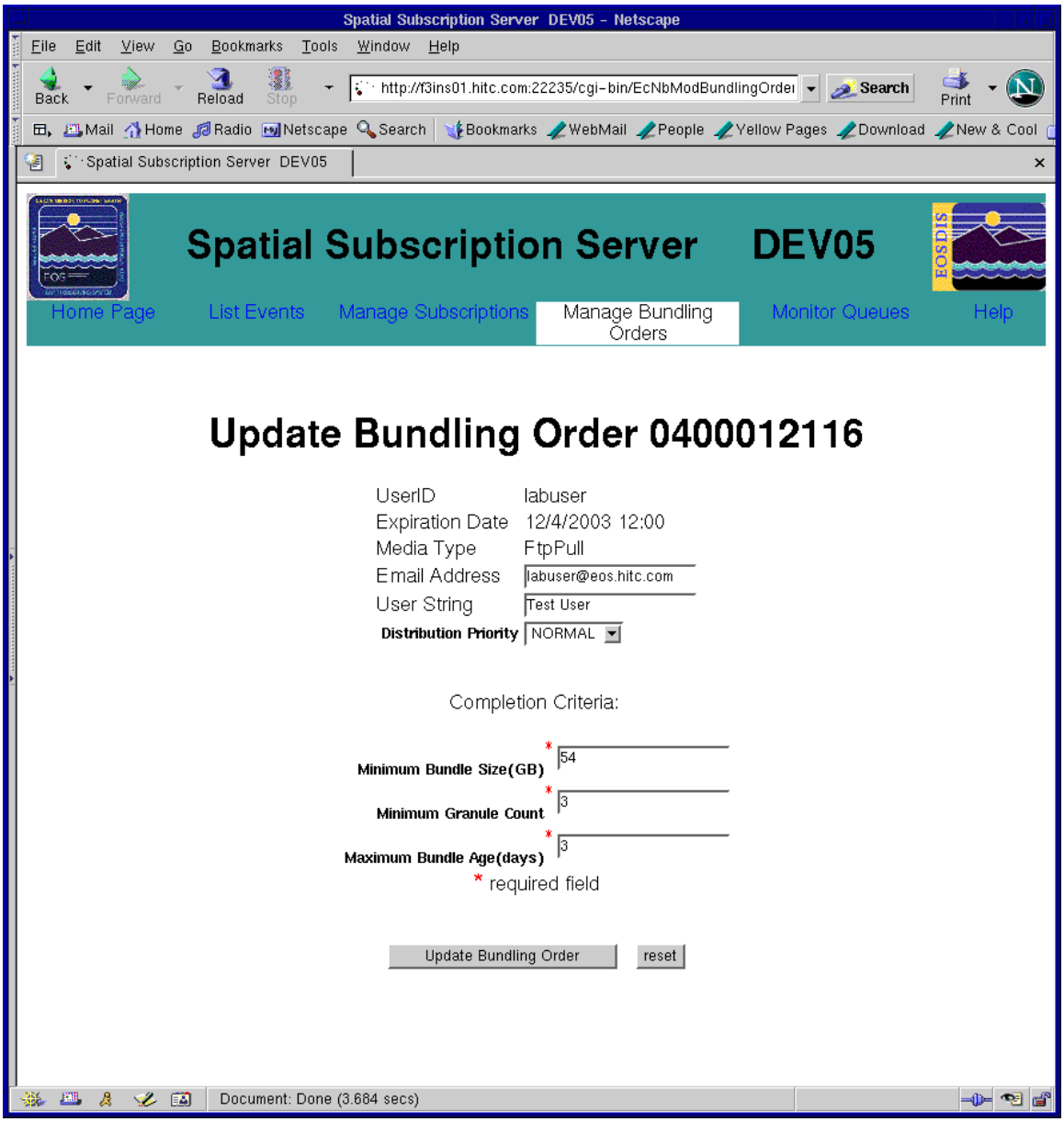

Figure 4.7.2.10-2. Update Existing Bundling Order (Part 2). This Screen Is Only Accessible to Full Capability Operator.

Limited Capability Users

Limited Capability users cannot use this functionality.

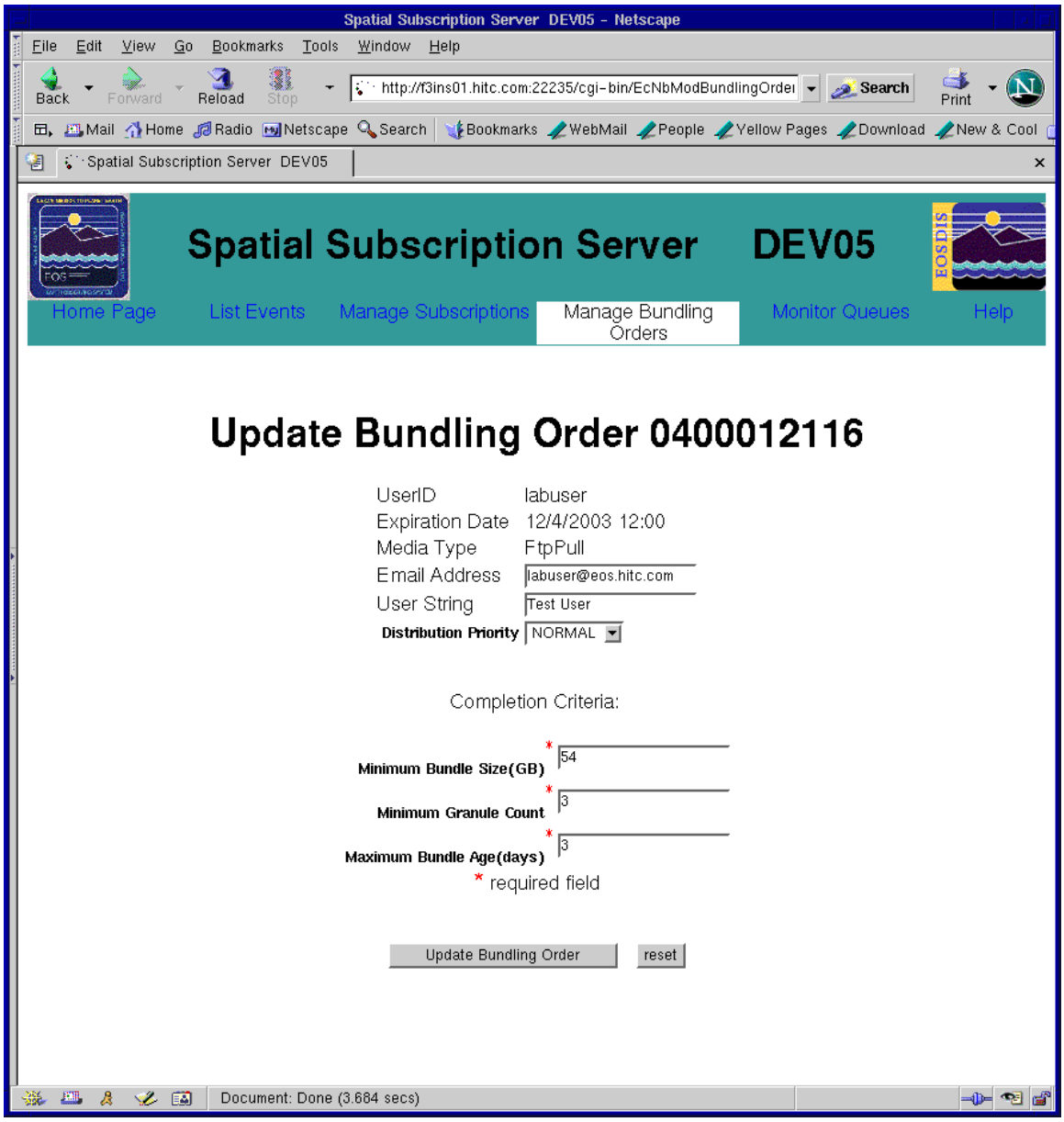

Figure 4.7.2.10-3. Update Existing Bundling Order (Media Type is FTP PULL). This Screen is Accessible to Only Full Capability Operator.

Limited Capability Users

Limited Capability users cannot use this functionality**.**

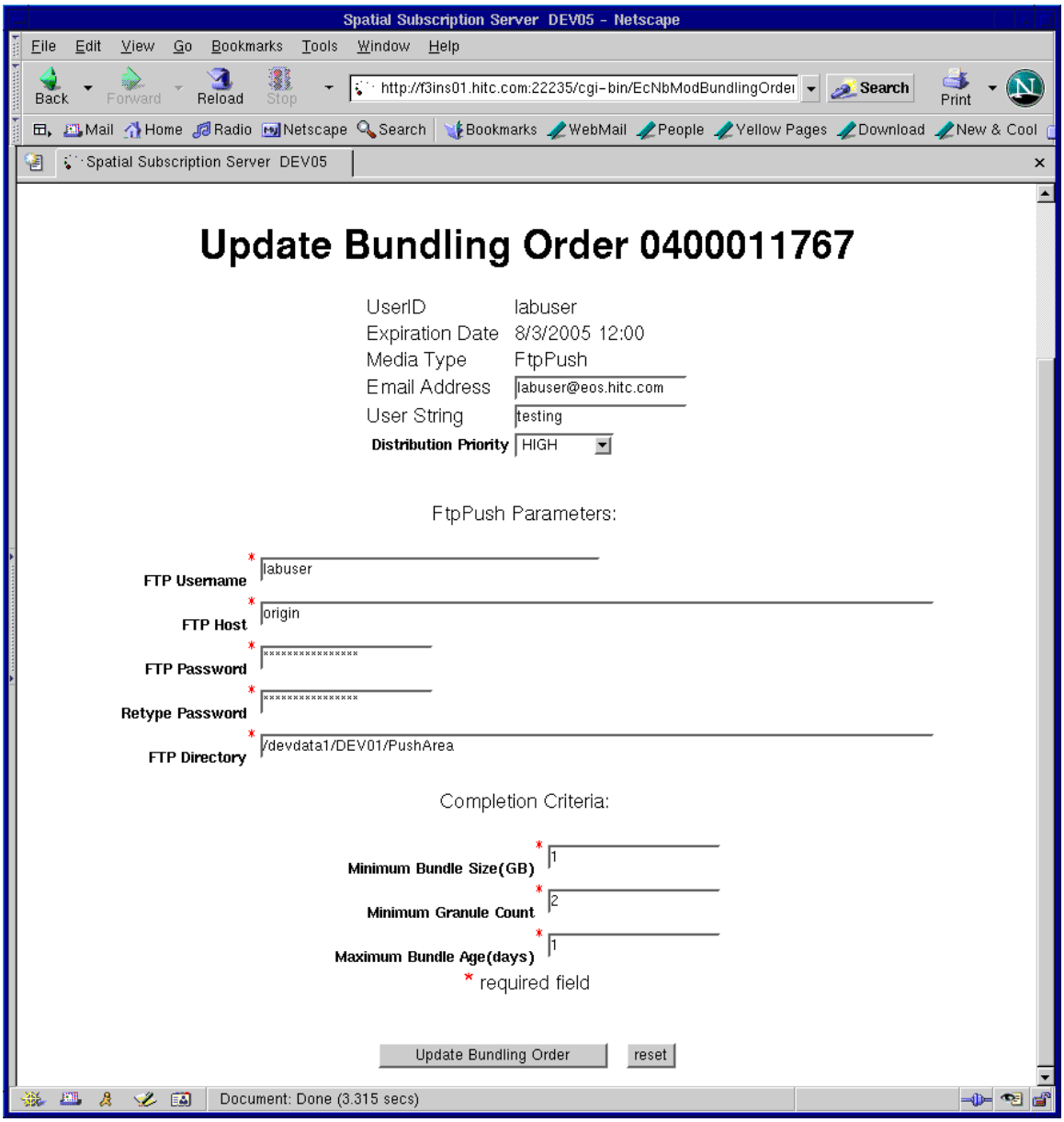

Figure 4.7.2.10-4. Update Existing Bundling Order (Media Type is FTP PUSH). This Screen is Accessible to Only Full Capability Operator.

Limited Capability Users

Limited Capability users cannot use this functionality**.**

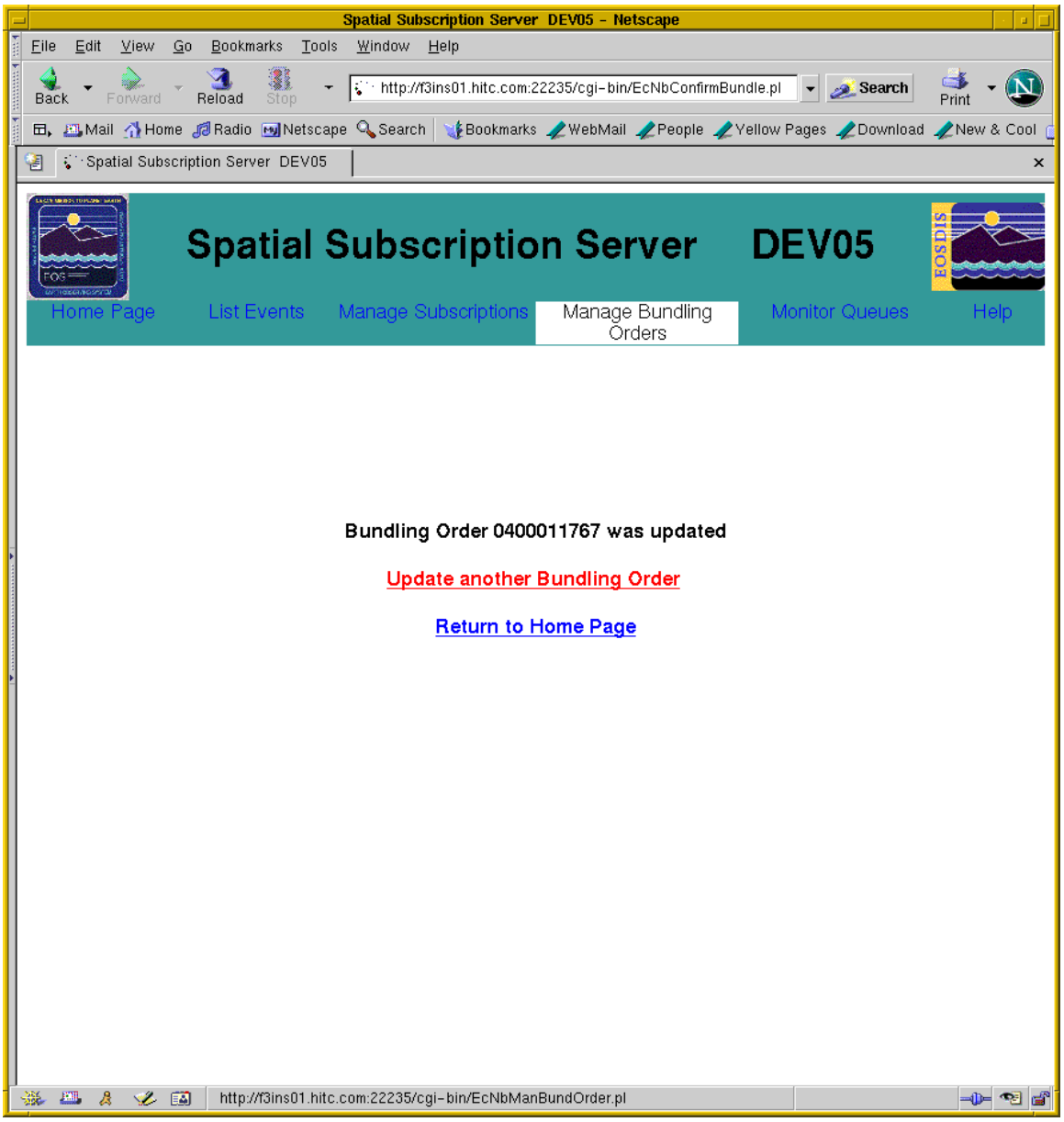

Figure 4.7.2.10-5. Update Existing Bundling Order (Successful Update). This Screen is Accessible to Only Full Capability Operator.

Limited Capability Users

Limited Capability users cannot use this functionality**.**

4.7.2.11 Cancel Bundling Order

The Cancel Bundling Order screen shown in Figure 4.7.2.11-1 requests confirmation from the operator when the cancel option has been selected. If the operator selects **Yes,** the screen in Figure 4.7.2.11-2 is displayed if the cancellation was successful.

Please note Cancel Bundling Order functionality is only available to full capability Operators.

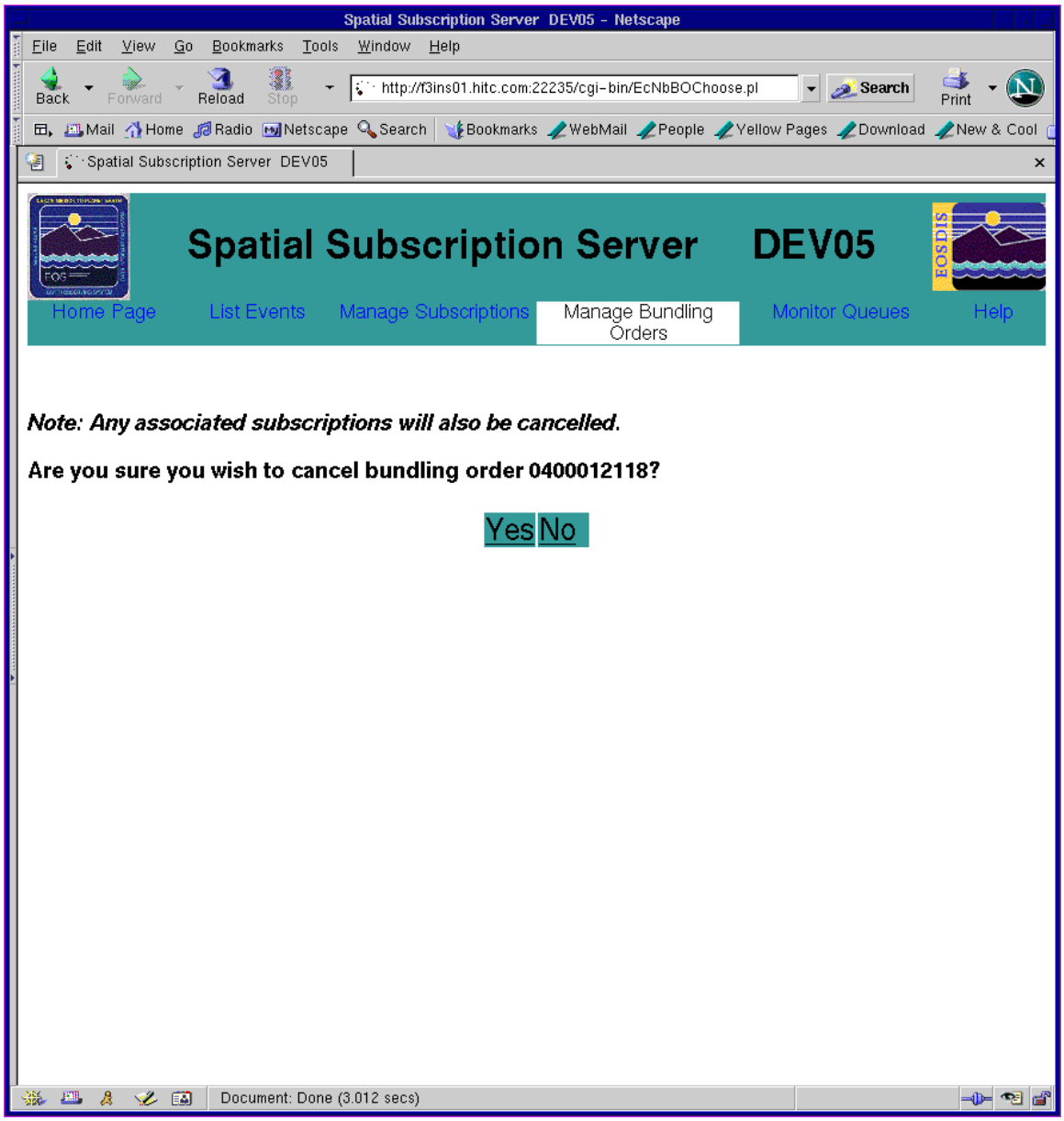

Figure 4.7.2.11-1. Cancel Bundling Order Request. This Screen is Accessible to Only Full Capability Operator.

Limited Capability Users

Limited Capability users cannot use this functionality.

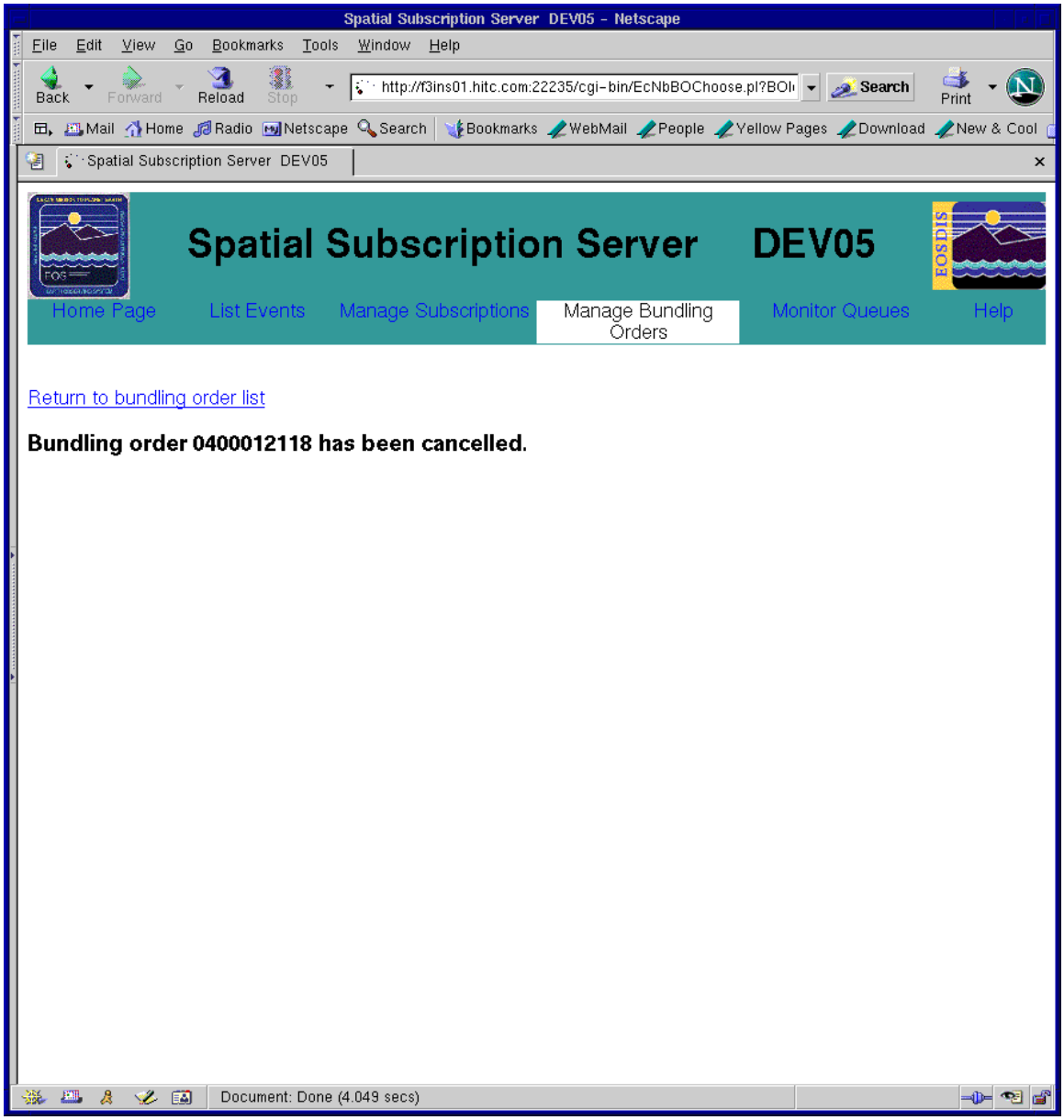

Figure 4.7.2.11-2. Cancel Bundling Order (Successful Cancellation). This Screen Is Accessible to Only Full Capability Operator.

4.7.2.12 List Subscriptions Associated with Bundling Order

The list subscriptions screen shown in Figure 4.7.2.12-1 Lists the subscriptions associated with a bundling Order. Note that selecting "**View**" or "**Update"** or "**Cancel**" button and clicking on "**Apply**" would provide similar functionality as in Section 4.7.2.4.

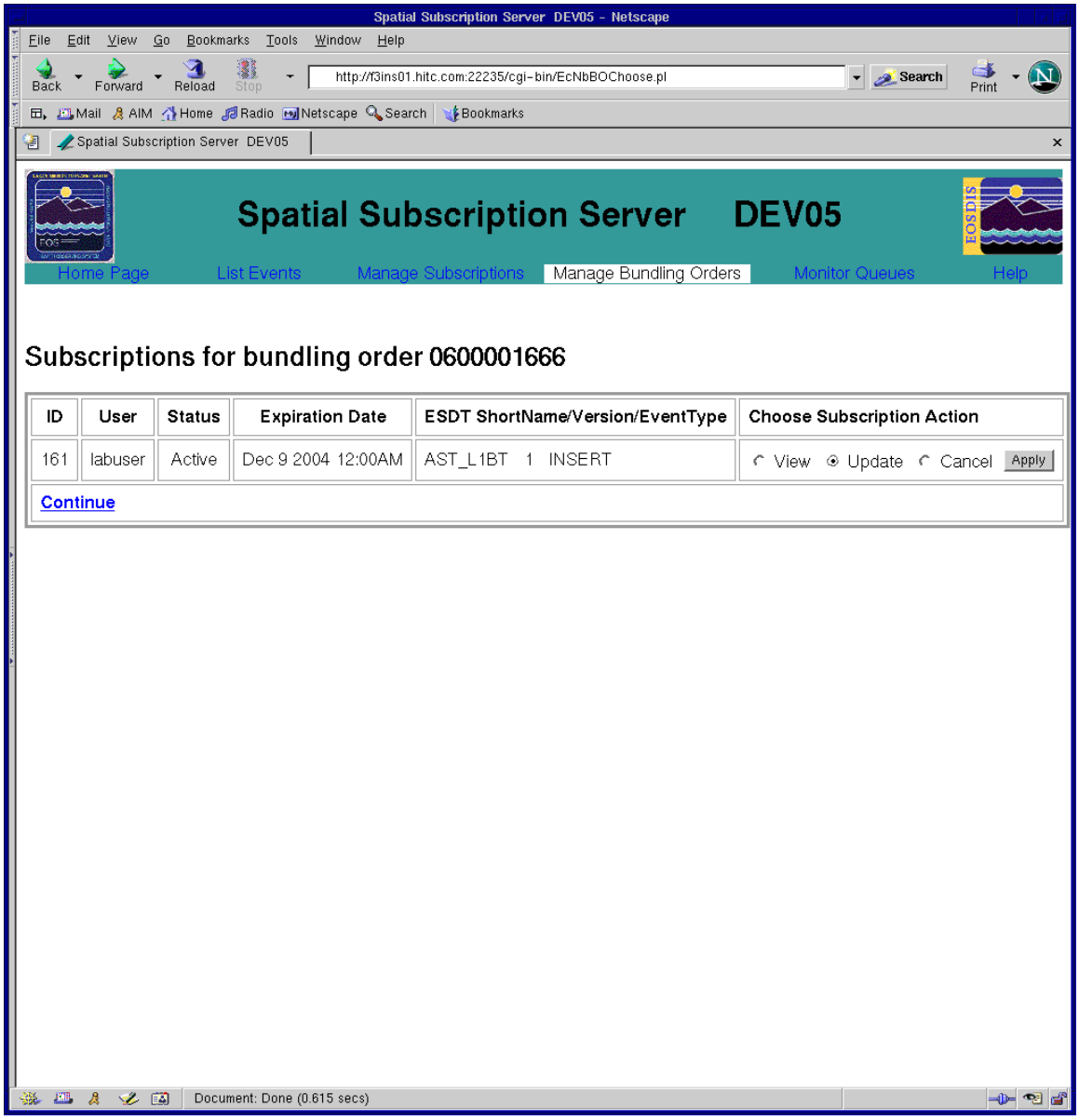

Figure 4.7.2.12-1. List Subscriptions Associated with a Bundling Order

4.7.2.13 Monitor Queues Tab

When the operator selects the Monitor Queues tab, the List Action Queue page (see Section 4.7.2.14) will be displayed by default. From this page, the operator can view production statistics by selecting the List Statistics tab.

4.7.2.14 List Action Queue tab

The List Action Queue screen shown in Figure 4.7.2.14-1 allows the operator to view the Acquire and E-Mail Notification actions that are being processed. The operator can sort the list by Action Type and Subscription Id by clicking on the **Action Type** or **Subscription Id** link. The operator can also filter the list by any combination of **Action Type**, **Subscription** and **Status**. After selecting the filtering criteria from the pull-down list(s), click on the **Filter** button.

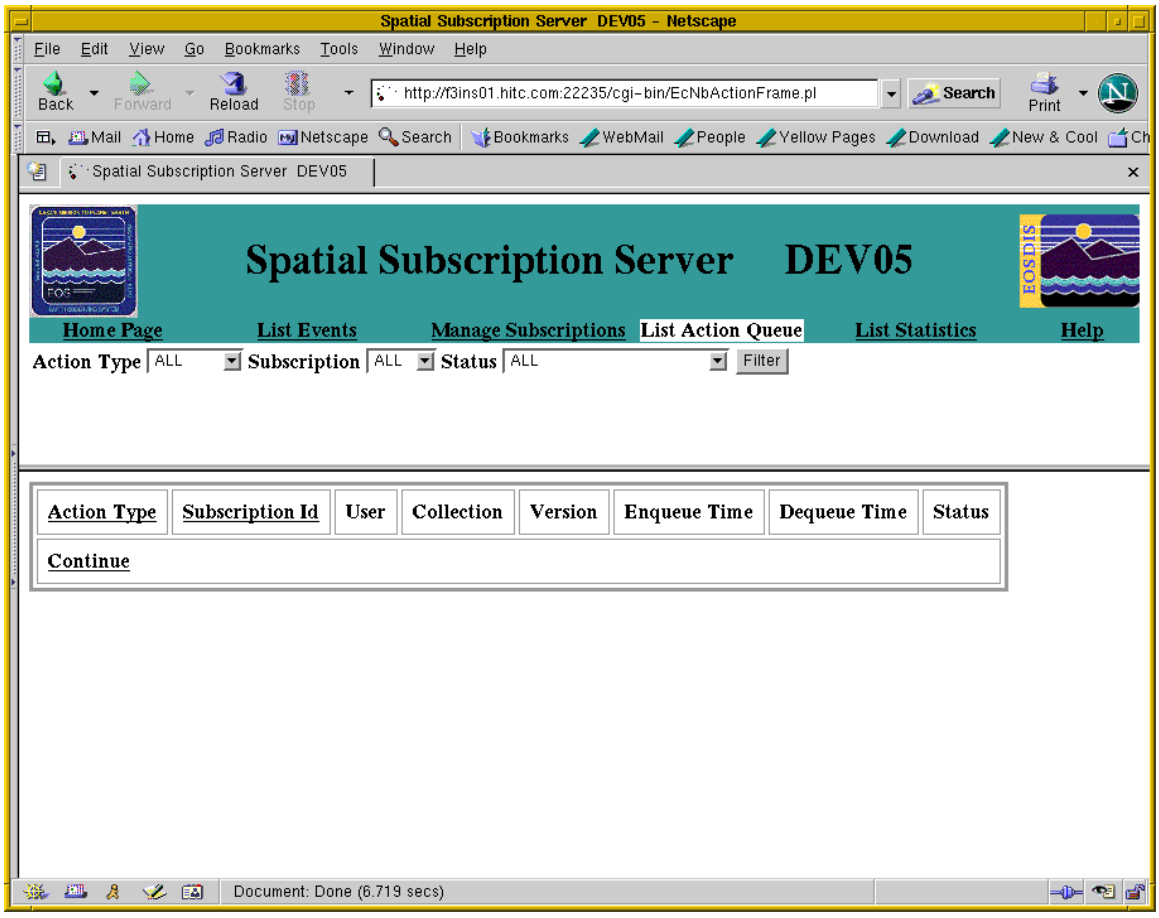

Figure 4.7.2.14-1. List Action Queue (Acquire and E-mail Notifications)

4.7.2.15 List Statistics tab

The List Statistics screen shown in Figure 4.7.2.15-1 allows the operator to view the statistics relating to subscribed events and matched subscriptions. Note that the statistics are based only on data in the NBSRV database at the time the GUI page is displayed. The subscription statistics

are retained in the NBSRV database only until they are cleaned up by the Deletion Driver. The Deletion Driver runs periodically at an interval specified in its configuration parameters.

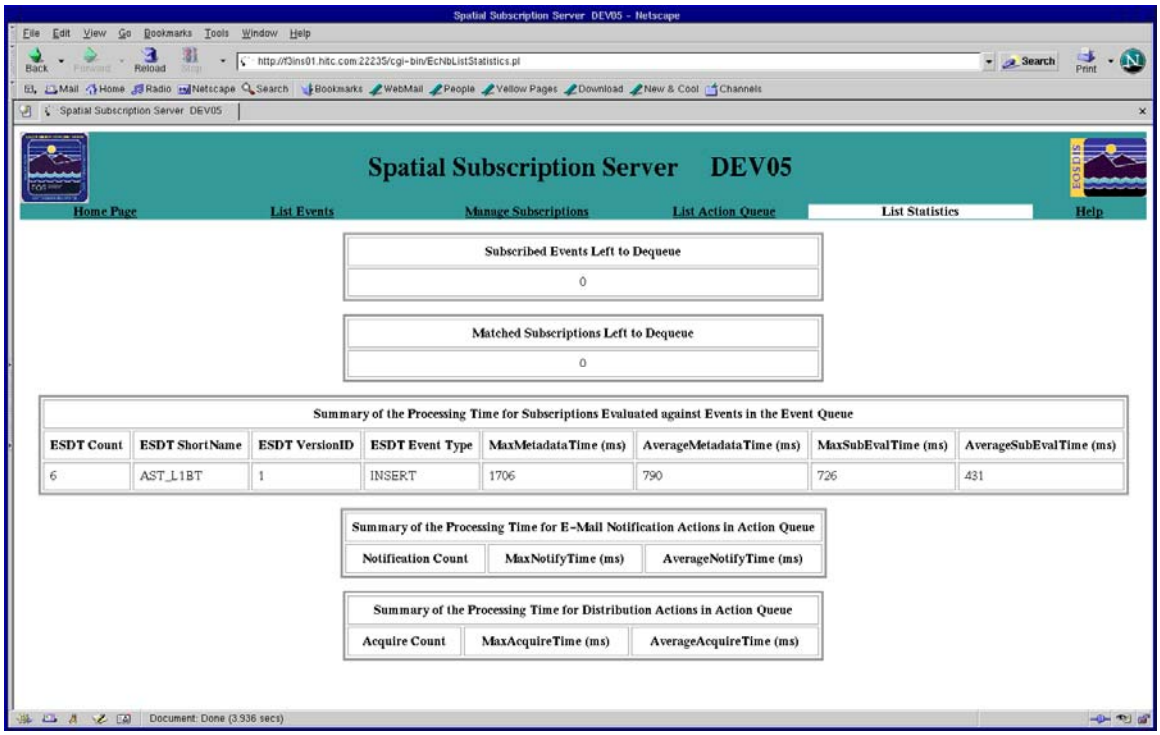

Figure 4.7.2.15-1. List Statistics Screen

Note: This screen will allow the operator to view statistics relating to subscribed events and matched subscriptions. The statistics will also reflect the processing time for e-mail notification and distribution actions.

4.7.2.16 List Failed Actions

Figure 4.7.2.16-1 displays failed actions present within the system. Figure 4.7.2.16-2 shows the screen displayed on clicking on "**Remove Action**".

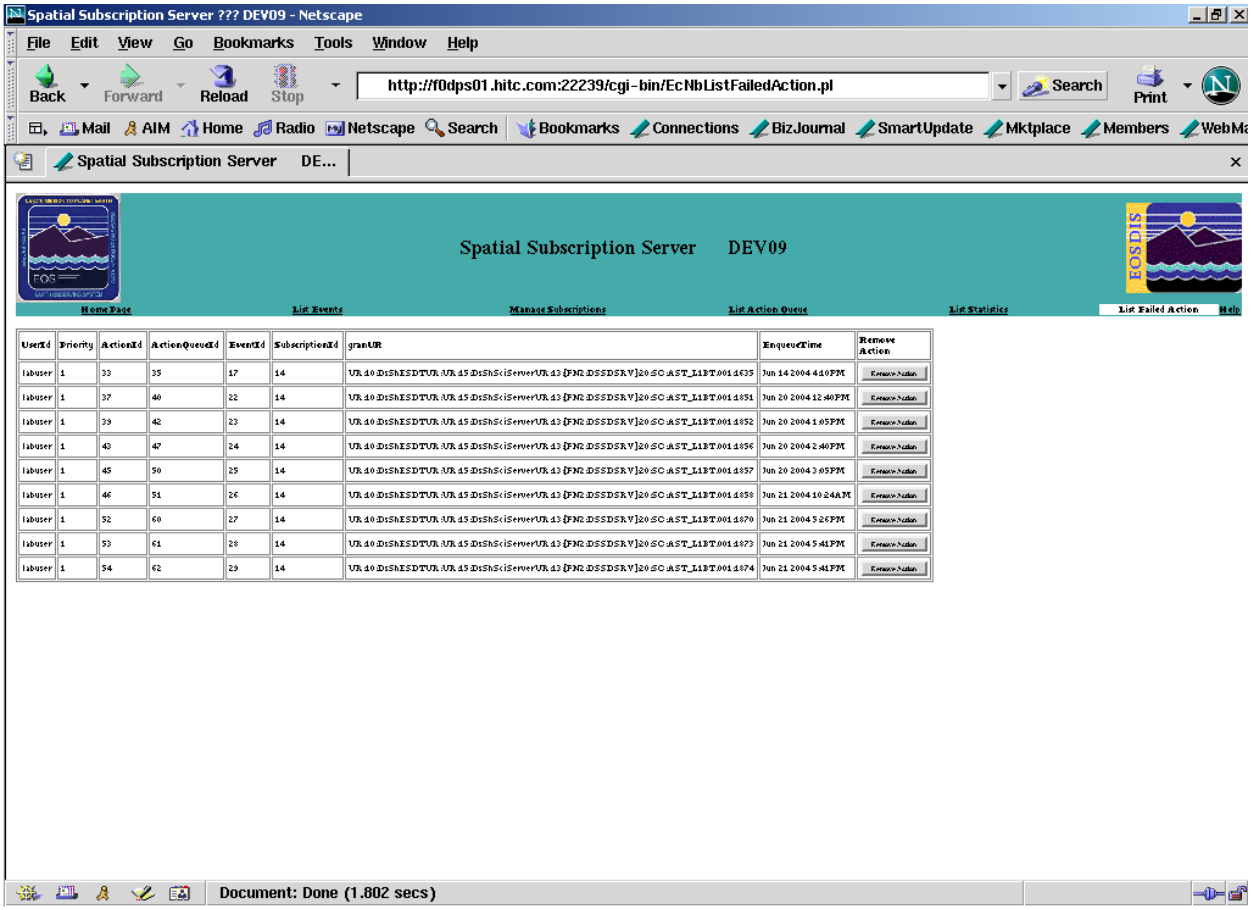

Figure 4.7.2.16-1. List of Failed Actions

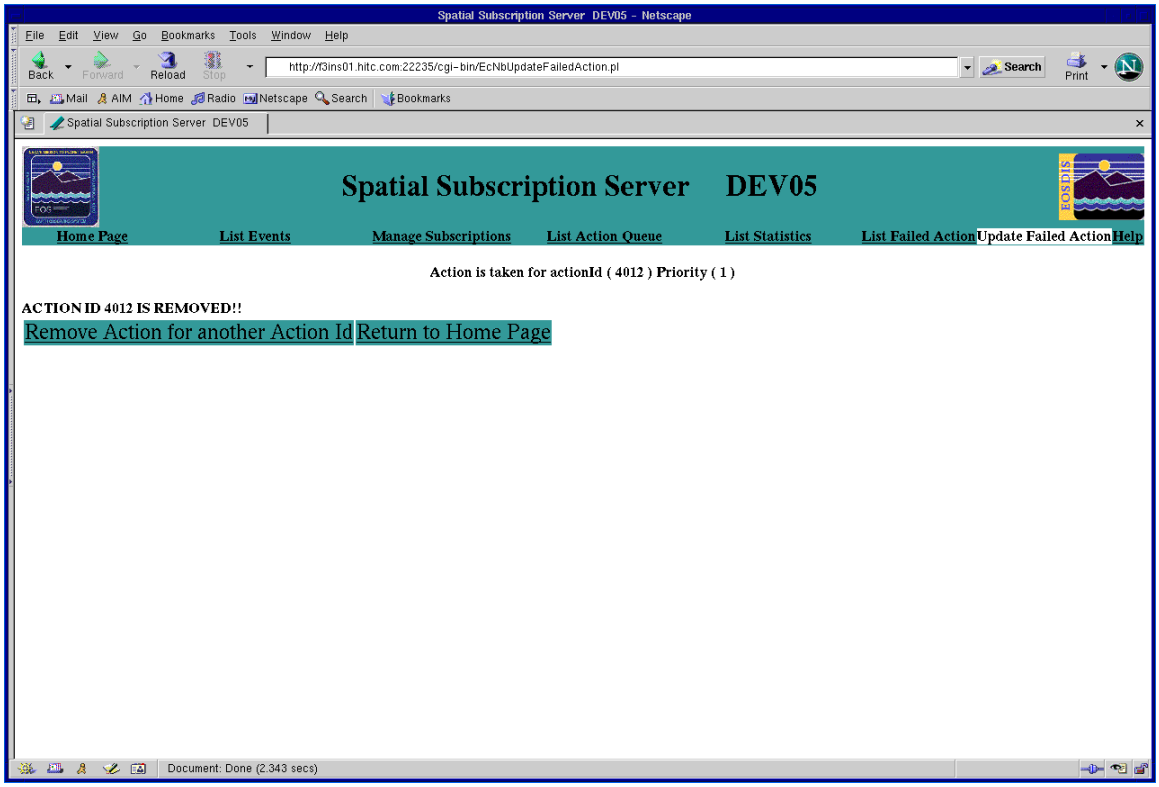

Figure 4.7.2.16-2. Removing a Failed Action

4.7.2.17 Security Considerations.

With Security Enabled, Figure 4.7.2.17-1 is displayed anytime a user logs in for the first time. On selecting the End Session tab on NBSRV.html page, Figure 4.7.2.17-2 is displayed. Clicking on the ShutDown button in Figure 4.7.2.17-2 closes the Browser.

The session time out page shown in Figure 4.7.2.17-3 is displayed anytime a user session times out. Note that session time out is part of the security feature.

After a session times out and an invalid password is entered by the Operator, page shown in Figure 4.7.2.17-4 is displayed.

For a user attempting to access SSS GUI using a non certified browser, the page shown in Figure 4.7.2.17-5 is displayed.

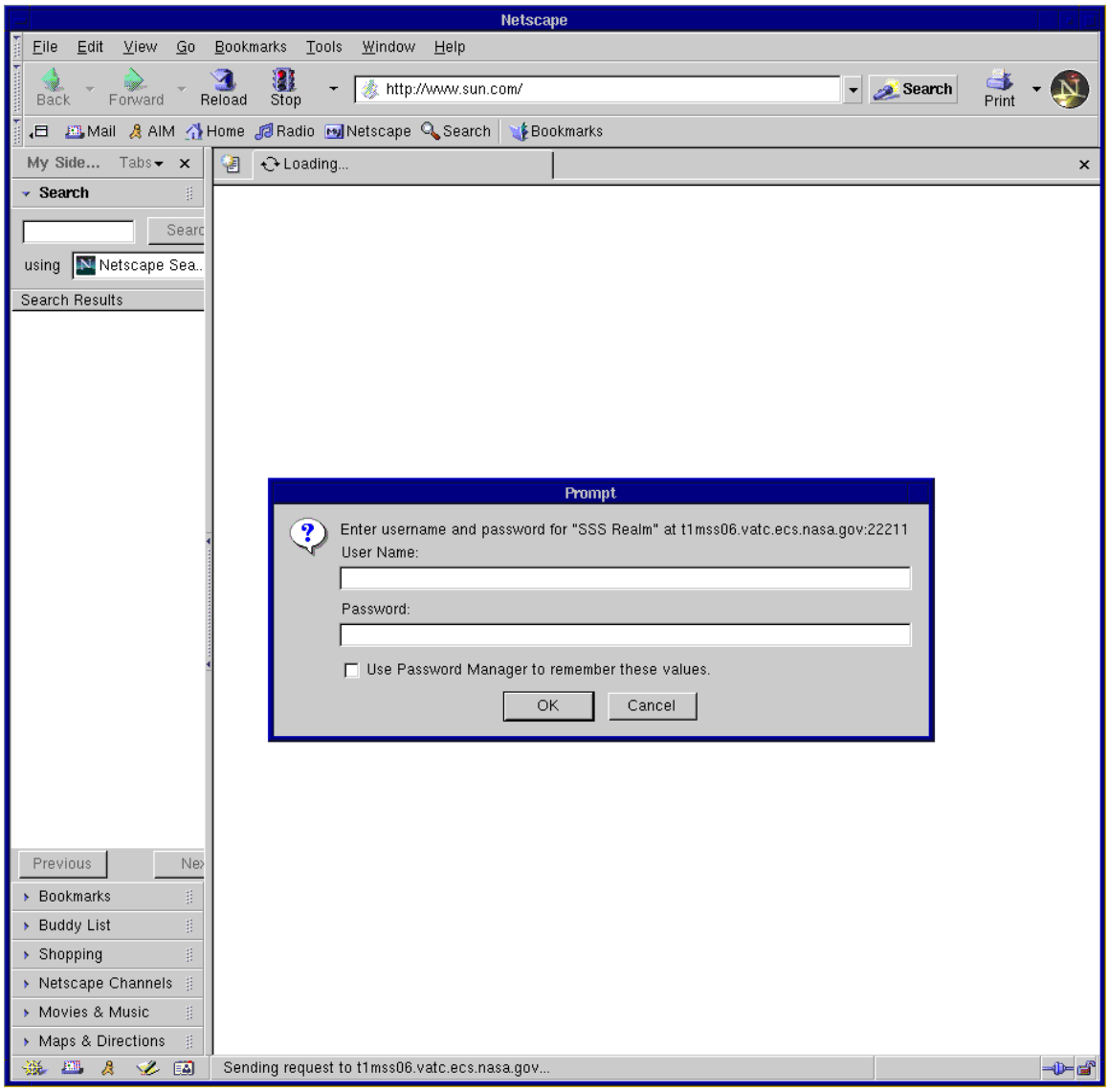

Figure 4.7.2.17-1. Login Dialog Box

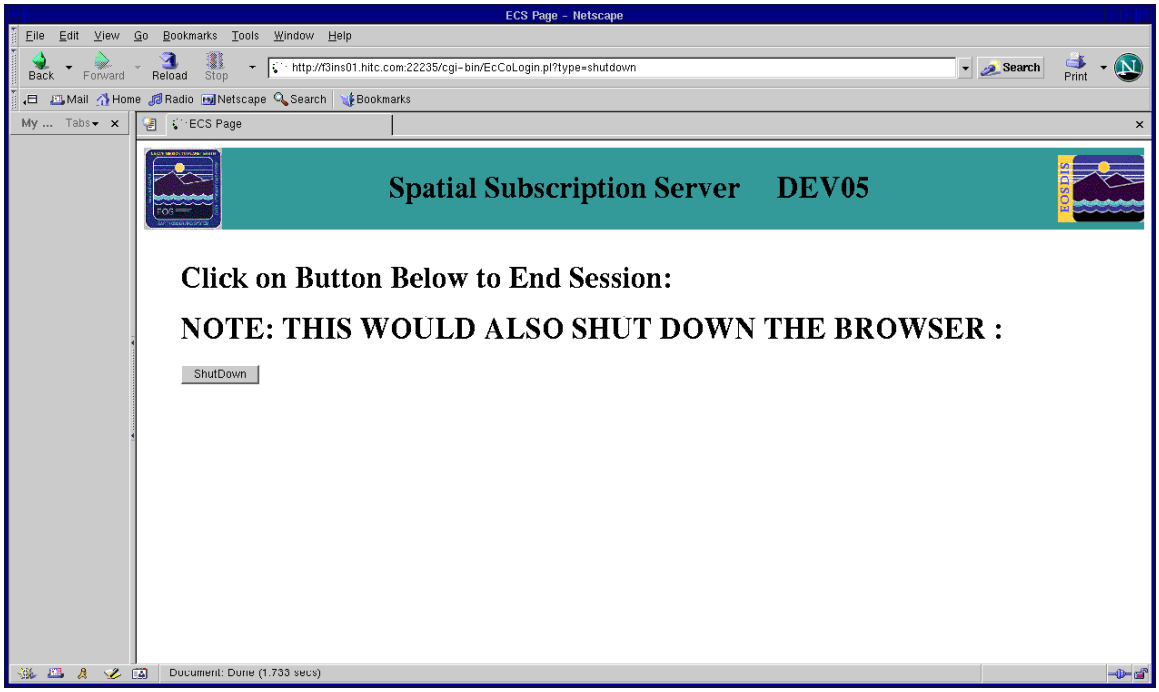

Figure 4.7.2.17-2. Shut Down Page

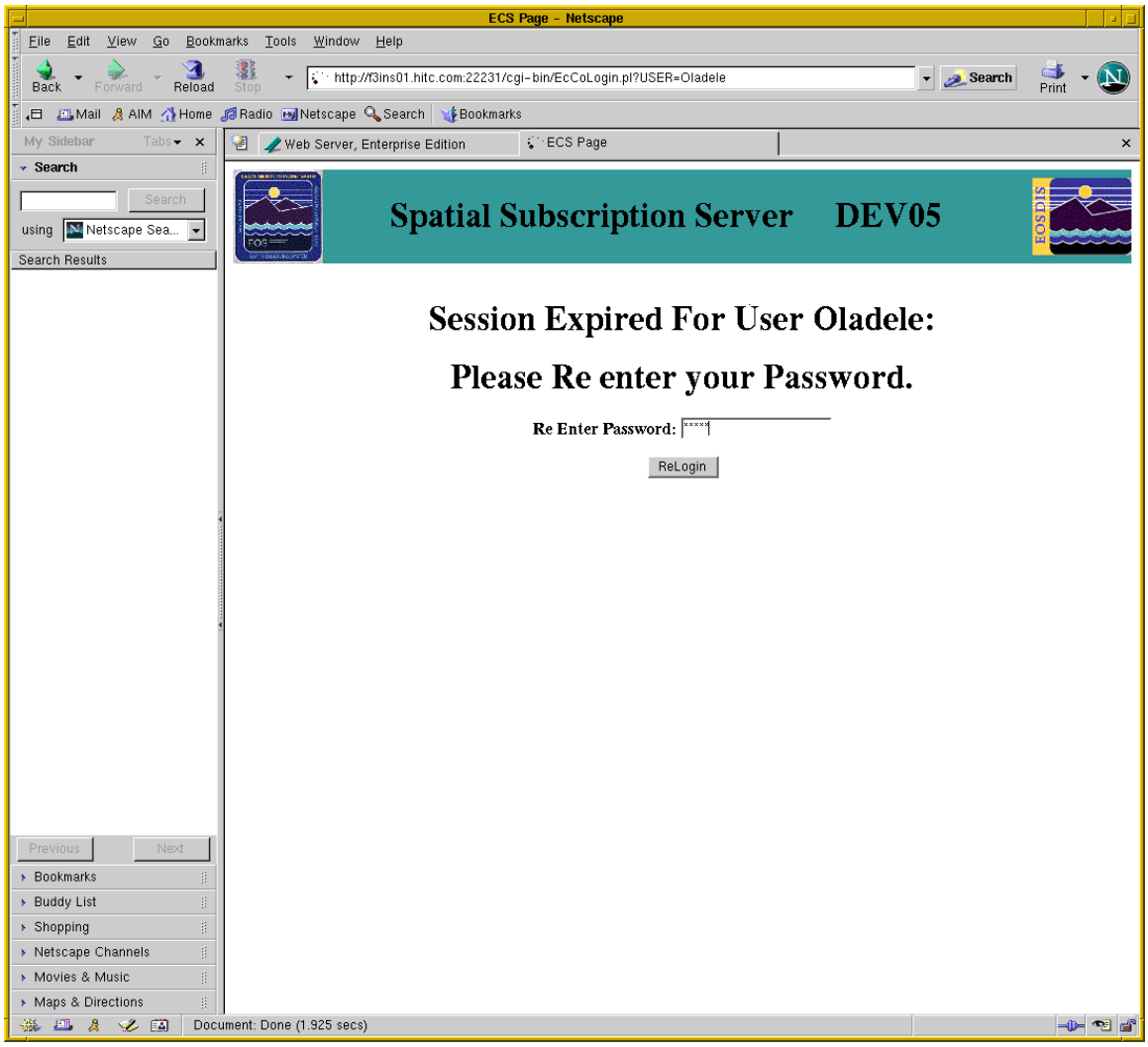

Figure 4.7.2.17-3. Session Timed-Out Page

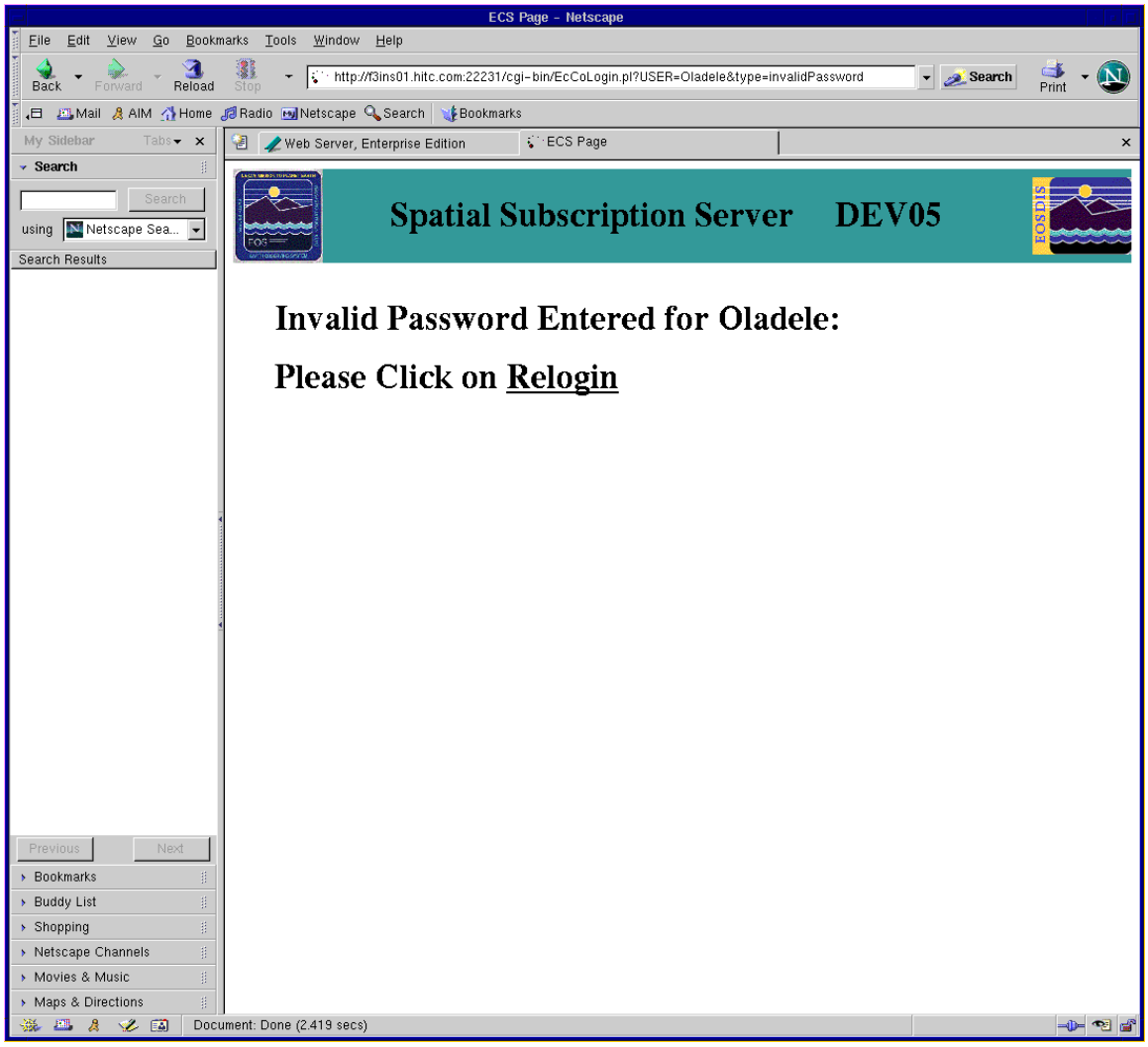

Figure 4.7.2.17-4. Invalid Password Entered by Operator

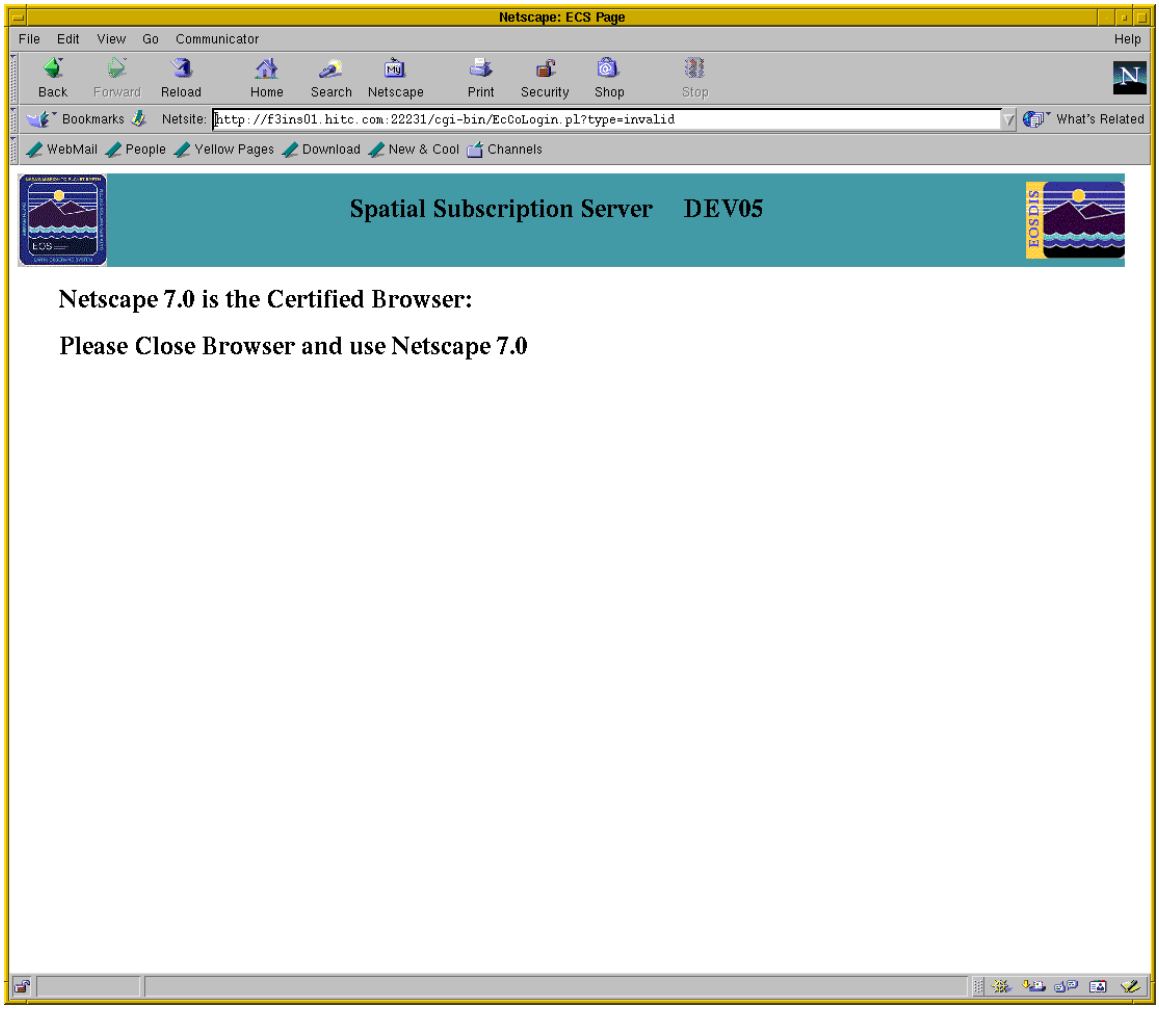

Figure 4.7.2.17-5. Invalid Client Browser

4.7.2.18 Required Operating Environment

This following environment is required for the NBSRV GUI to work properly.

- O/S requirements are Linux 2.x.

4.7.2.19 Interfaces and Data types

The NBSRV GUI exchanges data between the Web Browser and Sybase using Perl CGI and DBI Modules for the interface.

4.7.2.20 Databases

The NBSRV GUI accesses the NBSRV, Inventory, DataPool, OMS, and MSS databases.

4.7.2.21 Special Constraints

There are no special constraints to running the NBSRV GUI.

4.7.2.22 Outputs

There are no outputs from the NBSRV GUI except for status and error messages.

4.7.2.23 Events and Messages

The NBSRV GUI issues client side validation errors when adding or modifying a subscription. If the operator does not correct the validation errors the subscription will be rejected when the operator attempts to add or update the subscription. The NBSRV GUI writes status and error messages to the EcNbGUI.log file in the directory /usr/ecs/<MODE>/CUSTOM/logs.

4.7.2.24 Reports

The NBSRV GUI does not generate reports.

4.7.3 Spatial Subscription Server Command Line Interface

The Spatial Subscription Server (SSS) Command Line Interface (CLI) allows the user to add a new subscription, delete a subscription, update a subscription, view a subscription, or batch update subscriptions without using a GUI. The details of the subscription are contained in a text file.

The CLI is installed in the utilities directory for each mode. You must go to the appropriate mode directory to access the correct database for a particular mode.

4.7.3.1 Quick Start Using Spatial Subscription Server Command Line Interface

To execute the CLI, run the script EcNbSubscriptionCLIStart.

For Add, Delete, Update and View, this script takes three parameters: (1) the mode, (2) the function (Add, Delete, Update and View), and (3) a third parameter, which depends on the function in (2).

If the function selected was Delete or View, the third parameter must be the subscription number to be deleted or viewed. If the function selected was Add or Update, the third parameter must be the name of the text file containing the subscription information. This file is assumed to reside in the current directory unless expressed as a qualified pathname.

For BatchUpdate, this script takes four parameters: (1) the mode, (2) the function (BatchUpdate), (3) the match file, which contains “NAME=value” pair(s) that define the search criteria for subscriptions to be updated (this is an "AND" relationship), and (4) the update file, which contains “NAME=value” pair(s) that will replace the existing values associated with matching subscriptions.

4.7.3.1.1 Invoking Spatial Subscription Server from the Command Line Interface

The Spatial Subscription Server Command Line Interface (CLI) allows the user to add a new subscription, delete a subscription, update a subscription, view a subscription, or batch update a set of subscriptions without using a GUI.

To execute the Spatial Subscription Server from the command line interface (Add, Delete, Update, View):

EcNbSubscriptionCLIStart <mode> <function> <function dependent parameter>

Examples:

```
EcNbSubscriptionCLIStart   OPS   Add    MyNewSubscription.txt
EcNbSubscriptionCLIStart   TS1   Delete 5199
EcNbSubscriptionCLIStart   TS2   Update /home/daacUser/MyOldSubscription.txt
EcNbSubscriptionCLIStart   OPS   View   2355
```

To execute the Spatial Subscription Server from the command line interface (BatchUpdate):

EcNbSubscriptionCLIStart <mode> <function> <matchfile> <updatefile>

Example:

EcNbSubscriptionCLIStart OPS BatchUpdate matchFile updateFile

Notes:

(1) When adding a subscription, a new subscription number is assigned and returned as output to stdout.
(2) When deleting a subscription, the user is prompted to confirm the delete.
(3) When updating a subscription, the number of the subscription to be updated must appear within the text file containing the subscription data.
(4) When viewing a subscription, the output appears in a new file called sub.*nnn*.txt, where *nnn* refers to the subscription number. This file is created in the current directory.
(5) To save on typing when adding a subscription, it is helpful to start by viewing a subscription similar to the one being added, edit the resulting text file, and then submit that file as input to the Add command.
(6) Prior to updating a subscription, always view the subscription first and then make your changes in the resulting text file, submitting it as input to the Update command.
(7) Physical media distributions for subscriptions are now supported through the use of bundling orders. The simplest way to do this is to create a bundling order via the GUI and then "bundle" the subscription by specifying the bundling order ID (see table below). Alternatively, if a bundling order ID is not specified for a physical media distribution, a bundling order is automatically created for the subscription; however, in this case, all of the required information for the bundling order (such as shipping information) must be specified in the input file for the subscription.
(8) If the user updates a bundled subscription without altering the bundling order ID, the bundling order is updated along with the subscription.
(9) When batch updating a set of subscriptions, all matching subscription IDs will be displayed on the screen. After viewing all the subscription ids, the user is prompted to confirm whether or not to save the details of the matched subscriptions into a file. The user can choose his own output file name. If the user does not enter anything, then the default file name "matchSub.txt" will be used. Using the saved output file (matchSub.txt) as a reference, the user can always change the values back if any subscriptions are mistakenly updated.
(10) When batch updating subscriptions, the user is prompted to confirm or abort the batch update after reviewing the set of matched subscriptions retrieved.
(11) The user can batch update granule collections by batch updating the granule version ID.
(12) The user can batch delete granules by batch updating the status to "Canceled". The Spatial Subscription Server deletion driver will remove all the canceled subscriptions from the database after a configured amount of time.

(13) For batch updating subscriptions, the name and value pairs of the form "NAME=value" (one per line both in matchfile and updatefile) must be chosen from the list in Table 4.7.3-2 TextFile Contents (BatchUpdate List).Otherwise, an error will be raised and the match/update parameter function will not work for the unsupported "NAME"s.

(14) For batch update, the granule start date and granule end date, if used, must always appear together in the match file or update file. If either is used without the other, the SSS CLI will raise an error and will not process the batch update.

There is a log file called EcNbSubscriptionCLI.log in the logs directory for each mode. If your command did not appear to succeed, be sure to check the log file to see what went wrong.

The text file generated by the View command, or used as input to the Add or Update commands, consists of several lines of name and values pairs of the form "NAME=value", one per line. If you wish to introduce comments into your text file, you may do so by starting the line for the comment with the "#" character.

Table 4.7.3-1 shows all possibilities for rows in the text file. This table is intended for reference only. If you have never entered a subscription before, it is recommended that you start by entering a few subscriptions using the GUI. Then use the View command of the CLI to generate text files for these subscriptions. Modify these text files to serve as input for adding or updating subscriptions.

Table 4.7.3-2 shows all possibilities for rows in the match file or update file when batch updating a set of subscriptions.

Table 4.7.3-1. Text File Contents (1 of 5)

Name	Type	Mandatory	Description
SUBSCRIPTION	Integer	Yes for Update or View; ignored by Add	The subscription number.
USERNAME	Variable Character	Yes	The name of the owner of the subscription.
STATUS	Variable Character	Yes	The subscription status: Active, Inactive or Canceled.
EXPIRATION	Date/Time	No (defaults to one year from the current date if not specified)	The expiration date for the subscription.

Table 4.7.3-1. Text File Contents (2 of 5)

Name	Type	Mandatory	Description
ESDT_SHORT_NAME	Variable Character	Yes	The short name for the ESDT being subscribed to.
ESDT_VERSION	Integer	Yes	The version for the ESDT being subscribed to (e.g., 1, if version ID is 001).
EVENT_TYPE	Variable Character	Yes	The type of event being subscribed to: INSERT, DELETE, or UPDATEMETADATA.
NOTE: The next four lines should appear as a block in the text file. Up to five such blocks may be used.			
ATTRIBUTE_NAME	Variable Character	No	The name of a qualifying numeric attribute. Use this only for attributes of type Integer, Float, or Date/Time.
ATTRIBUTE_TYPE	Variable Character	No	The type of a qualifying attribute: Integer, Float, or Date/Time.
ATTRIBUTE_MIN_VALUE	Integer, Float, or Date/Time	No	The smallest acceptable value for this attribute.
ATTRIBUTE_MAX_VALUE	Integer, Float, or Date/Time	No	The largest acceptable value for this attribute.
NOTE: The next three lines should appear as a block in the text file. Up to five such blocks may be used.			
STRING_ATTRIBUTE_NAME	Variable Character	No	The name of a qualifying string attribute.
STRING_ATTRIBUTE_TYPE	Variable Character	No	This is always ‘varchar’.
STRING_ATTRIBUTE_VALUE	Variable Character	No	The value that this attribute must have in order to qualify.
NOTE: The next six lines should appear as a block in the text file. Only one such block may be used.			
SPATIAL_ATTRIBUTE_NAME	Variable Character	No	The name of a qualifying spatial attribute: GPolygonContainer, BoundingRectangle, or Nose.
SPATIAL_ATTRIBUTE_TYPE	Variable Character	No	The type of a qualifying spatial attribute: gpolygon, llbox, or PathBlock, respectively.
SPATIAL_VALUE_SOUTH	Float	No	The lower latitude value for the qualifying rectangle.
SPATIAL_VALUE_WEST	Float	No	The lower longitude value for the qualifying rectangle.
SPATIAL_VALUE_NORTH	Float	No	The upper latitude value for the qualifying rectangle.

Table 4.7.3-1. Text File Contents (3 of 5)

Name	Type	Mandatory	Description
SPATIAL_VALUE_EAST	Float	No	The upper longitude value for the qualifying rectangle.
NOTIFY_EMAIL_ADDRESS	Variable Character	No	The email address of the recipient if email notification is desired.
NOTIFY_USER_STRING	Variable Character	No	An optional user string to be included in the email.
NOTIFY_METADATA	Character	No	Indicates whether the email should include all metadata (Y) or just metadata associated with the subscription qualifiers (N).
ACQUIRE_USERNAME	Variable Character	No	The name of the user requesting an acquire.
ACQUIRE_USERSTRING	Variable Character	No	An optional string to be included in the distribution notice.
ACQUIRE_USER_FIRST_NAME	Variable Character	No	First name of user receiving the data.
ACQUIRE_USER_MIDDLE_INIT	Fixed Character	No	Middle initial of user receiving the data.
ACQUIRE_USER_LAST_NAME	Variable Character	No	Last name of user receiving the data.
ACQUIRE_USER_MAIL_ADDRESS_PHONE	Variable Character	No	Phone number of user receiving the data.
ACQUIRE_EMAIL_ADDRESS	Variable Character	No	The email address for “acquire” notification.
ACQUIRE_MEDIA_FORMAT	Variable Character	No	At present, this value should always be FILEFORMAT,
ACQUIRE_MEDIA_TYPE	Variable Character	No	The type of acquire: FtpPush or FtpPull.
ACQUIRE_PRIORITY	Variable Character	No	The distribution priority: VHIGH, HIGH, NORMAL, LOW, or XPRESS.
ACQUIRE_NOTIFY_TYPE	Variable Character	No	At present, this should always be MAIL.
ACQUIRE_FTP_USER	Variable Character	No	The FTP login name for an FTP push operation.
ACQUIRE_FTP_PASSWORD	Variable Character	No	The password for an FTP push operation.
ACQUIRE_FTP_HOST	Variable Character	No	The destination hostname for an FTP push operation.
ACQUIRE_FTP_DIR	Variable Character	No	The destination directory for an FTP push operation.
BUND_USER_NAME	Variable Character	Yes, if adding a new bundling order	If present, it must be the same as USERNAME.

Table 4.7.3-1. Text File Contents (4 of 5)

Name	Type	Mandatory	Description
BUND_ORDER_ID	Variable Character	No	The ID of the bundling order to be associated with this subscription. If present, a new subscription is associated with the existing bundling order. If absent, a new order in EcAcOrder is created using the information in BUND_MEDIA_TYPE, BUND_SHIP_PHONE, BUND_SHIP_CTRY, BUND_SHIP_STATE, BUND_SHIP_CITY, BUND_SHIP_FAX, BUND_SHIP_STREET_1, BUND_SHIP_STREET_2, BUND_SHIP_STREET_3, BUND_SHIP_ZIP, BUND_DIST_PRIOR. A new request in EcAcRequest is created using the above and some or all of BUND_FTP_HOST, BUND_FTP_PASSWORD, BUND_FTP_DIR, and BUND_FTP_USER.
BUND_MAX_BUND_AGE	Float	No	The number of hours which a bundle can have requests incorporated before it is expired.
BUND_MEDIA_TYPE	Variable Character	Yes, if adding a new bundling order	The media type for bundled requests.
BUND_MIN_GRAN_COUNT	Integer	No	The minimum number of granules a bundle can contain before it is distributed.
BUND_MIN_BUND_SIZE	Float	No	The minimum size in MB a bundle must attain before it is distributed.
BUND_EMAIL_NOTIFICATION_ADDR	Variable Character	No	Free text field to record the optional distribution parameter NOTIFY.
BUND_USER_STRING	Variable Character	No	Optional distribution option, which identifies a request.
BUND_DIST_PRIOR	Variable Character	No	Distribution priority of the bundling order.
BUND_FTP_HOST	Variable Character	No	The destination hostname for an FTP push operation.
BUND_FTP_PASSWORD	Variable Character	No	The FTP password for an FTP push operation.
BUND_FTP_DIR	Variable Character	No	The destination directory for an FTP push operation.
BUND_FTP_USER	Variable Character	No	The FTP login name for an FTP push operation.
BUND_SHIP_PHONE	Variable Character	No	The phone number for the user requesting the order.

Table 4.7.3-1. Text File Contents (5 of 5)

Name	Type	Mandatory	Description
BUND_SHIP_CTRY	Variable Character	No	The country the order should be shipped to.
BUND_SHIP_STATE	Variable Character	No	The state the order should be shipped to.
BUND_SHIP_CITY	Variable Character	No	The city the order should be shipped to.
BUND_SHIP_FAX	Variable Character	No	The fax number for the user requesting the order.
BUND_SHIP_STREET_1	Variable Character	No	The street address to which the order should shipped.
BUND_SHIP_STREET_2	Variable Character	No	The street address to which the order should shipped.
BUND_SHIP_STREET_3	Variable Character	No	The street address to which the order should shipped.
BUND_SHIP_ZIP	Variable Character	No	The zip code of address to which the order should be shipped.

Table 4.7.3-2. Text File Contents (BatchUpdate List) (1 of 2)

Name	Type	Description
USERNAME	Variable Character	The name of the subscription owner.
STATUS	Variable Character	The subscription status: Active, Inactive or Canceled.
START_DATE	Date/Time	The start date for the subscription
EXPIRATION	Date/Time	The expiration date for the subscription.
ESDT_SHORT_NAME	Variable Character	The short name for the ESDT being subscribed to. A wildcard can be used in the matchfile by including a subset of the ShortName for the value instead of full ShortName. Any ESDT ShortNames that include this subset as a string are considered a match.
ESDT_VERSION	Integer	The version for the ESDT being subscribed to (e.g., 1, if version ID is 001).
EVENT_TYPE	Variable Character	The type of event being subscribed to: INSERT, DELETE, or UPDATEMETADATA.
ACQUIRE_USERNAME	Variable Character	The name of the user requesting an acquire.
ACQUIRE_EMAIL_ADDRESS	Variable Character	The email address for “acquire” notification.
ACQUIRE_MEDIA_TYPE	Variable Character	The type of acquire: FtpPush, FtpPull or scp.

Table 4.7.3-2. Text File Contents (BatchUpdate List) (2 of 2)

Name	Type	Description
ACQUIRE_PRIORITY	Variable Character	The distribution priority: VHIGH, HIGH, NORMAL, LOW, or XPRESS.
ACQUIRE_FTP_USER	Variable Character	The FTP login name for an FTP push operation.
ACQUIRE_FTP_HOST	Variable Character	The destination hostname for an FTP push operation.
ACQUIRE_FTP_DIR	Variable Character	The destination directory for an FTP push operation.
NOTIFY_EMAIL_ADDRESS	Variable Character	The email address of the recipient if email notification is desired.
GRANULE_START_DATE	Date/Time	The start date of the granule.
GRANULE_END_DATE	Date/Time	The end date of the granule.

4.7.3.2 Spatial Subscription Server Command Line Interface Main Screen

The Spatial Subscription Server (NBSRV) Command Line Interface does not have a main screen. It is a command line interface only.

4.7.3.3 Required Operating Environment

O/S requirements are Linux 2.x platforms.

4.7.3.4 Databases

The Spatial Subscription Server CLI accesses the Spatial Subscription Server, Inventory, and OMS databases.

4.7.3.5 Special Constraints

There are no special constraints to running the Spatial Subscription CLI.

4.7.3.6 Outputs

In addition to status and error messages, there will be an output file called sub.*nnn*.txt (where *nnn* refers to the subscription number) when viewing a subscription.

There also will be an output file for matched subscriptions when using “BatchUpdate” function if the user chooses to save the information.

4.7.3.7 Event and Error Messages

The Spatial Subscription Server CLI issues validation errors when adding or updating a subscription. If the operator does not correct the validation errors, the subscription is rejected when the operator attempts to add or update the subscription. The SSS CLI writes status and error messages to the EcNbSubscriptionCLI.log file in the directory /usr/ecs/<MODE>/CUSTOM/logs.

4.7.3.8 Reports

The SSS CLI does not generate reports.

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4.7.4 Bulk Metadata Generation Tool

The Bulk Metadata Generation Tool (BMGT) is a utility which exports metadata for granules and collections in the ECS archive to the EOS ClearingHouse (ECHO). This metadata is utilized by ECHO to allow users to search for and order data from the ECS archive. BMGT is used to keep ECHO in sync with ECS archive holdings. BMGT can be run in five different ways. Four of those ways, "AUTOMATIC", "MANUAL", "CORRECTIVE", and "VERIFICATION" are covered in this section. "CLEANUP" BMGT is covered in the DataPool Cleanup utility section of the 609 (Section 4.8.6). "VERIFICATION" actually covers three export types itself, "VER_LONG" , "VER_SHORT", and "VER_INC".

In any of its five modes of use, BMGT exports metadata in "packages". A package is simply a zip file containing multiple XML metadata files, along with zero or more BROWSE data files, that is exported and ingested into ECHO as a whole. The zip file contains at the least a "manifest" file which contains a list of the files, if any, which are contained within the package. Each package has a unique file name, and optionally a unique and sequential packageId.

4.7.4.1 BMGT Automatic Preprocessor

The BMGT Automatic Preprocessor (BAPP) 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 such intervals would add up to an entire day. 5 hours would not). The BAPP 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. If the BAPP is run more than once per interval, it will simply return without doing any work if there is not an unexported elapsed time period to export. Each day, when the BAPP is run for the first time, it populates the cycles for the entire day (and any preceding days where it was not run). Once the cycles are populated, and in subsequent runs throughout the day, the BAPP checks these pre-populated cycles to determine if any of them are eligible to be generated (i.e. the time span of the cycle has passed and it has not been generated yet). For any such cycle that the BAPP finds, it will select and mark changes to the inventory which have occurred during the cycle. It will then mark the cycle for generation by the BMGT Generator server. The BAPP will ensure consistency between the packages that it creates, in other words, it will not export the same metadata change more than once, and will not export metadata that conflicts with metadata that it exported previously. For this reason, the BAPP can be run as a Linux cron job, and allowed to proceed without user interaction. If an error condition arises, and operator intervention is required, an email will be sent to a configured address. The operator can monitor the state of metadata export, and set configuration parameters (as explained in the BMGT configuration section), using the BMGT GUI (See Section 4.7.5).

4.7.4.1.1 BMGT Automatic Preprocessor Usage

EcBmBMGTAutoStart <MODE>

BMGT Automatic Preprocessor usage

4.7.4.2 BMGT Manual Preprocessor

The BMGT Manual Preprocessor (BMPP) provides another interface through which the operator can initiate an export of ECS metadata through BMGT. Unlike an '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/or collections. An operator is able to specify which metadata products are desired, or can request the generation of them all. An operator is also able to use the Manual Preprocessor to re-run a previous AUTOMATIC export cycle which has failed or export the contents of the reExport Queue. The operator is also able to use the manual Preprocessor to initiate one of three types of "Verification" exports which will re export metadata which has already been exported to verify that there are no discrepancies between ECS and ECHO holdings. Once the Manual Preprocessor is run (in any of its modes of operation), the desired products will be created by the BMGT Generator server. These products can be exported to ECHO or simply written to the file system, depending on what that operator specifies. The Manual Preprocessor is meant primarily for use when errors occur in the normal automatic processing flow, or when DAAC Operations would like to verify the consistency of ECS and ECHO holdings either routinely or due to some known issue. It can also be used for any other situations in which the normal, automatic export of BMGT metadata is not sufficient, such as exporting historical metadata. The Manual Preprocessor does not prevent multiple exports of the same metadata as Automatic BMGT does. For this reason, DAAC Operations Staff should inform ECHO Staff before using the Manual Preprocessor for export to ECHO, and exercise discretion as to what is exported in a manual cycle.

4.7.4.2.1 Using the BMGT Manual Preprocessor

The BMGT Manual Preprocessor is executed via a start script (EcBmBMGTManualStart.pl, located in the /usr/ecs/<mode>/CUSTOM/utilities directory), which takes one or more parameters. Tables 4.7.4-1 through 4.7.4-11 provide a description of these parameters.

BMPP Guidelines:

- All parameters are optional except **--mode**, but at least one additional parameter must be specified.
- If another BMGT cycle is currently running, the operator will be prompted as to whether they would like to continue, or try again later. If **–x** is specified, and there is an AUTOMATIC cycle currently executing, the Preprocessor will exit. This behavior can be modified using the **--noprompt**, **--force**, and **--retry** options.
- Except when **--help, --corrective, --incremental** or **--regenerate** is used, at least one option from SELECTION CRITERIA must be specified.

- If no PRODUCT OPTIONS are specified, the preprocessor will by default generate all products.

Table 4.7.4-1. General Options

Option	Notes	Description
--help | -h	Overrides all other options	Display a detailed help page.
--mode <*MODE*>	Required	Run in ECS mode <*MODE*>.

Table 4.7.4-2. Generated Product Options

Option	Notes	Description
--metg	Requires one or more SELECTION CRITERIA options, and/or one of the verification run type options (**--short, --long, --incremental)**	Generate an ECSMETG (granule metadata) product.
--metc	requires **--collections** or **--collectionfile**, and/or one of the verification run type options (**--short, --long, --incremental)**	Generate an ECSMETC (collection metadata) product.
--bbr	requires one or more SELECTION CRITERIA options or --short	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. If --short is specified, then the generated product will instead be a list of browse IDs organized by which collections' granules they are linked to, for purposes of verifying these linkages with ECHO.
--url	requires one or more SELECTION CRITERIA options	Generate a BULKURL (DataPool public URL) product.

Table 4.7.4-3. Run Type Options

Option	Notes	Description
--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 logically or physically deleted from the archive, it must be explicitly specified (with the **--granules** or **--granulefile** option) by geoid rather than dbid.
--short| --ver_short | --vs		Generate a short form ("VER_SHORT") verification package. A short form package contains only the identifiers for selected collections/granules, and is used for performing existance checks with ECHO. Any of **--metg**, **--metc**, **--bbr** may be specified, but only one of them at a time. If **--metg** or **--bbr** is specified, then **-g** or **-gf** is not allowed. If **--metc** is specified, then **-c** and **-cf**, as well as **-p** and **-pf** are not allowed. **-c** and **-cf** are allowed with **-metg** and **-bbr**. **-p** and **-pf** are also allowed, but not recommended as they would likely result in packages that are very large and this is not desirable.
--long | --ver_long | --vl		Generate a long form ("VER_LONG") verification package. A long form package contains the full metadata for selected collections/granules, and is used for performing full metadata comparison with ECHO. **--metg** and/or **--metg** may be specified with **--long**, but if **--metg** is specified, then granules and/or collections must be specified with the **-g**,b-gf,**-c**, or **-cf** options. Note that there is no BBR long form product, so **--bbr** will be ignored if it accompanies **--long**.
--incremental | --ver_inc | --inc | --i		Initiate an incremental ("VER_INC") verification export, in which the granules to be exported as long form metadata are selected automatically based on an algorithm that exports granule verification in batches for eventual total coverage. An optional list of collections to verify may be specified.

The following options can be used to specify the collections and/or granules for which metadata export is desired. At least one of these options must be specified, except when the **--regenerate** or **--corrective** option is being used. No metadata will be generated unless the associated collection is defined in the groups config file, and has CollExport set to 'Y'. No granule level metadata will be generated unless the collection also has GranExport set to Y.

The options below allow specifying granules by dbid or geoid, and also specifying collections by shortname/versionid or group name. Each of these options can take a comma separated (with no spaces) list on the command line, or a file containing one or more values (separated by newlines

or whitespace). Using an input file is strongly recommended if the list contains more than 2 or 3 items. If one or more collections are specified (by shortname/versionId or group), a start and/or end date may be specified to limit granules in those collections for which granule metadata (if any) is generated by insert or lastupdate time (depending on whether ***--lastupdate*** is specified).

If no granules or collections match the specified criteria, and are eligible for export, then an empty package will be generated, and marked as an error. If **--nosequence** or **--noexport** is not specified, then a SYNC package will be generated and exported to ECHO in response to such an error (the SYNC package is necessary in order to keep ECHO and ECS packageIds synchronized).

Table 4.7.4-4. Item Selection Options (1 of 2)

Option	Notes	Description
--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.
--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].

Table 4.7.4-4. Item Selection Options (2 of 2)

Option	Notes	Description
--lastupdate	requires **--endtime** and/or **--starttime**	Causes the **--starttime** and **--endtime** values to be used to select granules based on lastupdate rather than insert time.

Table 4.7.4-5. Output Options

Option	Notes	Description
--noexport | --ne	implies **--nosequence**	Do not export the generated package to ECHO, and do not assign it a sequence number.
--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

Table 4.7.4-6. Concurrency Options

Option	Notes	Description
--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
--force | **-f**		Ignore currently executing export cycles and run regardless. Implies noprompt. Useful when calling manual processor from a script

Table 4.7.4-7. Error Recovery Options

Option	Notes	Description
--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 | **-v**		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.

Examples

Request a manual BMGT package containing all relevant granules and collection metadata for all granules in all collections in the file ./collections. The package will have no sequence number and will be ingested into ECS, but not exported to ECHO.

EcBmBMGTManualStart.pl –mode <MODE> --metg --metc –noexport –nosequence –collectionfile ./collections

Request the regeneration of a previous AUTOMATIC cycle with packageId 122, but only for ingest into ECS, and not export to ECHO. A new package will be generated with the same package Id, but a new cycleId. All events during the specified cycle will be exported in the new cycle.

EcBmBMGTManualStart.pl –mode <MODE> --regenerate 122 --noexport

Request the generation of a BMGT package containing the METG, METC, and URL metadata for the granules and collections specified in the command options. In addition, METG and URL metadata will be generated for the granules that belong to the specified collections and were inserted into the inventory between the specified start and end dates.

EcBmBMGTManualStart.pl –mode <MODE> --metg --metc –url –collections AST_L1A.001,MOD29P1N.001,MOD29P1D.002 –granules 213388,213400,213402,212100,213395 –starttime "2006-02-21 14:07:00" –endtime "2008-01-18 09:54:22"

Request the export of the contents of the reExport Queue to correct errors that were returned from ECHO for previous packages. Output a report of the contents of the corrective export to a file in the specified directory.

EcBmBMGTManualStart.pl –mode <MODE> --corrective –report –outdir ./BmgtReports

Request the export of a listing of all granule in the specified collections to be compared against the ECHO holdings for the collections.

EcBmBMGTManualStart.pl --mode <MODE> --short --metg -c MOD29P1D.001, MYD29P1N.001

Request the export of full granule and collection metadata for all collections in the group 'MOLT' and all of the granules in those collections which have a lastUpdate value within the provided boundaries. This metadata will be compared against that which ECHO already has to find any discrepancies.

EcBmBMGTManualStart.pl --mode <MODE> --long --metg --metc --p MOLT --starttime "2006-02-21 14:07:00" --endtime "2008-01-18 09:54:22" --lastupdate

Request the export of full granule metadata for a set of granules determined by the BMGT based on a configured time interval, max number of granules per package, and the lastUpdate of the granules. This 'incremental' package will constitute a set of the least recently updated granules which have not yet been verified with ECHO since they were updated.

EcBmBMGTManualStart.pl --mode <MODE> --incremental

NOTE: it is recommended that incremental mode be set up as a cron job to run on a regular interval. If this is done, use the --force option to override any prompts which would require user response.

4.7.4.3 BMGT ReExport Queue Utility

When processing Ingest Summary Reports from ECHO, the BMGT system will handle some reported errors by enqueing 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. This functionality is covered in Section 4.7.4.2.1.

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 or browse). The queue report or summary is printed to a file specified by the user (or to the terminal if none is specified). The utility also offers the ability to delete one or more actions from the queue, by providing dbIDs, cycleIds, or geoids on the command line or in a file. Report output can be filtered by collection, original cycleId, and/or group, which can be specified on the command line, or in a file.

4.7.4.3.1 Using the BMGT ReExport Queue Utility

The ReExportQueue utility will be called as shown below:

EcBmBMGTReExportQueue.pl <MODE> [COMMAND] [OPTIONS]

[COMMAND] is one of the commands listed in Table 4.7.4-8 below, and [OPTIONS] is zero or more of the options listed in Table 4.7.4-9.

Table 4.7.4-8. 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. -delete requires at least one of --cycleids, --cycleidfile, **--ids** or **--idfile**, but will accept more than one.

Table 4.7.4-9. ReExport Queue Utility Options (1 of 2)

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.

Table 4.7.4-9. ReExport Queue Utility Options (2 of 2)

Parameter Name	Comments
--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.
--cycleids | -y <cycleid1,...>	A list of **--cycleids**. Combined with report, this option will cause the produced report to contain only those queued items which are were added due to one of the listed cycles. Combined with delete, this option will result in the items which were enqueued due to the listed cycles being removed from the queue. IDs must be separated by commas with no space between them, or they will be seen as separate, unrecognized arguments. **--cycleids** may be combined with **--cycleidfile**.
--cycleidfile | -l <cycleidfile>	A file containing a list of **--cycleids**, separated by whitespace or commas. More than one **--cycleidfile** may be given. **--cycleidfile** may be combined with **--cycleids**.

Examples

Print a report of all contents of the ReExport Queue to standard output.

EcBmBMGTReExportQueue.pl DEV03 --report

```
Granule ID       Collection   Type Group        Cycle ID         ECHO Error Response
---------------- ------------ ---- ------------ ---------------- ------------------------------
----------
           21155 MB2LME.002   SC   MISR                    1335 BROWSE_NOT_EXISTS
           22743 MISBR.005    SC   MISR                    1335 BROWSE_NOT_EXISTS
           22718 MISBR.005    SC   MISR                    1325 BROWSE_NOT_EXISTS
```

Print a report of all contents of the ReExport Queue which belong to collection MB2LME.002 to standard output.

EcBmBMGTReExportQueue.pl DEV03 --report --collection MB2LME.002

```
Granule ID       Collection   Type Group        Cycle ID         ECHO Error Response
---------------- ------------ ---- ------------ ---------------- ------------------------------
----------
           21155 MB2LME.002   SC   MISR                     1335 BROWSE_NOT_EXISTS
```

Print a report of all contents of the ReExport Queue which belong to the MOLT group to standard output.

EcBmBMGTReExportQueue.pl DEV03 --report --group MOLT

```
The re-export queue is empty.
```

Print a statistical summary of all contents of the ReExport Queue to standard output.

EcBmBMGTReExportQueue.pl DEV03 --stat

```
Count            Collection   Type Group        ECHO Error Response
---------------- ------------ ---- ------------ ----------------------------------------
               1 MB2LME.002   SC   MISR         BROWSE_NOT_EXISTS
               2 MISBR.005    SC   MISR         BROWSE_NOT_EXISTS

Associated Browse
Parent Count     Parent Coll. Browse Coll. ECHO Error Response
---------------- ------------ ------------ ----------------------------------------
```

Delete granule with dbID 21155 from the ReExport Queue.

EcBmBMGTReExportQueue.pl DEV03 --delete --ids 21155

```
Attempting to delete 1 granule from the re-export queue.
```

Write to a file in /home/cmshared a report of all contents of the ReExport Queue.

EcBmBMGTReExportQueue.pl DEV03 --report --outdir /home/cmshared/

```
Report written to /home/cmshared/bmgt-reexport-queue-report-20081203111502.txt
```

4.7.4.4 BMGT Configuration

Configuration of the BMGT is stored in a text file and a database table that are shared by all of the BMGT components.

4.7.4.4.1 EcBmBMGT.properties

This file is located in /usr/ecs/<MODE>/cfg. It contains low level configuration parameters, such as database connection information and configuration of a proxy (if needed) which is used as a gateway to the external internet for use during FTP.

Table 4.7.4-10. BMGT Configuration File Parameters (1 of 2)

Parameter Name	Description
PGM_ID	Not used by manual Preprocessor
LOG_LEVEL	Verbosity level of logs.
DATABASE_DRIVER	Database driver for Java BMGT servers. Not used by manual preprocessor.
DATABASE_HOST	The host where the SQL server is located.
DATABASE_PORT	The database port, used by the Java BMGT servers.
DATABASE_USER	The BMGT database user
DATABASE_PWSEED	The seed for decoding the database password.
DATABASE_DPLNAME	The name of the Data Pool database.
DATABASE_DPLPOOLSIZE	The size to use for the Data Pool database connection pool. (not used by manual pre processor)
DATABASE_INVNAME	The name of the Inventory database.
DATABASE_INVPOOLSIZE	The size to use for the Inventory database connection pool. (not used by manual pre processor)
FTP_TIMEOUT_USECS	The FTP timeout interval used by the Export server. This value (in milliseconds) determined how long BMGT will try to push or pull a file before giving up.
DPL_URL_ROOT	The root of all DataPool URLs. This must include both the protocol (most likely 'ftp://') and the fully qualified host name. This host should be accessible from outside the firewall. The default port for the given protocol is assumed unless a different port is specified after the hostname as ':<portnum>'. Entering the URL specified for this value into a browser should bring up the root of the anonymous FTP server. An example value is : "`ftp://e4ftl01u.ecs.nasa.gov`"

Table 4.7.4-10. BMGT Configuration File Parameters (2 of 2)

Parameter Name	Description
SITE_ID	The three letter site identifier
FTP_PROXY_HOST_NAME	The hostname of the ftp proxy server that should be used to FTP to the ECHO site. If this value is not provided, or is an empty string, no proxy server will be used.
FTP_PROXY_USERNAME	The login user name to the ftp proxy server. This value is only needed if the FTP_PROXY_SERVER configuration parameter is set.
FTP_PROXY_PASSWORD	The login password for the ftp proxy server. This value may only be needed if the FTP_PROXY_SERVER configuration parameter is set. If no password is required, this value may be omitted, of left empty.
BCP_FILE_DIR	The location to put a temporary file holding granule IDs to be BCPed in to the database for manual export initiation.

4.7.4.4.2 DsMdBmgtConfig Table

The majority of the configuration parameters for the BMGT system are set in the DsMdBmgtConfig table of the Inventory database. Below is a subset of the parameters in that table. There are additional parameters which are not included below, but which are not directly relevant to the BAPP and BMPP (they are used by the down stream BMGT servers). The parameters below are configured using the BMGT GUI (Section 4.7.5).

Table 4.7.4-11. DsMdBmgtConfig Parameters (1 of 2)

Parameter Name	Used By	Description
AUTOMATIC_CYCLE_LENGTH_HRS	AUTO	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
AUTOMATIC_CYCLE_RETRY_INTERVAL_MINS	AUTO	The time interval, measured in minutes, between retries of a failed automatic export cycle. Recommend values in the range 30 to 60 minutes.
GROUPS_CONFIG_FILE	BOTH	The absolute path of the ESDT group configuration file.
MAX_DATA_SKIPPED	AUTO	The maximum number of data-related errors that the BMGT may encounter when generating an export package before the package will fail.
MAX_SIZE_ECSBBR	BOTH	The maximum number of browse inserts/deletes allowed for ECSBBR files. Export products larger than this will have their output split into multiple files.
MAX_SIZE_ECSMETG_KB	BOTH	The maximum size for ECSMETG files, measure in Kb. Export products larger than this will have their output split into multiple files.

Table 4.7.4-11. DsMdBmgtConfig Parameters (2 of 2)

Parameter Name	Used By	Description
MAX_SIZE_ECSMETU	BOTH	The maximum number of updated granules that may be allowed in a single ECSMETU file. Export products larger than this will have their output split into multiple files. This value also limits the size of URL files.
NOTIFICATION_EMAIL_ADDR	BOTH	Email address(es) that will be used to send alerts or error notifications to. Multiple addresses may be provided by separating them with whitespace.
PRODUCT_ROOT_DIRECTORY	BOTH	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.
INCREMENTAL_INTERVAL	MANUAL	The lastUpdate interval in days for a BMGT incremental verification package. This is the maximum range of lastUpdate times in a single incremental verification package.
MAX_VERIFICATION_GRANULES	MANUAL	The maximum number of granules that can be exported in a BMGT long form verification package. The user will be prompted if this maximum will be exceeded and given the choice of overriding it.
REEXPORT_THRESHOLD	MANUAL	The number of reexport actions which will cause an alert email to be sent to the operator.
VER_REPAIRED_ITEM_LIST_DIR	MANUAL	The directory to put a list granules which received verification errors, but have been repaired. If this value is left blank, then no such lists will be created. If it is not blank, then for each long for verification export for which there are errors which have been repaired by ECHO, a file will be written.

4.7.4.4.5 Group Configuration File

The BMGT group config file is an XML file containing the definition of BMGT groups, and specifying which ECS collections belong to each group. Any collection for which BMGT output is desired must be included in this file. In fact it is recommended to have all collections which are in use at a DAAC included in this file. It is also recommended, but not necessary, to use the same groupings that are used in the DataPool.

The format of this file is similar to that used in previous versions of BMGT, except that for each collection, the file contains 'GranExport' and 'CollExport' parameters, in addition to ShortName and VersionID. These values determine whether the specified collection will have collection, and/or granule metadata (if it exists) exported by a BMGT cycle. These parameters apply to all types of export cycles. The location of the group config file is determined by the value of 'GROUPS_CONFIG_FILE' in the database, as described in the table above. Below is an example of a simple groups config file:

The Group config file contains a root element called “groupConfigFile”. This element can contain multiple “group” elements which are each defined like this:

- **group**
  - **name: The name of the group.**
  - **ESDT**: A collection to be included in the group.
    - **ShortName**: The shortname of the collection.
    - **VersionID**: The version ID of the collection.
    - **CollExport**: If Y, BMGT will export collection metadata for this collection.
    - **GranExport**: If Y, BMGT will export granule metadata for granules in this collection.
  - **…**

The group config file is read whenever the BAPP or BMPP is run. During an automatic cycle, its contents are loaded into a database table, and are compared to the configuration which is already saved there. If a change is detected, the following actions are performed:

a) CollExport goes from N to Y: Collection metadata will be exported in this cycle, regardless of collection insert time.
b) GranExport goes from N to Y: Metadata will be exported in this cycle for all granules in this collection, regardless of insert time.
c) CollExport and GranExport go from N to Y: Same as (a) for the current cycle, same as (b) for next cycle.
d) GranExport or CollExport goes from Y to N: THIS SHOULD NOT BE DONE UNTIL AFTER THE COLLECTION IS DELETED.

A Manual or Corrective cycle does not check for changes, but uses the current values in the group config file.

Figure 4.7.4-1 shows the sample groups configuration file.

```
<?xml version="1.0"?>
<groupConfigFile>
   <group>
      <name>ASTT1</name>
      <ESDT>
         <ShortName>AST_L1B</ShortName>
         <VersionID>1</VersionID>
         <CollExport>Y</CollExport>
         <GranExport>Y</GranExport>
      </ESDT>
       …
   </group>
   …
</groupConfigFile>
```

Figure 4.7.4-1. Sample Groups Config File

4.7.4.5 Required Operating Environment

BMGT runs on a Linux platform.

4.7.4.6 Interfaces and Data Types

Table 4.7.4-12 lists the supporting products that this tool depends upon in order to function properly.

Table 4.7.4-12. Interface Protocols

Product Dependency	Protocols Used	Comments
Data Pool database	SQL	Via SQL server machines
Inventory database	SQL	Via SQL server machines
Java JRE version 1.6.0_02	Linux system call	
Java jConnect	Java Library	
Perl Interpreter	Linux system call	

4.7.4.7 Outputs

The Manual and Automatic Preprocessors do not generate output files themselves. They produce output into the ECS Inventory and DataPool databases which causes output files to be created through the BMGT Generator. This output is a set of XML files which follow the ECS BMGT DTD (BMGTUpdateMetadata.dtd). These XML files are collected into a single zip file. Output may also include Browse files which are not packaged in the zip file.

4.7.4.8 Event and Error Messages

Error messages will be displayed to either the log file or standard output, depending on at what point during execution they occur (see Section 4.7.4.9).

4.7.4.9 Logs

The Manual preprocessor writes to a log file named EcBmBMGTManual.log in the /usr/ecs/<mode>/CUSTOM/logs directory. This log file contains the original call to the preprocessor, including all arguments, as well as all database stored procedure calls, any errors that occur, and other pertinent information. Fatal errors are printed both to the log and to standard output. Errors that occur before the log is opened will be printed to standard output only. The ReExport Queue utility writes to a similar log at EcBmBMGTReExportQueue.log in the same log directory.

The Automatic Preprocessor and the remaining BMGT components use a common logging library. The verbosity of this logging can be tuned by the LOG_LEVEL configuration parameter (via the BMGT GUI (Section 4.7.5)). At the highest verbosity, the log will contain all stored procedure calls, the entrance and exit to/from many methods, and any errors or exceptions which occur. Any errors in the initial start up of a BMGT component (e.g. the component is already running) will be displayed on the standard output.

4.7.4.10 Recovery

4.7.4.10.1 Manual Preprocessor

There is no manual recovery required for the BMPP. If the BMPP is killed by a user interrupt, or encounters a fatal error, it will move the state of the cycle (if any) it has created to CANCELLED, and mark it for cleanup by the BMGT Monitor server. The operator is free to try the same command again once the cause of the failure is corrected, creating a new cycle, but there is no need, or ability to recover the failed cycle.

4.7.4.10.2 Automatic Preprocessor

If the BAPP fails to complete while in the middle of preprocessing a cycle, recovery is as simple as rerunning the BAPP. Like the BMGT servers, it will not change the state of the cycle until it has completed. A subsequent run will retrieve the same cycle and do all of the necessary preprocessing as if it had not been done before.

4.7.4.10.3 BMGT Servers

The BMGT servers (Generator, Packager, Exporter, and Monitor) poll the Inventory database for packages in a particular state, perform work on them, and then change the state of the package for the next server to pick up. If a server dies while doing work on a package, the package will remain in its current state, and be picked up again when the server is restarted. No operator interaction is required, other than fixing whatever problem may have caused the server to die.

If an error causes a package to fail, but does not cause the server to crash, the response will depend on the type of package. All automatic packages are required to complete, so they will be retried ad infinitum until successfully generated and exported. Retries are performed automatically at an interval defined by the configuration parameter "AUTOMATIC_CYCLE_RETRY_INTERVAL_MINS", and do not require re-running the BAPP. If desired, an automatic package can be re-run prior to the retry interval passing, by using the "--regenerate" (See Section 4.7.4.2.1) option of the BMPP. If a manual package fails, it will not be retried, and will be put in a failed state where it will be cleaned up. If the manual package, however, has a packageId associated with it (i.e. **--nosequence** was not specified), an empty "SYNC" package will be exported to ECHO to replace the failed manual package in the package sequence. If a cleanup package fails, it will be treated the same as an automatic package, except that it cannot be regenerated prematurely by the BMPP.

4.7.4.11 Sybase Error Handling

All BMGT components will attempt to deal with Sybase errors gracefully, usually by retrying the query. If a query cannot be completed after several retries, BMGT will try to put the current package into an appropriate state to reflect the error. If this fails, then the component will either exit, or continue to output error text to the log files. All Sybase errors will be reported to the log of the BMGT component in which the error occurred.

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4.7.5 Bulk Metadata Generation Tool GUI

The Bulk Metadata Generation Tool (BMGT) GUI is a web-based interface that allows the operator to monitor the export of BMGT packages (in Automatic, Manual, Corrective, Verification, or Cleanup mode). The primary purpose of the GUI is to provide the operator with a list of recent packages and their detailed information. In addition, the operator can also use it to configure various BMGT tuning parameters, such as the length of an Automatic cycle. Since it is possible for errors to occur during the FTP process, the GUI is also able to display the status of BMGT FTP service and the global FTP alerts.

In the BMGT GUI, each user session is controlled by a session timeout value (in minutes) defined in the "/usr/ecs/OPS/COTS/tomcat_<version>/webapps/BmgtGui_<MODE>/WEB-INF/web.xml" file. If the GUI page's idle time reaches the timeout value (by default set to 30 minutes), the session will be expired and the GUI will be automatically redirected to the login page.

The BMGT GUI follows the look and feel of the DPL Ingest GUI, however, with only a subset of that GUI's functionality implemented. Specifically,

- context-sensitive help is not supported
- automatic refresh is not provided
- user access privilege is defined simply as "Administrator" (allowed to configure global tuning parameters) or "Operator" (only allowed to view the parameters).

4.7.5.1 Login Page

The Login Page (shown in Figure 4.7.5-1) allows the operator to log in either as the Administrator (with the ability to configure the global tuning parameters) or as an Operator (view only, no editing privileges). The Administrator login requires a password, while the Operator one does not.

To login as Administrator, the user needs to perform the following steps:

1. enter the administrator login password in the box designated as "Administrator Password:";
2. upon entering the correct password, click on the button labeled as "Admin Login".

To login as Operator, simply click on the button labeled as "Operator Login" without entering the password.

In either case, the user is required to click on either of the login buttons to log into the BMGT GUI. Just entering the administrator password and hitting the Enter key without clicking the "Admin Login" button would not log the user in. If the user inputs an incorrect password, an error message in red font "Administrator incorrect password" is displayed below the login buttons.

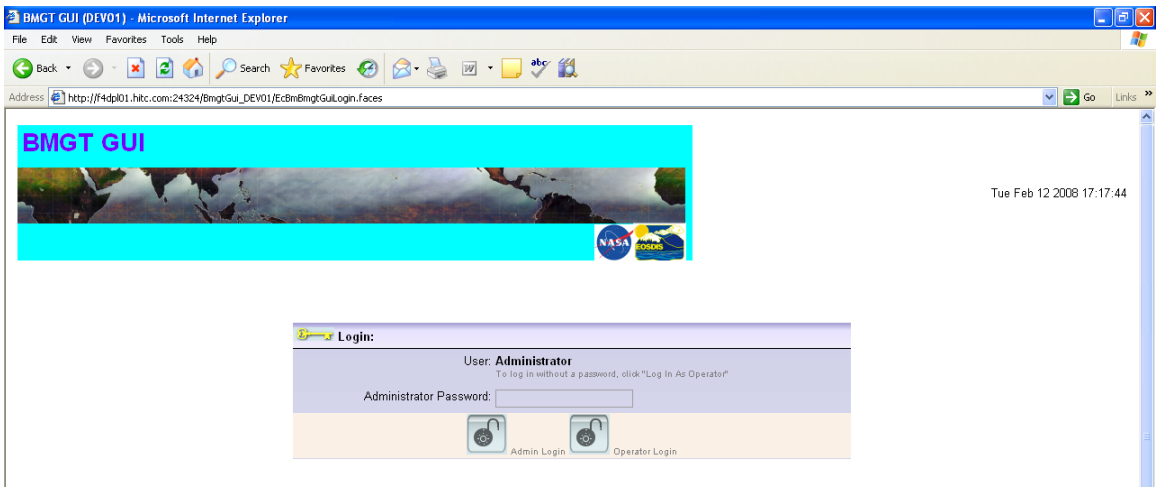


Figure 4.7.5-1. BMGT GUI Login Page

4.7.5.2 Navigation Panel

After a successful login, the user is presented with a navigation panel on the left side of the screen (Figure 4.7.5-2), which consists of the following menu items, texts, and links:

- Home Page
- Monitoring
  - Recent Packages
  - Failed Packages
  - ReExportQueue
- Configuration
  - Global Tuning
  - Group Configurations
  - Error Tuning
- [reload page]
- You are logged in as Administrator (or Operator)
- You are under mode DEV01 (or other modes)
- [log out]

This navigation panel is displayed on each of the GUI pages to provide the user a menu-based utility to switch between the GUI pages. Under the “Monitoring” heading are three options for monitoring the state of BMGT packages. The Recent Packages item allows the user to view recent export packages, including those currently in progress. The Failed Packages item shows export packages that encountered errors, and the ReExportQueue item shows ECS objects which are queued to have their metadata reExported to ECHO due to a previous error returned from ECHO. Under the “Configuration” heading are three options for modifying and/or viewing BMGT configuration settings. The Global Tuning item allows the user to view and update the BMGT global configuration parameters, the Group Configurations item allows the user to view and modify some attributes of the current collection group configuration (and view the current status of incremental verification), and the Error Tuning item allows the user to view the error

handling policies for error codes returned from ECHO. A user must be logged in as Admin in order to modify the values in Global Tuning or Group Configuration. The values in Error Tuning are static and can not be modified through the BMGT GUI.

The navigation panel also displays your login type, i.e. either Admin or Operator, and the mode the GUI is in. It also provides a "reload page" button to allow the user to manually refresh the GUI page on the right, and a "log out" button to log the user out of the GUI.

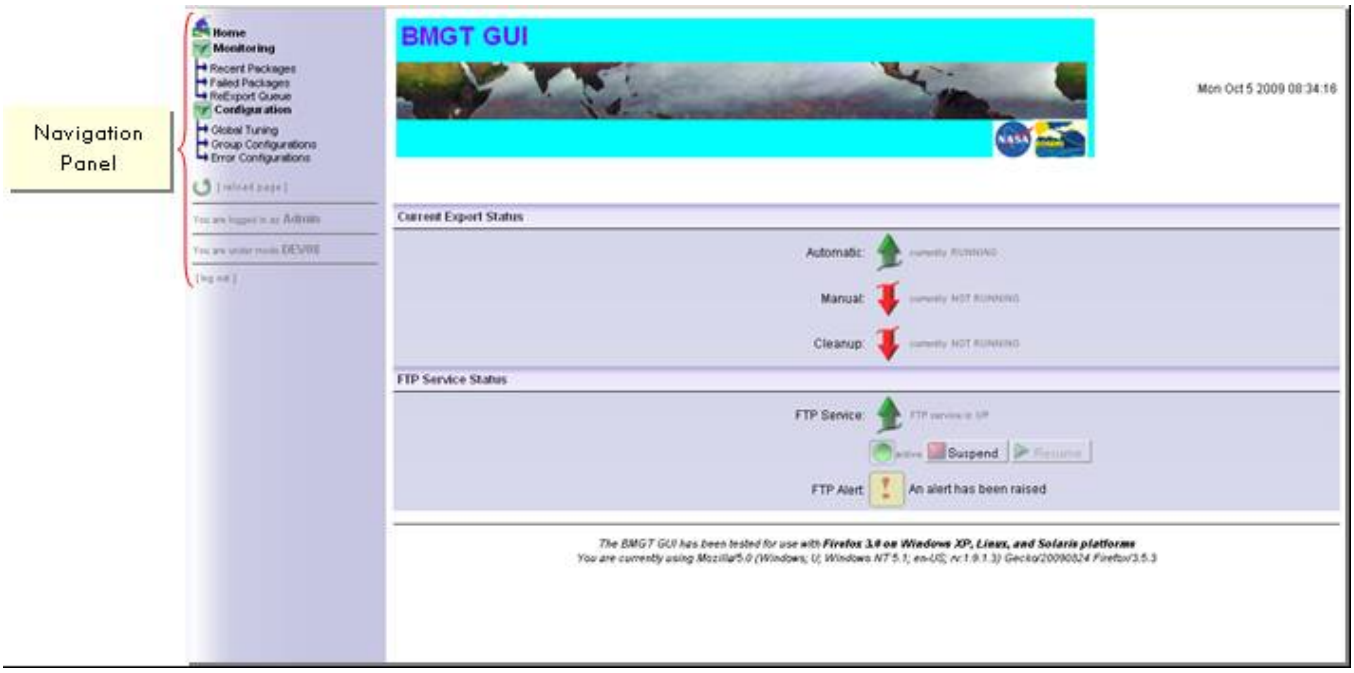


Figure 4.7.5-2. Home Page and Navigation Panel

4.7.5.3 Home Page

After logging in, the user will see the BMGT GUI Home Page (the right part of Figure 4.7.5-2), which provides an overview of the current system status, including the current export status (whether any packages are currently being generated for each export type), and the BMGT FTP Service status.

The Current Export Status section of the page shows whether the instances of the Automatic, Manual, or Cleanup Export are currently running. An upward green arrow indicates the corresponding export is running while a downward red arrow indicates it is not running. Note that 'running' in this context means that a cycle is being generated. Regardless of the status on this page, BMGT will be able to generated cycles of any export type as long as the Generator server is running.

The FTP Service Status section displays the current state of the BMGT FTP Service and allows the user to suspend/resume the service. The BMGT FTP Service can be in one of the following three states:

(1) a red downward arrow indicates the BMGT FTP Service is down. Under such a state, both “Suspend” and “Resume” buttons are disabled;
(2) an upward green arrow and an enabled “Suspend” button indicate the BMGT FTP Service is up and active. Clicking on the “Suspend” button will suspend the service and turn on the “Resume” button;
(3) an upward green arrow and an enabled “Resume” button indicate the BMGT FTP Service is suspended. Clicking on the “Resume” button will resume the service and turn on the “Suspend” button.

In addition to the BMGT FTP status, the GUI also shows the existence or absence of a global FTP Alert in this section. A single alert may be pending due to the FTP errors, in which the FTP Alert line shows the alert description (shown in Figure 4.7.5-2). If there is no FTP Alert existing, this line simply shows “None”.

4.7.5.4 Recent Packages Page

Figure 4.7.5-3 shows the Recent Packages Page.

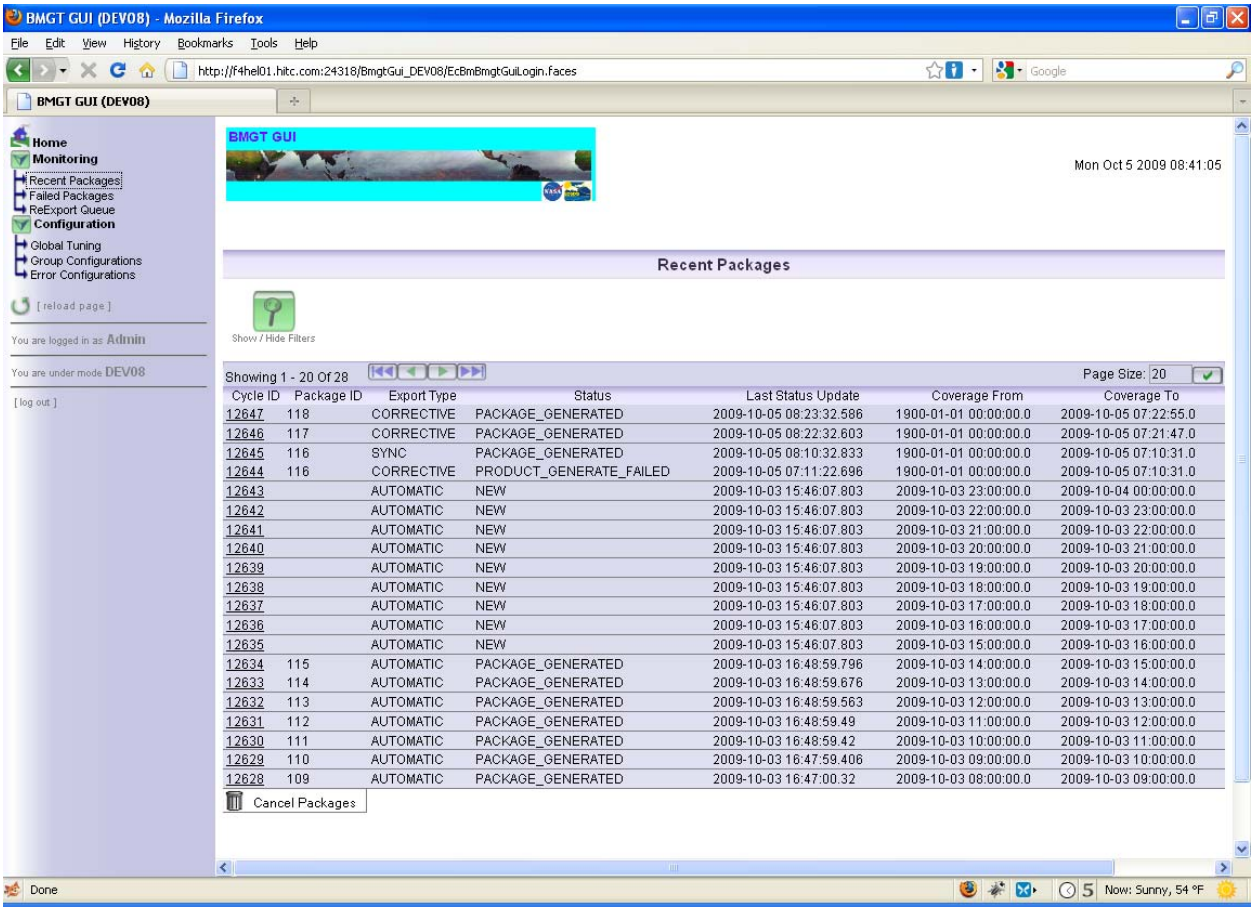


Figure 4.7.5-3. Recent Packages Page

The Recent Packages page provides a listing of the most recent packages and their status information. The number of packages displayed can be modified by entering a number in the box marked “Page Size”. The operator can move through the list using the four directional buttons at the top of the list (these buttons move to the first, previous, next, and last pages respectively).

The listing consists of the following columns:

- **Cycle ID**: The export cycle ID (Clicking on the underlined link will bring up the Package Details Page, discussed below). This ID is used to uniquely identify an export package.
- **Package ID**: The assigned package ID. The package ID is used primarily by ECHO to confirm the processing order of export packages. All AUTOMATIC, CORRECTIVE, VER_INC, and CLEANUP export packages are assigned package IDs. The package ID is optional for MANUAL, VER_LONG and VER_SHORT packages. The Package ID is generally unique, with the exception of SYNC packages that will have the same Package ID as the MANUAL export package that failed. AUTOMATIC cycles which have been manually regenerated will have the same package ID (and a different cycle ID) when they are regenerated.
- **Export Type**: The type of the export package, which can be one of AUTOMATIC, MANUAL, CLEANUP, CORRECTIVE, VER_INC, VER_SHORT, VER_LONG, or SYNC. AUTOMATIC Export packages are those generated by the BMGT system automatically at configured intervals. CLEANUP Export packages are those generated as the result of running the Data Pool Cleanup tool. MANUAL packages are generated by using the BMGT Manual Preprocess (documented elsewhere). SYNC Export packages result from MANUAL Export packages that failed (only in the case where the MANUAL Export package was assigned a Package ID). CORRECTIVE packages are basically like MANUAL packages, except they export metadata that was queued for re export due to a previous error. VER_INC, VER_LONG, and VER_SHORT, are also similar to MANUAL packages, but are used to verify that the current ECHO holdings are in sync with ECS.
- **Status**: The current status of the package, with the values defined in S_BGT_01250.
- **Last Status Update**: The time and date at which the package status was last updated.
- **Coverage From:** The start of the temporal coverage of the export package.
- **Coverage To:** The end of the temporal coverage of the export package.

The user can filter the listing of packages by clicking the “Show/Hide Filter” button and entering search criteria then pressing the “Apply” button (see Figure 4.7.5-4.).

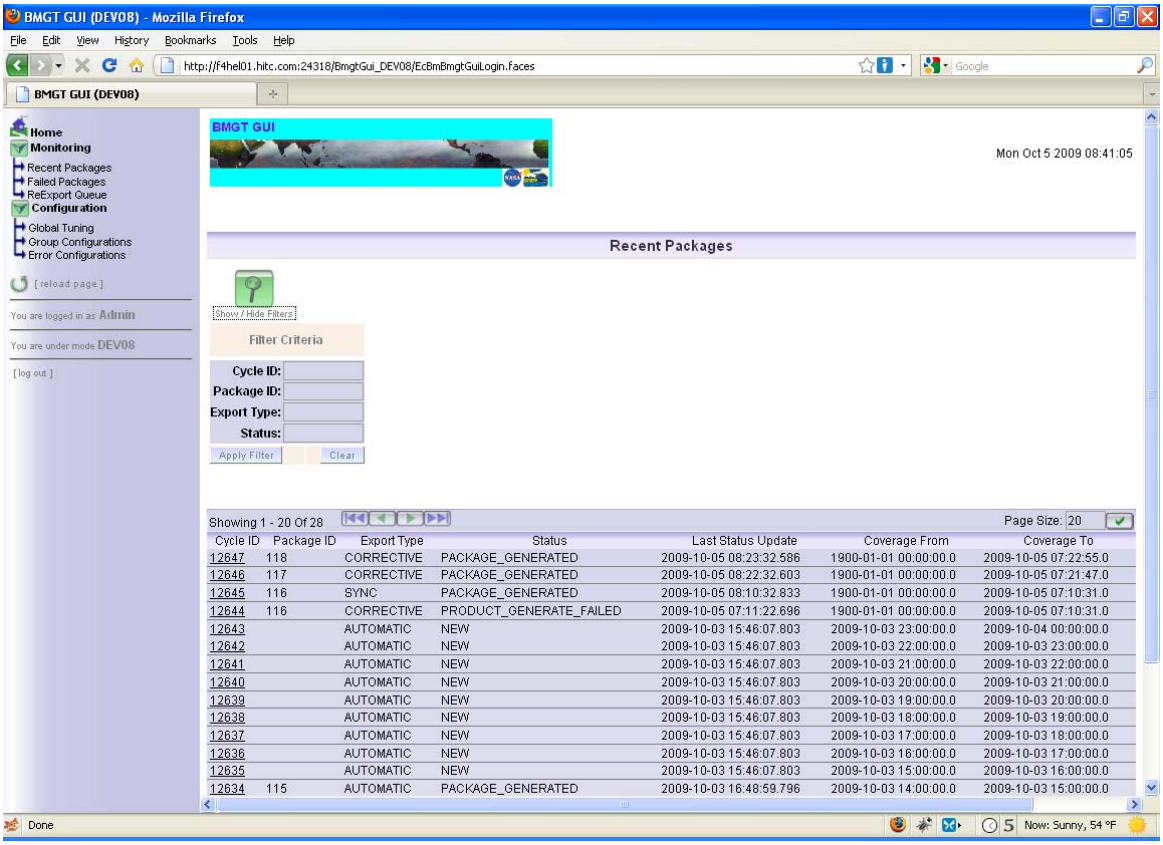


Figure 4.7.5-4. Recent Packages Page Filter

When a package is in one of the three states, TRANSFERRING, PACKAGE_RETRANSMIT, or WAITING_TO_RETRANSMIT, it is considered as cancelable, and a checkbox is displayed at the left of the cycle ID corresponding to the package. To cancel a package, select the checkbox next to the package, and then select the 'Cancel Packages' button (located at the bottom left of the page). This will cancel all packages whose checkboxes are currently selected. After cancellation, the package status will be updated to CANCELLING. When successfully cancelled, the package states will be updated to CANCELED. Note that cancellation of a package is a serious and potentially disruptive action, and should only be considered as a last resort. If the cancelled package was assigned a Package ID, that package will need to be regenerated by using the manual preprocessor in order to avoid stalling ECHO processing.

4.7.5.5 Failed Packages Page

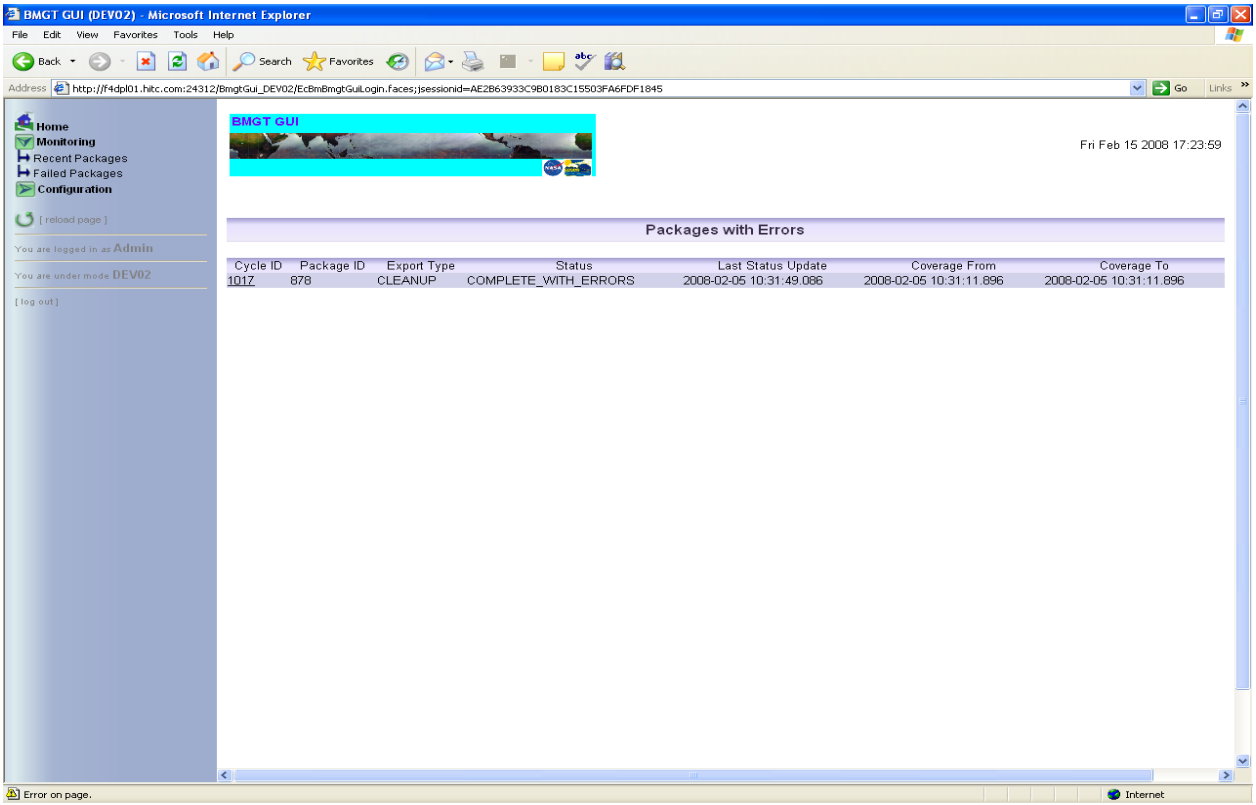


Figure 4.7.5-5. Failed Packages Page

The Failed Packages Page (Figure 4.7.5-5) shows a listing of the most recent packages that resulted in an error. The list columns are identical to those on the Recent Packages Page (Figure 4.7.5-3) and the cycle ID column is a link to the package details page for the cycle.

4.7.5.6 ReExport Queue Listing Page

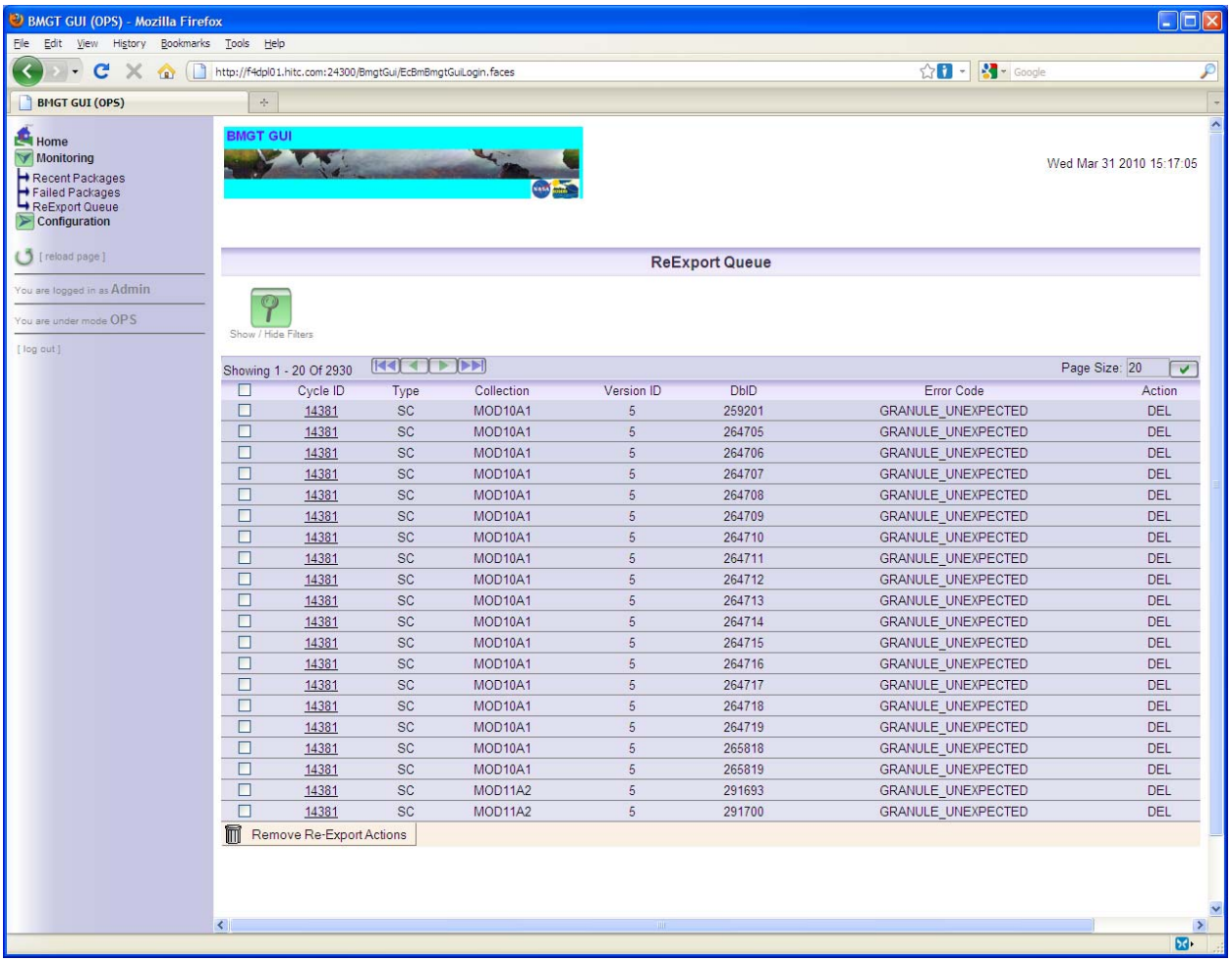


Figure 4.7.5-6. ReExport Queue Page

The ReExport Queue Page (Figure 4.7.5-6) provides a list of all items queued for reExport by BMGT. It provides the item type and identification, the error code responsible for the re-export, and the cycle Id of the initial export attempt.

The Operator can filter which items in the queue will be displayed by clicking 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 and pressing the 'Apply Filter' button (Figure 4.7.5-7). The number of items to display on a page can be selected, and the Operator can use the arrow buttons at the top of the list to move between pages of items.

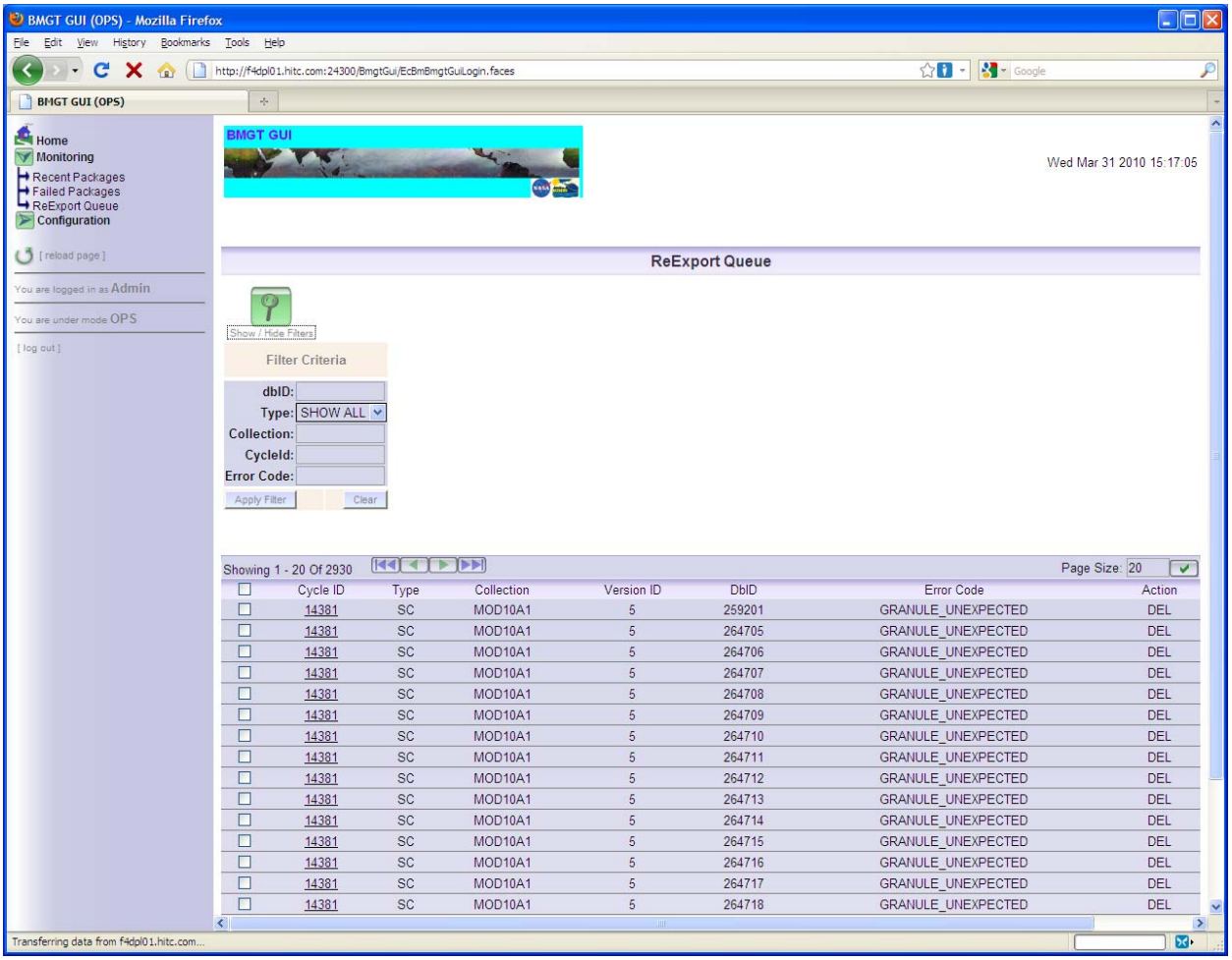


Figure 4.7.5-7. ReExport Queue Page showing filter

4.7.5.7 Package Details Page

The Package Details Page shows additional information for each package, and can be viewed by clicking the underlined link of the corresponding cycle ID on the Recent Packages, Failed Packages, and ReExport Queue pages.

This package detailed information is displayed in three (or four, for VERIFICATION packages) sections, titled as Audit Trail Information, Ingest Summary Statistics, Product Information, and Verification Package Status (where applicable) respectively.

- Audit Trail Information
  A summary of general package information that has been presented on the Monitoring screens and the information about the package's Ingest Summary Report, including two links which provide access to the report, if it is available. The first link is to a formatted version of the report. The second link is to the original, unprocessed report file in XML format. The formatted report is much more readable and therefore is the recommended viewing method. The filesystem path to the report is also displayed, and can be used to

obtain the unformatted “ugly” version of the report(not really useful other than for parsing by software).

- Ingest Summary Statistics
  The ingest summary statistic data, including the statistic type (Browse, Collection, or Granule), and the number of Inserts, Deletions, Updates, and Rejections for each statistic type. Also included here is the number of ECHO errors which were Ignored, ReExported, and Not Handled.

- Product Information
  The content of a package, broken down by Product Type and Group. The Product Type can be one of {METC, METG, METU, VIS, URL, BBR} and the Product Status can be one of {NEW, COMPLETE, COMPLETE_WITH_ERRORS, COMPLETE_WITH_WARNINSG, FAILED}.

- Verification Package Status
  The breakdown of Verified, Repaired, and Failed items in a verification export. Verified items have been verified to have identical metadata in ECS and ECHO, Repaired items had a discrepancy, but it was repaired by either ECHO or BMGT, and failed items have discrepancies which will require operator intervention to repair. This information is only displayed in a verification export package.

The Ingest Summary Statistics and Product Information sections may have empty fields, depending on the package’s status. Figures 4.7.5-8 and 4.7.5-9 show the Package Details page.

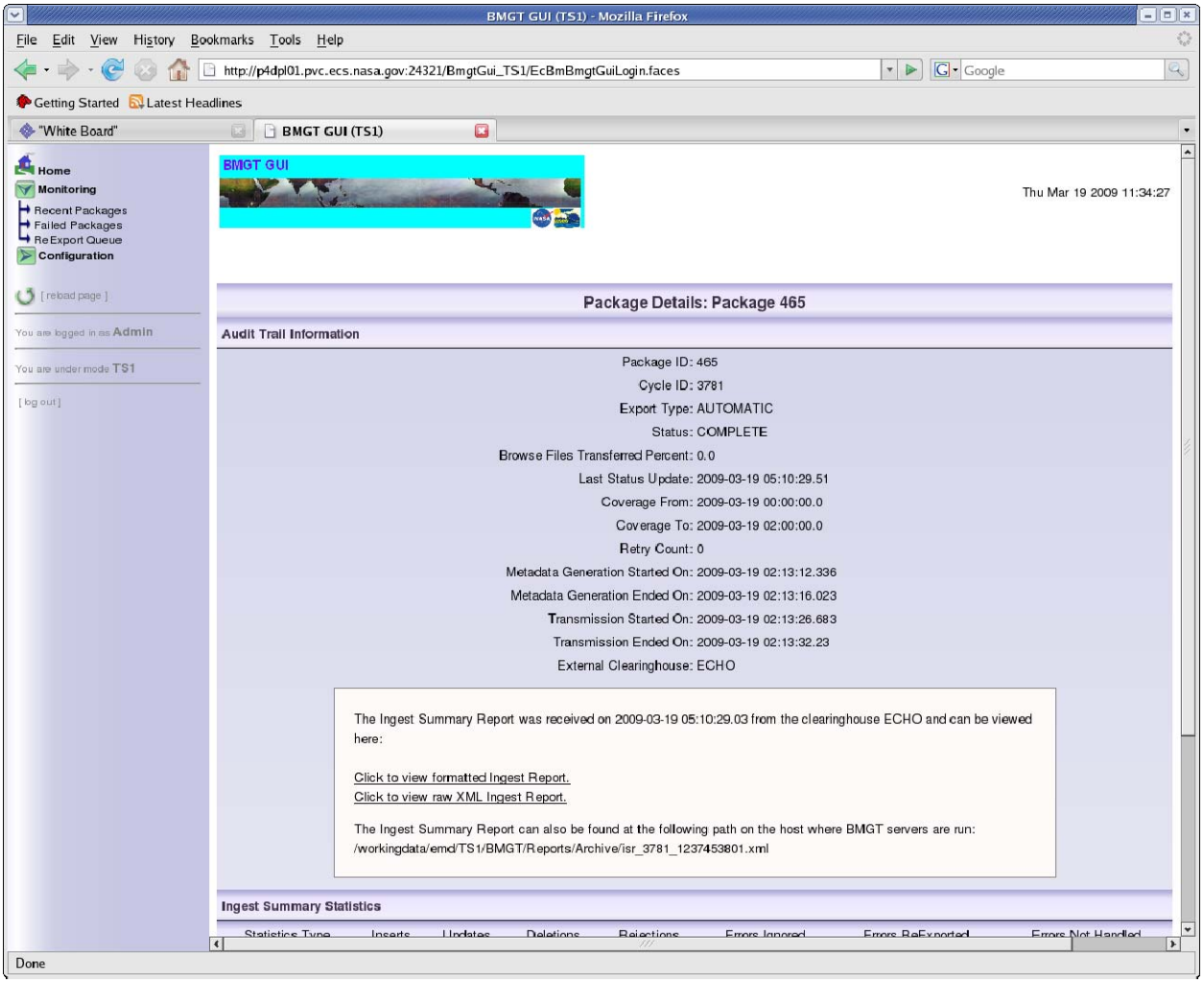


Figure 4.7.5-8. Package Details Page

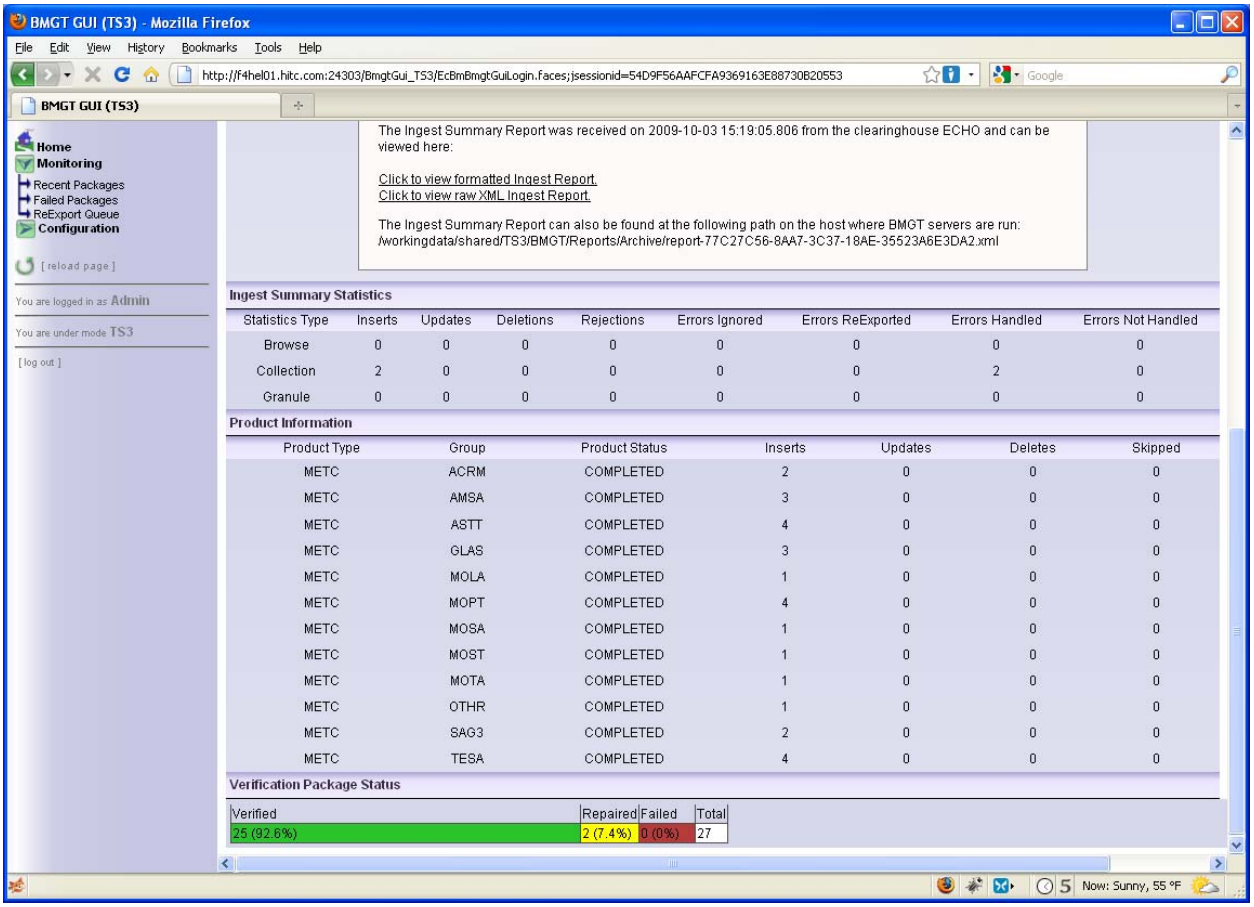


Figure 4.7.5-9. Package Details Page with Verification Package Status

4.7.5.8 Formatted Ingest Summary Report

Figure 4.7.5-10 shows the Formatted Ingest Summary Report Page

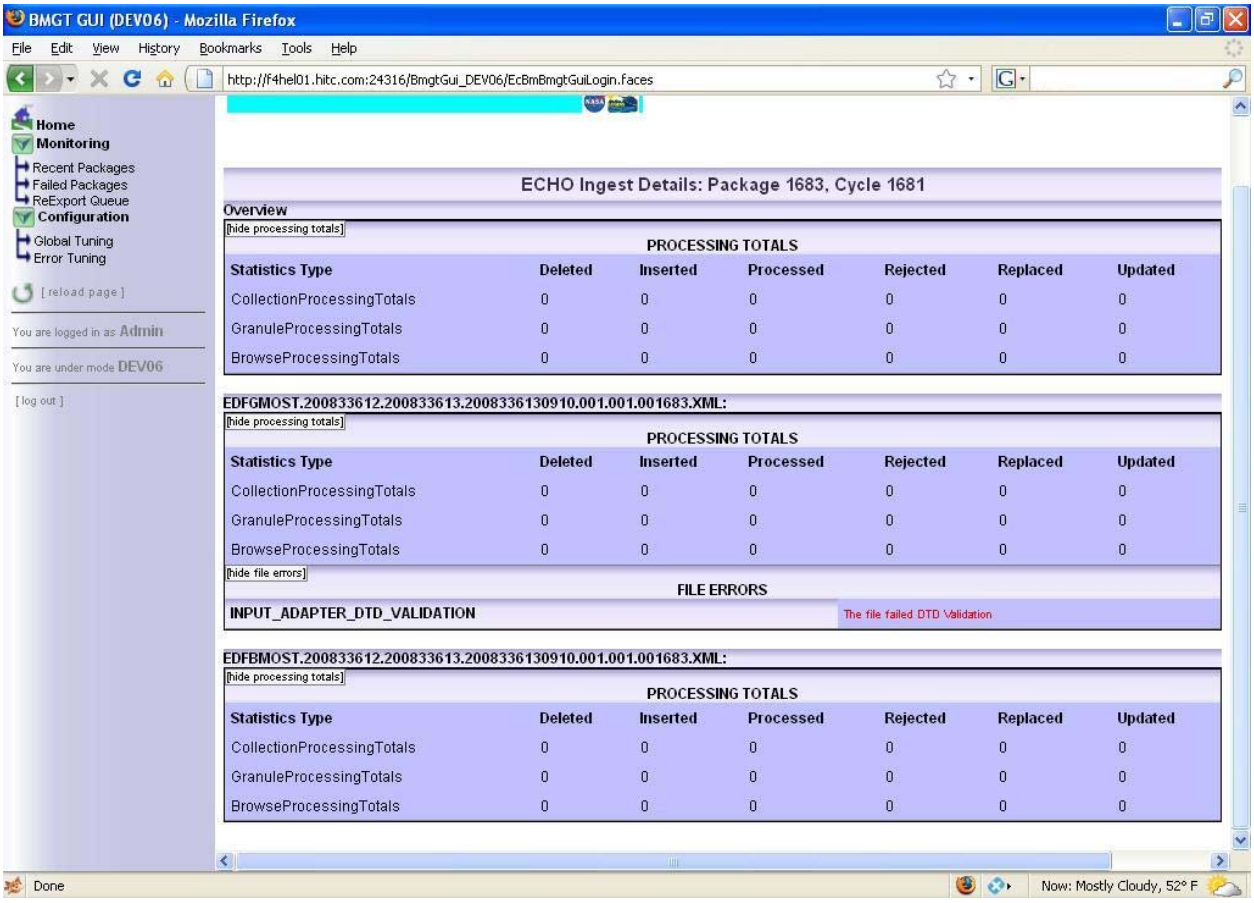


Figure 4.7.5-10. Formatted Ingest Summary Report Page

The Formatted Ingest Summary Report Page provides a tabular view of the contents of the report returned by ECHO. The report, in its raw format, is in XML format, and is not meant to be human readable. This page simply applies a stylesheet to the report, and presents it in a more useful format (the original XML file can be viewed in the GUI, or found on the filesystem using the link and path provided on the Package Details page).

The formatted report contains the package and cycle Id at the top of the page, followed by overview statistics of the entire package, as well as any Job (synonymous with package) errors. There is then a section for each file in the package, which contains the statistics for that file, followed by any file or item level errors within that file. Each section of the report has a 'hide' button at the top left which allows the user to toggle the display of that section. This is useful if there are hundreds of errors in one file, but the user wants to look at errors in another file without scrolling through the entire list. When a section is hidden, the 'hide' button becomes a 'show' button (see Figure 4.7.5-11) and will restore the hidden section when clicked.

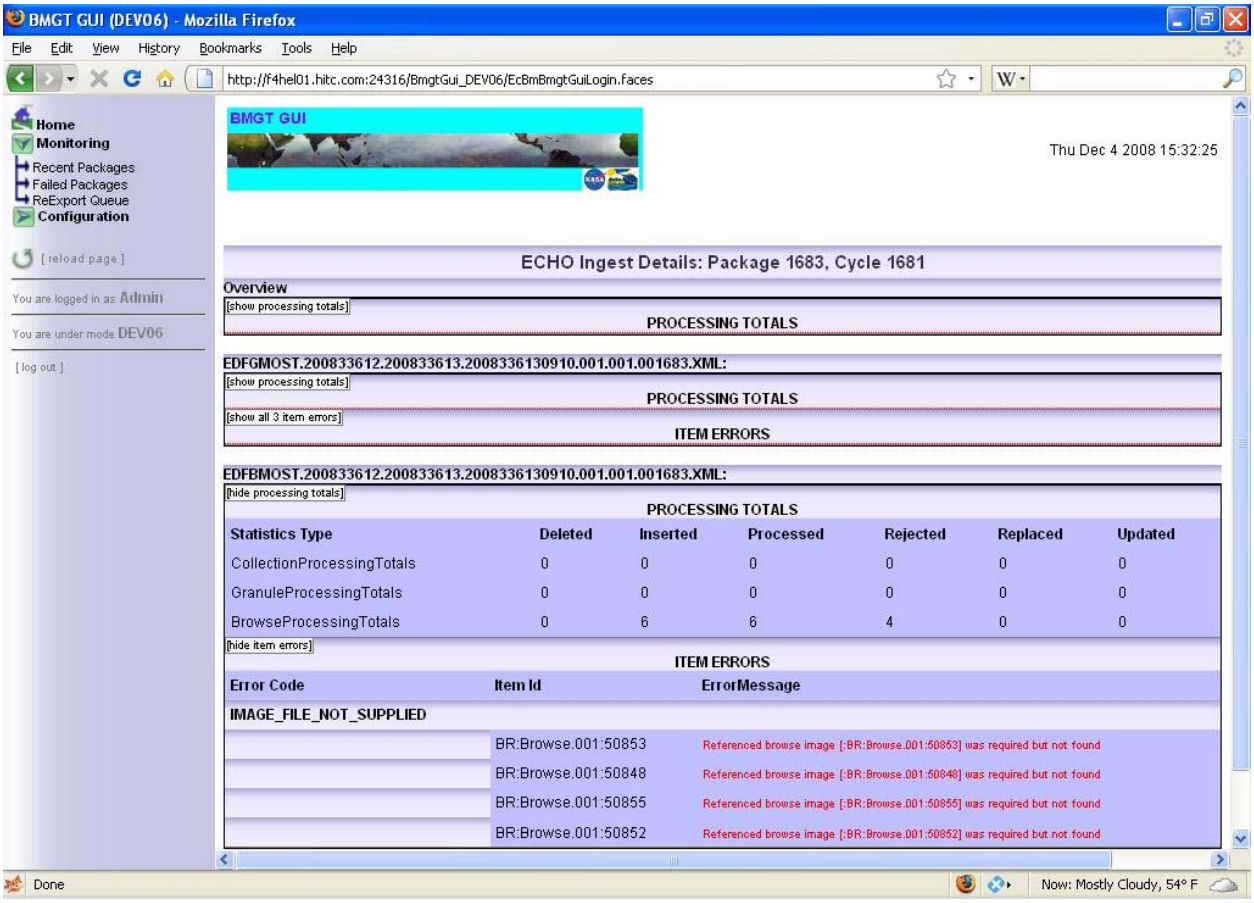


Figure 4.7.5-11. Formatted Ingest Summary Report Page (with hidden sections)

4.7.5.9 Global Tuning Page

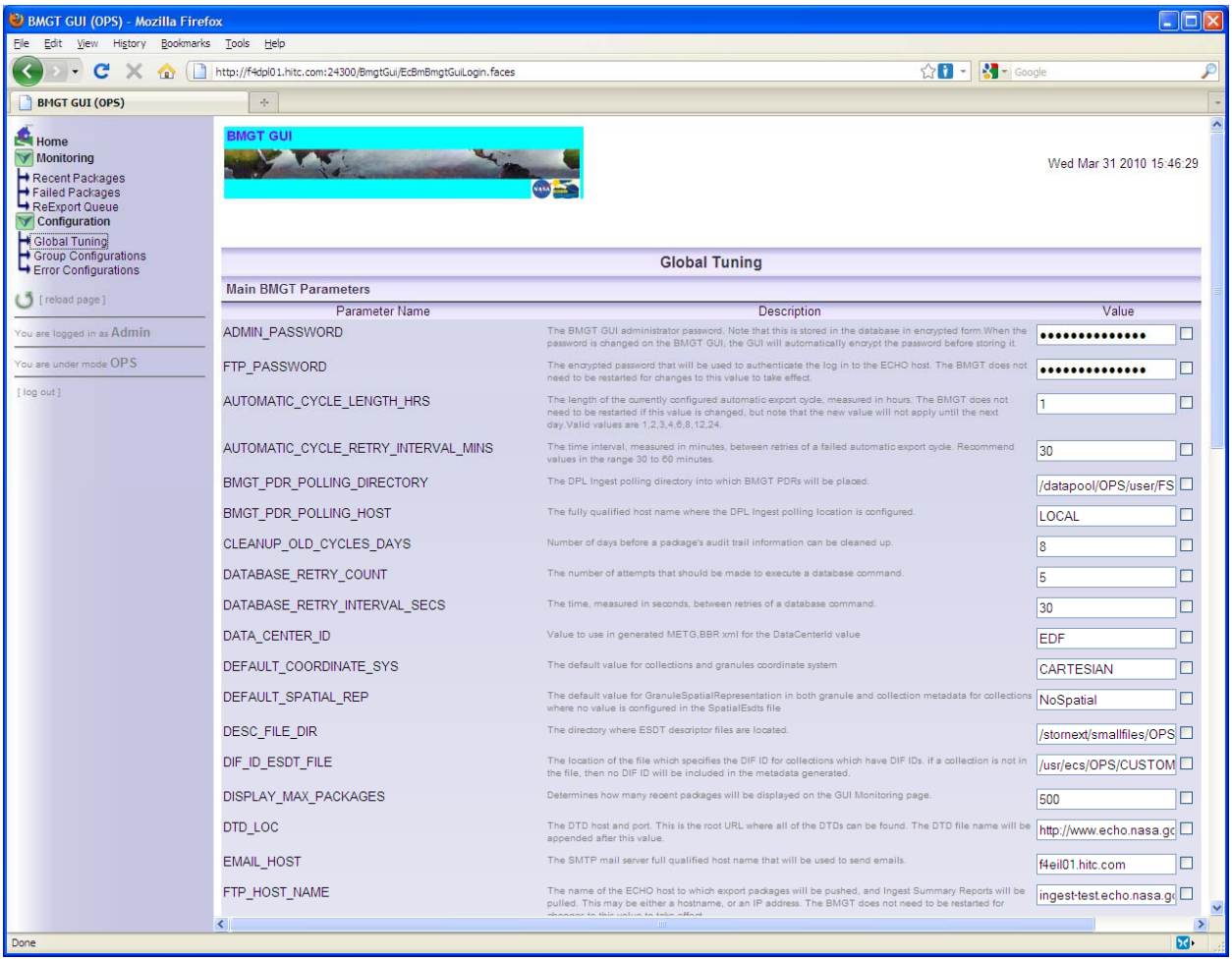


Figure 4.7.5-12. Global Tuning Page (1 of 3)

The Global Tuning Page displays a list of BMGT configuration parameters (shown in Figure 4.7.5-12). The list is a three-column table with the title of Parameter Name, Description and Value, respectively. The explanation or definition of each configuration parameter is described in the Description column. The Value field of the table is enabled for updating only if the user logged in as the Administrator. If logged in as the Operator, these fields will be disabled and can only be viewed by the user.

The top two rows of this table are for password configuration. When logged in as the Administrator, the user can change the administrator login password and BMGT FTP password in these two rows, respectively. The user's inputs for password changes are always marked over (displayed as an array of asterisks) for security purposes.

When logged in as the Administrator, the user can change the values of configuration parameters by performing the following steps:

- Edit the parameter value in the input box;
- Check the checkbox adjacent to the input box in the same row;
- After checking all the checkboxes of the parameters that need to be updated, click the Apply Changes button at the bottom of the page to apply changes;
- Before pressing Apply Changes button, the user can cancel the changes by clicking the Cancel Changes button .The values of configuration parameters that have been changed in the input boxes are reset to their original values, whether the corresponding checkbox is checked or not.

The configuration changes made through the Global Tuning Page do not take effect until all BMGT servers are restarted with the start scripts, with the exception of the BMGT FTP login configuration parameters (FTP_USERNAME and FTP_PASSWORD).

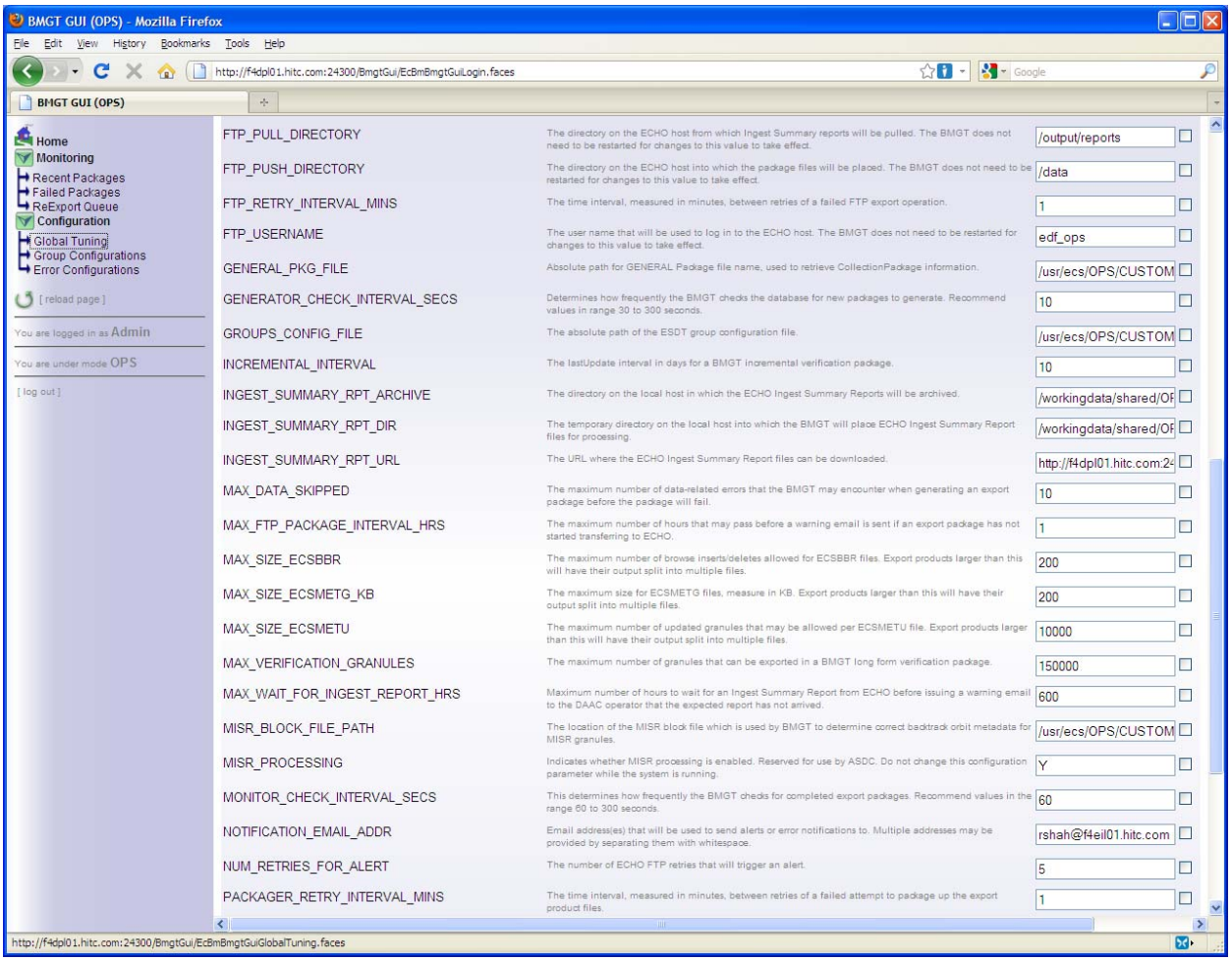


Figure 4.7.5-12. Global Tuning Page (2 of 3)

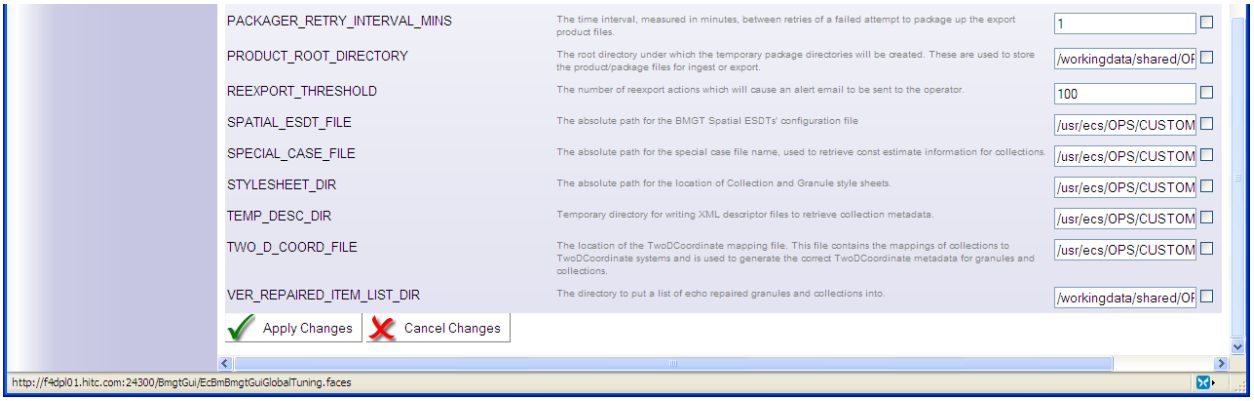


Figure 4.7.5-12. Global Tuning Page (3 of 3)

4.7.5.10 Group Configurations Page

The Group Configurations Page provides a view of the current collection group configuration. This configuration comes from the database, but is populated from the group configuration file whenever an automatic cycle is initiated. This page also shows the current status of incremental verification for each group and collection as well as for the ECS inventory as a whole.

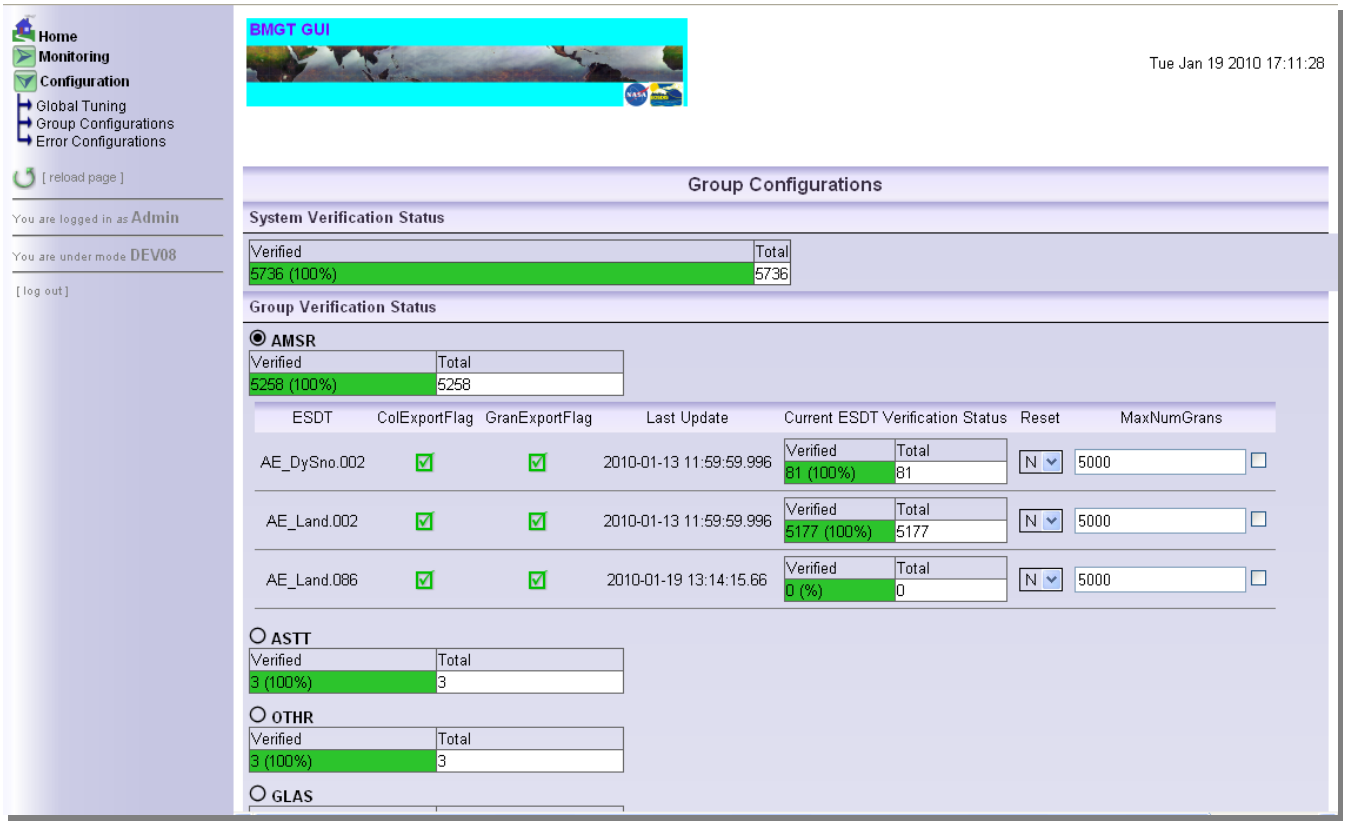
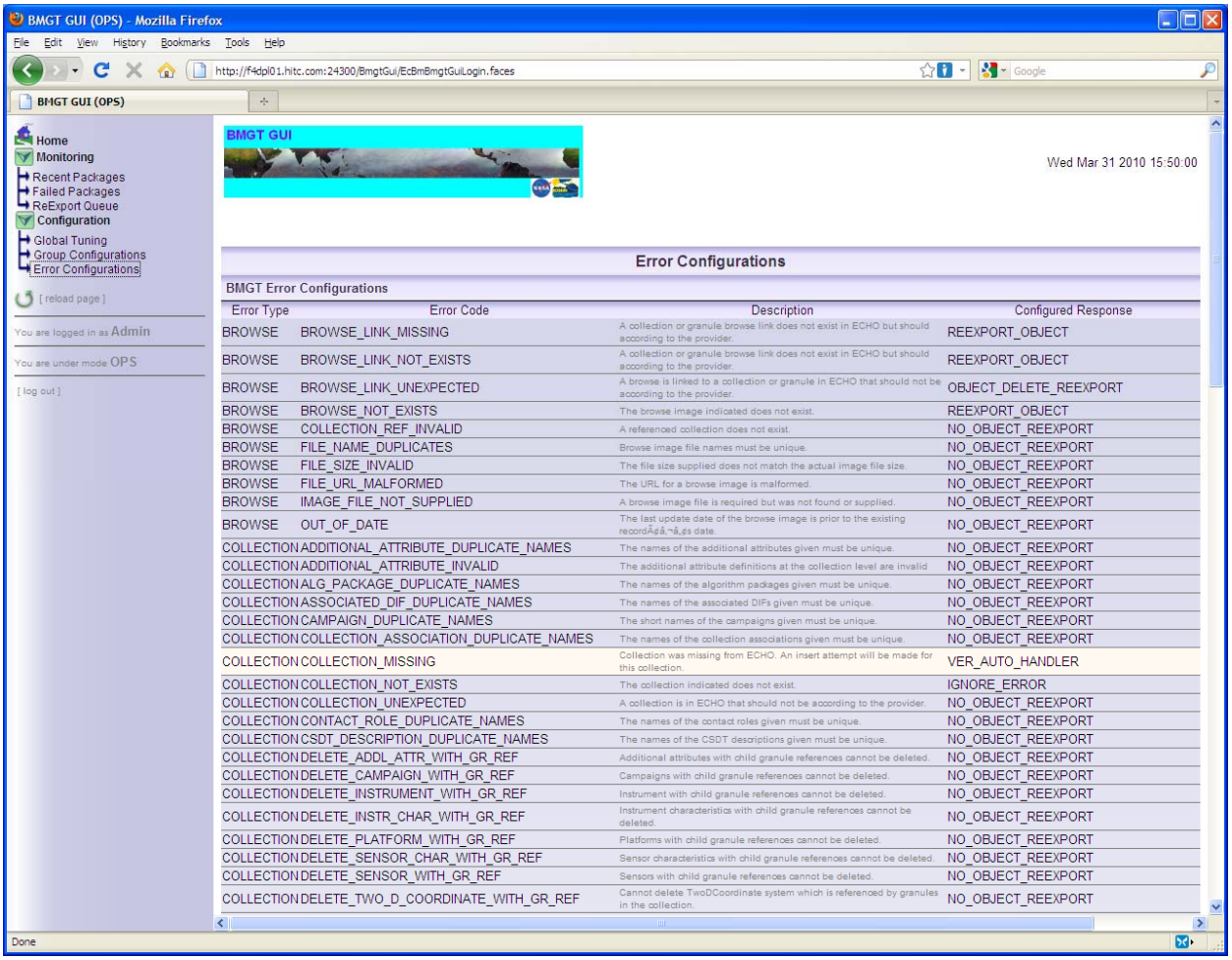


Figure 4.7.5-13. Group Configurations Page

4.7.5.11 Error Configuration Page

Figure 4.7.5-14 shows the Error Configuration Page.



Error Type	Error Code	Description	Configured Response
BROWSE	BROWSE_LINK_MISSING	A collection or granule browse link does not exist in ECHO but should according to the provider.	REEXPORT_OBJECT
BROWSE	BROWSE_LINK_NOT_EXISTS	A collection or granule browse link does not exist in ECHO but should according to the provider.	REEXPORT_OBJECT
BROWSE	BROWSE_LINK_UNEXPECTED	A browse is linked to a collection or granule in ECHO that should not be according to the provider.	OBJECT_DELETE_REEXPORT
BROWSE	BROWSE_NOT_EXISTS	The browse image indicated does not exist.	REEXPORT_OBJECT
BROWSE	COLLECTION_REF_INVALID	A referenced collection does not exist.	NO_OBJECT_REEXPORT
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
BROWSE	FILE_URL_MALFORMED	The URL for a browse image is malformed.	NO_OBJECT_REEXPORT
BROWSE	IMAGE_FILE_NOT_SUPPLIED	A browse image file is required but was not found or supplied.	NO_OBJECT_REEXPORT
BROWSE	OUT_OF_DATE	The last update date of the browse image is prior to the existing recordÃ¢â‚¬â„¢s date.	NO_OBJECT_REEXPORT
COLLECTION	ADDITIONAL_ATTRIBUTE_DUPLICATE_NAMES	The names of the additional attributes given must be unique.	NO_OBJECT_REEXPORT
COLLECTION	ADDITIONAL_ATTRIBUTE_INVALID	The additional attribute definitions at the collection level are invalid	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
COLLECTION	CAMPAIGN_DUPLICATE_NAMES	The short names of the campaigns given must be unique.	NO_OBJECT_REEXPORT
COLLECTION	COLLECTION_ASSOCIATION_DUPLICATE_NAMES	The names of the collection associations given must be unique.	NO_OBJECT_REEXPORT
COLLECTION	COLLECTION_MISSING	Collection was missing from ECHO. An insert attempt will be made for this collection.	VER_AUTO_HANDLER
COLLECTION	COLLECTION_NOT_EXISTS	The collection indicated does not exist.	IGNORE_ERROR
COLLECTION	COLLECTION_UNEXPECTED	A collection is in ECHO that should not be according to the provider.	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
COLLECTION	DELETE_ADDL_ATTR_WITH_GR_REF	Additional attributes with child granule references cannot be deleted.	NO_OBJECT_REEXPORT
COLLECTION	DELETE_CAMPAIGN_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
COLLECTION	DELETE_TWO_D_COORDINATE_WITH_GR_REF	Cannot delete TwoDCoordinate system which is referenced by granules in the collection.	NO_OBJECT_REEXPORT

Figure 4.7.5-14. Error Configuration Page

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. 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 most 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 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 and/or correct 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 (using the Manual Preprocessor with the '--corrective' option). Otherwise, the error will either be ignored, or will be handled by the NO_OBJECT_REEXPORT policy.

- REEXPORT_OBJECT_DELETE:
  BMGT will determine whether the error can be handled by simply exporting the deletion of the science or browse granule to ECHO. If this is the case, it will add the relevant granule(s) to the BMGT ReExport Queue as a deletion action, 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 (using the Manual Preprocessor with the '--corrective' option). 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 and/or correct the problem.

- RETRY_PACKAGE:
  Causes the package to be retransmitted to ECHO (without regenerating the products), 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 and/or correct 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 and/or correct the problem.

4.7.6 Data Pool Maintenance GUI

The Data Pool Maintenance (DPM) GUI provides an operator interface to monitor the current status of Data Pool Inserts and to maintain specific Data Pool parameters. This GUI manages ECS and Non-ECS data collections. Specifically, the DPM GUI provides the following capabilities:

- Monitor the active insert processes
- Monitor the Data Pool Insert Queue
- Manage existing Data Pool Collection Groups
- Add new Data Pool Collection Groups (includes ECS and Non-ECS)
- Manage existing Data Pool Collection Themes
- Add new Data Pool Collection Themes
- Suspend and Resume Data Pool Inserts
- Turn the NoFreeSpace Flag on or off
- Configure parameters used by the Data Pool Action Driver (DPAD) and the Data Pool Insert Utility (DPIU)

4.7.6.1 Quick Start Using the Data Pool Maintenance GUI

Bring up the Web Browser and then access the URL for the DPM GUI web page. The operator may be prompted by a dialogue box similar to that shown in Figure 4.7.6-1. The requested information must be entered to continue.

For example, http://<host name location>:22111/DataPool.html

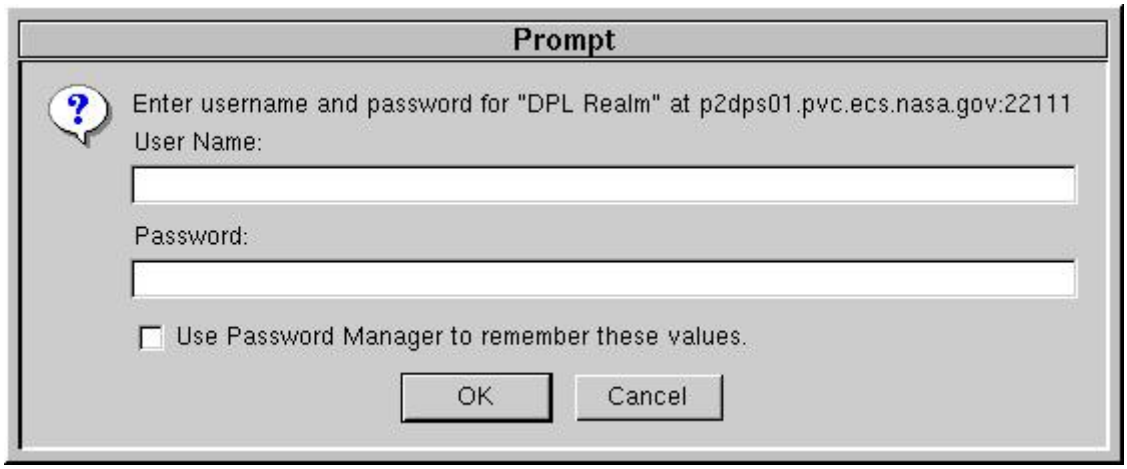


Figure 4.7.6-1. Login Prompt

4.7.6.1.1 DPM Home Page

The DPM Home Page screen shown in Figure 4.7.6-2 gives the operator current status of Data Pool Inserts. The screen is refreshed automatically. The operator is shown the current screen

refresh rate, the current chunk size for the list of active insert processes. Minimum values for screen refresh rate is 60 seconds and Active Insert Process List row size is 1. Maximum value for Active Insert Process List row size is 100. The operator must click on the adjacent **Apply** button to initiate changes. Summary of Data Pool File System table displays current status of the FreeSpace Flag, Availability Flag, and amount of desired free space in megabytes for each file system. Summary of Active Processes table displays configured number of Maximum Allowed Processes, the Maximum Allowed Processes from ARCHIVE cache, the Maximum Allowed Processes from ARCHIVE tape, the total number of active insert processes running, the number of active insert processes using ARCHIVE cache, the number of active insert processes using ARCHIVE tape. The list of Active Insert Processes table displays the current status of the active insert processes. The screen can be immediately refreshed by clicking on the **Refresh Home Page** link. Use the tab buttons at the top to navigate to the Home Page, Batch Summary, List Insert Queue, Collection Groups, Themes, Data Pool File System, Cloud Cover, Configuration Parameters, Aging Parameters, and End Session screens. See Table 4.7.6-1 for descriptions of the Home Page elements.

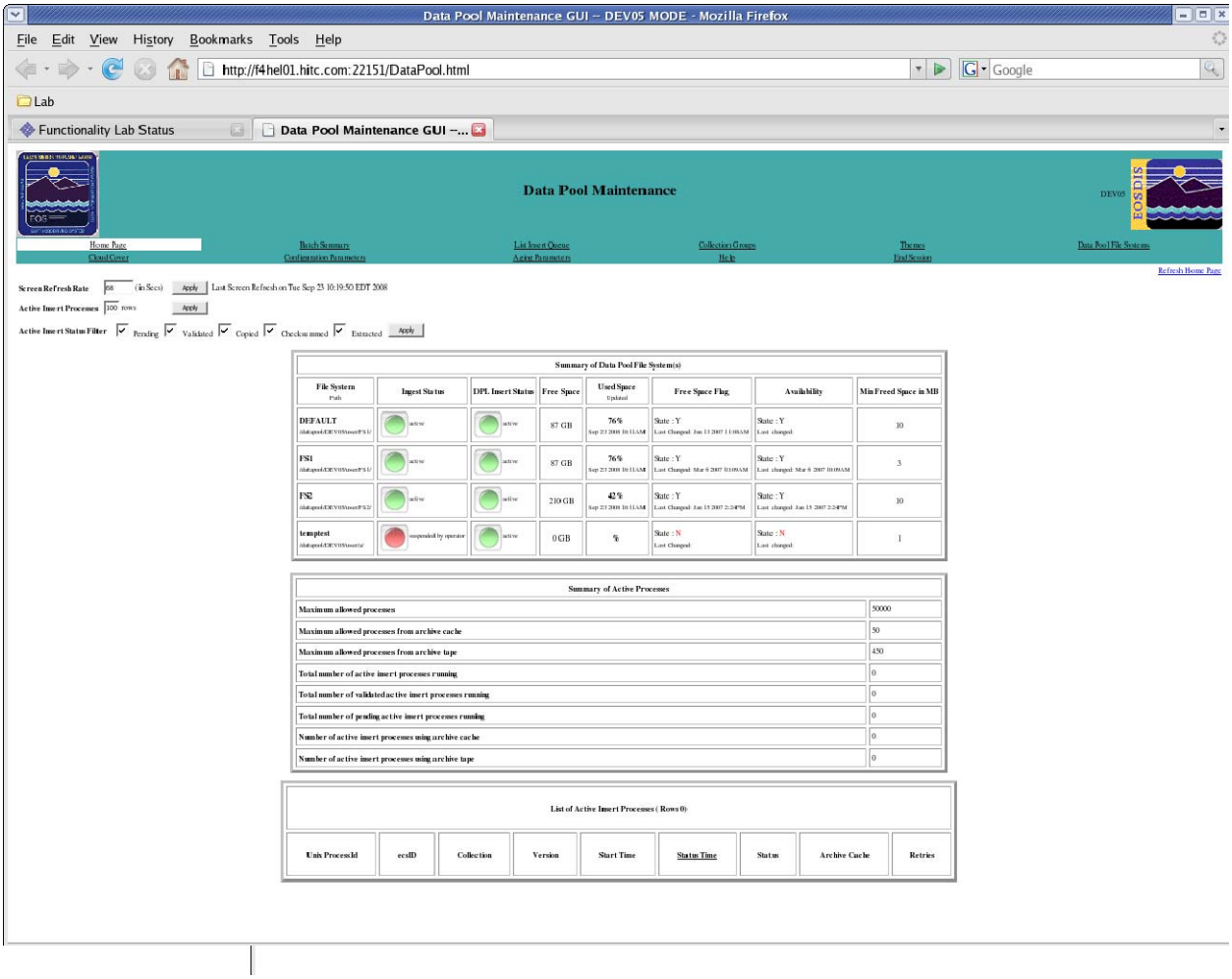


Figure 4.7.6-2. Data Pool Maintenance Home Page

Table 4.7.6-1. DPM Home Page Field Descriptions (1 of 2)

Field Name	Data Type	Size	Entry	Description
Screen Refresh Rate	Integer	4	Optional	Allows the operator to adjust the Screen Refresh Rate in seconds.
Active Insert Processes	Integer	4	Optional	Chunk size to set for the list of active insert processes. Default is 100
Active Insert Process Filter	Check box	5	Optional	Filters Active Insert Processes based on process status
File System Label	char	10	Required	File System Label. Limited to 10 characters.
Free Space Flag	char	1	Optional	Indicates if space is available for Data Pool insert. 'ON' value indicates that space is available. Default is 'ON'.
Ingest Status	Int	1	Derived	Indicates if the file system is enabled for DPL ingest processes.
DPL Insert Status	Int	1	Derived	Indicates if the file system is enabled for public datapool insert processes.
Free Space	Int	5	Derived	Indicates the space available on this file system (in GB)
Used Space	Int	2	Derived	Indicated the percentage of the file system used and the date this statistic was last updated.
Availability	char	1	Optional	File system available for insert. Value 'YES' indicate it is available and value 'NO' it is not available. The default value is 'YES'.
Min Freed Space in MB	int	4	Optional	Amount space must be freed in order to make the file system available
Maximum allowed processes	int	4	System Generated	Maximum allowed processes for Data Pool
Maximum allowed processes from ARCHIVE cache	int	4	System Generated	Maximum allowed processes from ARCHIVE cache
Maximum allowed processes from ARCHIVE tape	int	4	System Generated	Maximum allowed processes from ARCHIVE tape
Total number of active insert processes running	int	4	System Generated	Total number of active insert processes running
Number of active insert processes using ARCHIVE cache	int	4	System Generated	Number of active insert processes using ARCHIVE cache
Number of active insert processes using ARCHIVE tape	int	4	System Generated	Number of active insert processes using ARCHIVE tape
Unix Process ID	char	10	System Generated	Unix Process ID

Table 4.7.6-1. DPM Home Page Field Descriptions (2 of 2)

Field Name	Data Type	Size	Entry	Description
ECS ID	char	10	System Generated	ECS ID number
Collection	char	20	System Generated	Name of collection
Version	int	4	System Generated	Version number
Start Time	char	10	System Generated	Process start time
Status Time	char	10	System	Process status time
Status	char	10	System Generated	Status of the process
ARCHIVE Cache	char	1	System Generated	Indicates if the process belongs to ARCHIVE cache or not
Retries	int	4	System Generated	Number of retries in case of failures

4.7.6.1.2 Batch Summary Tab

The Batch Summary Screen shown in Figure 4.7.6-3 displays a summary of the status of Data Pool inserts for each batch label. Status includes new, completed, failed, retried, and cancelled inserts. Minimum refresh rate is 1 minute. The **Apply Refresh Rate** button will refresh the screen with any updated information in the fields within a specified amount of time. See Table 4.7.6-2 for a description of the Batch Summary's entries.

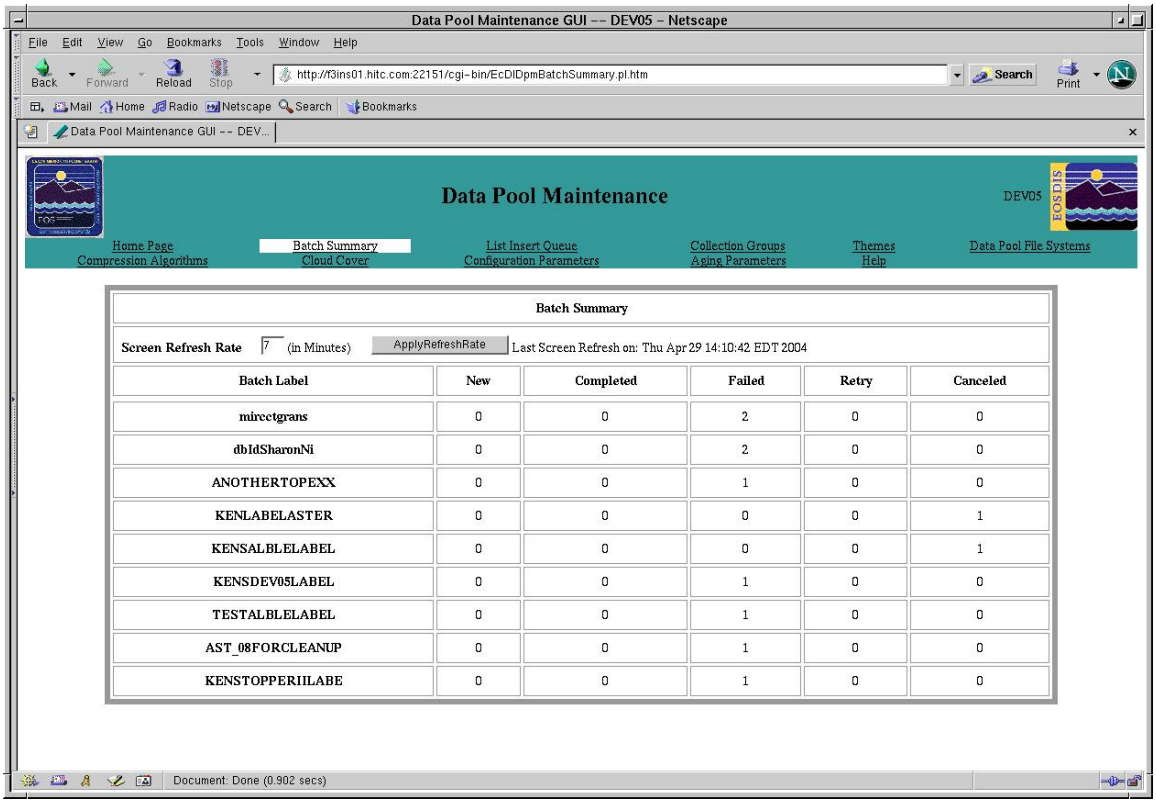


Figure 4.7.6-3. Batch Summary Screen

Table 4.7.6-2. Batch Summary Screen Field Descriptions

Field Name	Data Type	Size	Entry	Description
Batch Label	int	4	System Generated	Name of the batch label
New	int	4	System Generated	Number of batch inserts in NEW state
Completed	int	4	System Generated	Number of batch inserts in COMPLETED state
Failed	int	4	System Generated	Number of batch inserts in FAILED state
Retry	int	4	System Generated	Number of batch inserts in RETRY state
Cancelled	int	4	System Generated	Number of batch inserts in CANCELLED state

4.7.6.1.3 List Insert Queue Tab

The List Insert Queue Screen shown in Figure 4.7.6-4 allows the operator to monitor the Data Pool Inserts that still need to be processed or retried. The operator can cancel Inserts that are in the Insert Queue by clicking on the checkbox adjacent to the Status column. After selecting all desired inserts, click on the **Apply Change** button to initiate changes. The Inserts will be marked as "CANCELED" in the Data Pool database. The List Insert Queue screen will be refreshed with only inserts left to be processed. The DPAD driver will cleanup all canceled inserts at a configured interval. The List Insert Queue Screen can be filtered using the File System Label drop down list, Batch Label drop down list and Status drop down list. Clicking on the **File System** Label drop down list will display all the File System Labels in database. The operator can choose 'ALL' from the **File System** Label drop down list and choose one label from **Batch Label** drop down list and choose 'ALL' from Status drop down list to view all insert statuses for that label in all File Systems. The operator can also narrow down the list by choosing one batch label from the **Batch Labels** drop-down list, a specific status from the **Status** drop down list and a specific file system from the **File System** Label drop down list. After selecting the filter options, click on the **Apply Filter** button to display a filtered list. The XML file and path name for a Non-ECS granule insert action can be viewed by clicking on "NONECS" from the Data Source column. XML file path is displayed in Figure 4.7.6-5. The content of the XML file can be viewed by clicking on the file path. This will display the text of the file as shown in Figure 4.7.6-6.

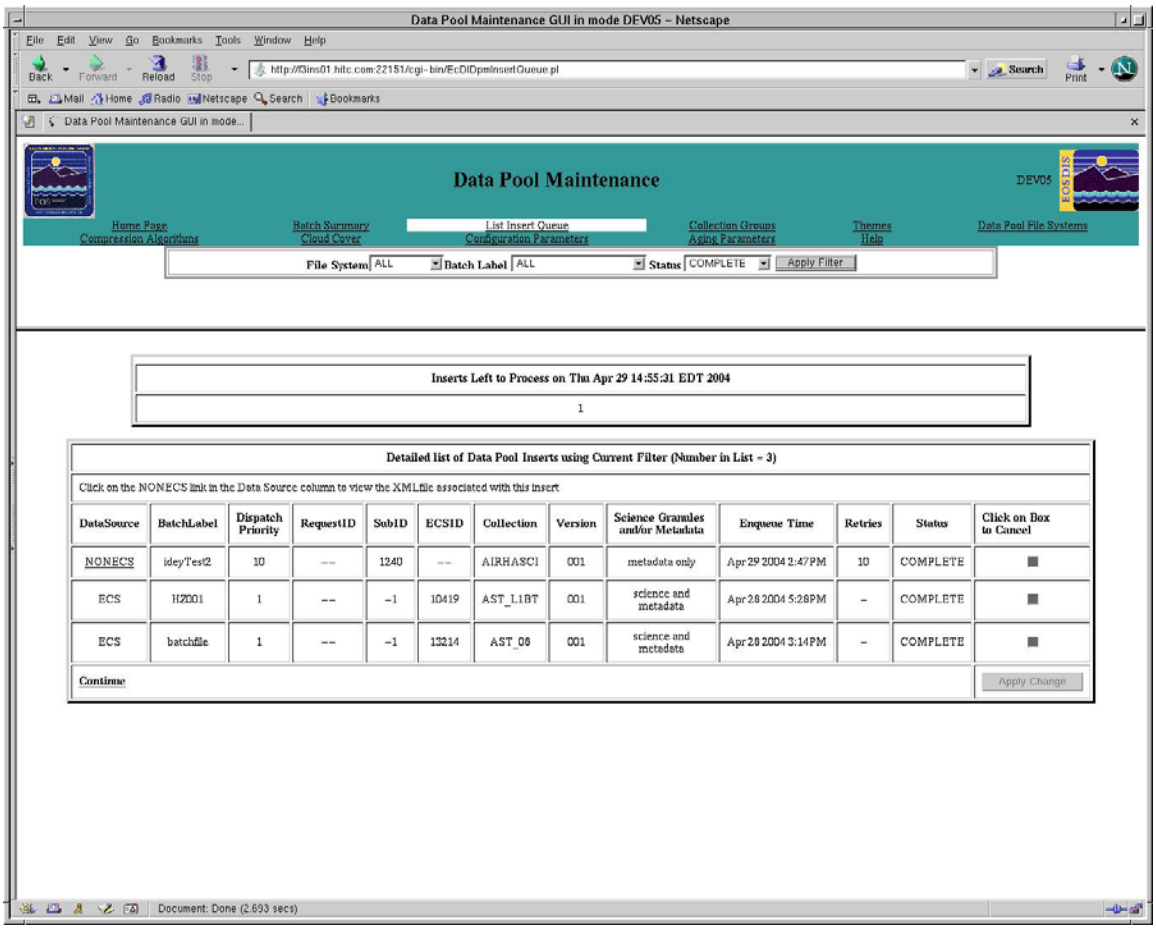


Figure 4.7.6-4. List Insert Queue Screen

See Table 4.7.6-3 for a description of the List Insert Queue's field descriptors.

Table 4.7.6-3. List Insert Queue Screen Field Descriptions (1 of 2)

Field Name	Data Type	Size	Entry	Description
Data Source	char	6	Required	To describe the source of the data whether ECS or NONECS.
Batch Label	char	20	System Generated	Name of batch
Dispatch Priority	int	4	System Generated	Number of priority by which requests will be processed
RequestID	char	10	System Generated	Request ID of the order
SubID	char	10	System Generated	Submission ID number

Table 4.7.6-3. List Insert Queue Screen Field Descriptions (2 of 2)

Field Name	Data Type	Size	Entry	Description
ESCID	char	10	System Generated	ECS ID number
Collection Version	int	4	System Generated	Version number of collection.
Science Granules and/or Metadata	char	n/a	Optional	Indicate whether collection whether collection is Science Granules and/or Metadata.
Enqueue Time	char	10	System Generated	Time in queue
Retries	int	4	System Generated	Number of retries
Status	char	10	System Generated	Status of the input process
Click on Box to Cancel	checkbox	1	Optional	Select when cancellation of request is needed

Note: This screen depicts the total number of Data Pool Inserts left to process and retry. It also displays a detailed list of Data Pool Inserts using the current filter and total number of rows in the database. Default filter is set to ignore for Batch Label and NEW/RETRY for Status. Full capability users can cancel an insert.

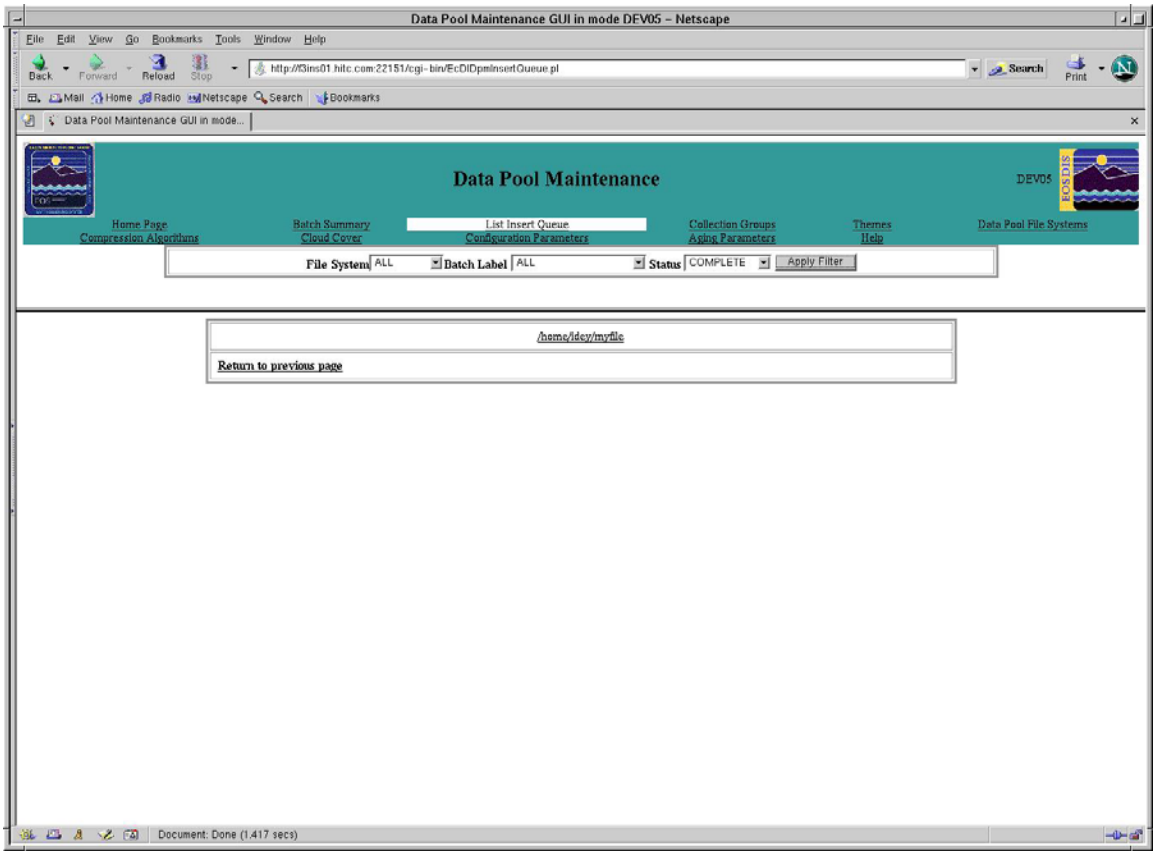


Figure 4.7.6-5. List Insert Queue Screen - Absolute xml File Path. This Screen Depicts the Absolute XML File Path for Non-ECS Data Pool Inserts.

Note: Limited capability users cannot cancel any inserts.

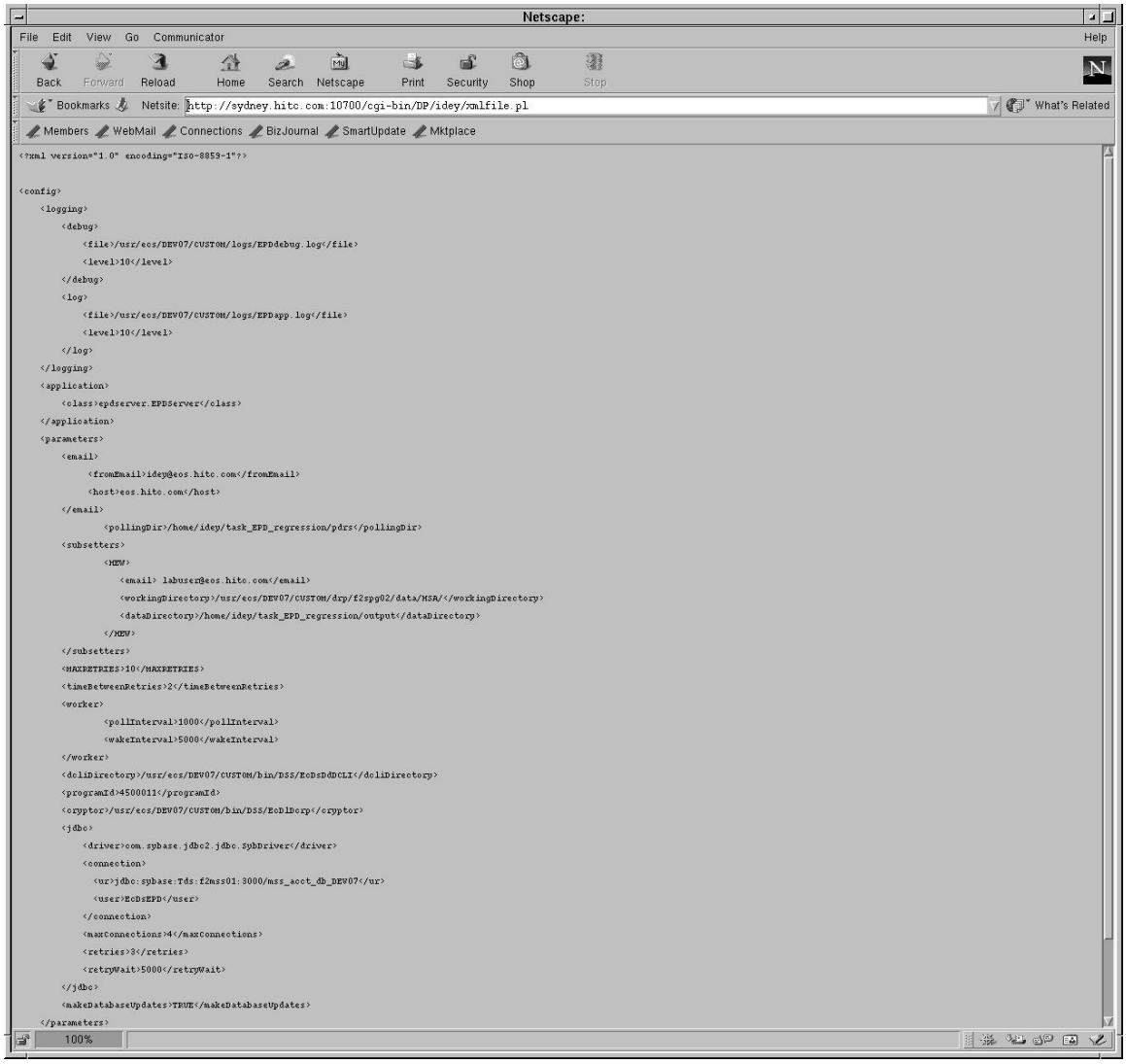


Figure 4.7.6-6. List Insert Queue Screen - XML File Content

4.7.6.1.4 Configuration Parameters Tab

The Configuration Parameters Screen shown in Figure 4.7.6-7 allows all operators to display the current values for the Data Pool Configuration Parameters. Full-capability operators can adjust the values for the parameters by entering new values in the input box. After making all changes, click on the **Click on Box to Modify Parameter** checkbox adjacent to the configuration parameters. Click on the **Apply Change** button to initiate the changes. See Table 4.7.6-4 for a description of the configuration parameters.

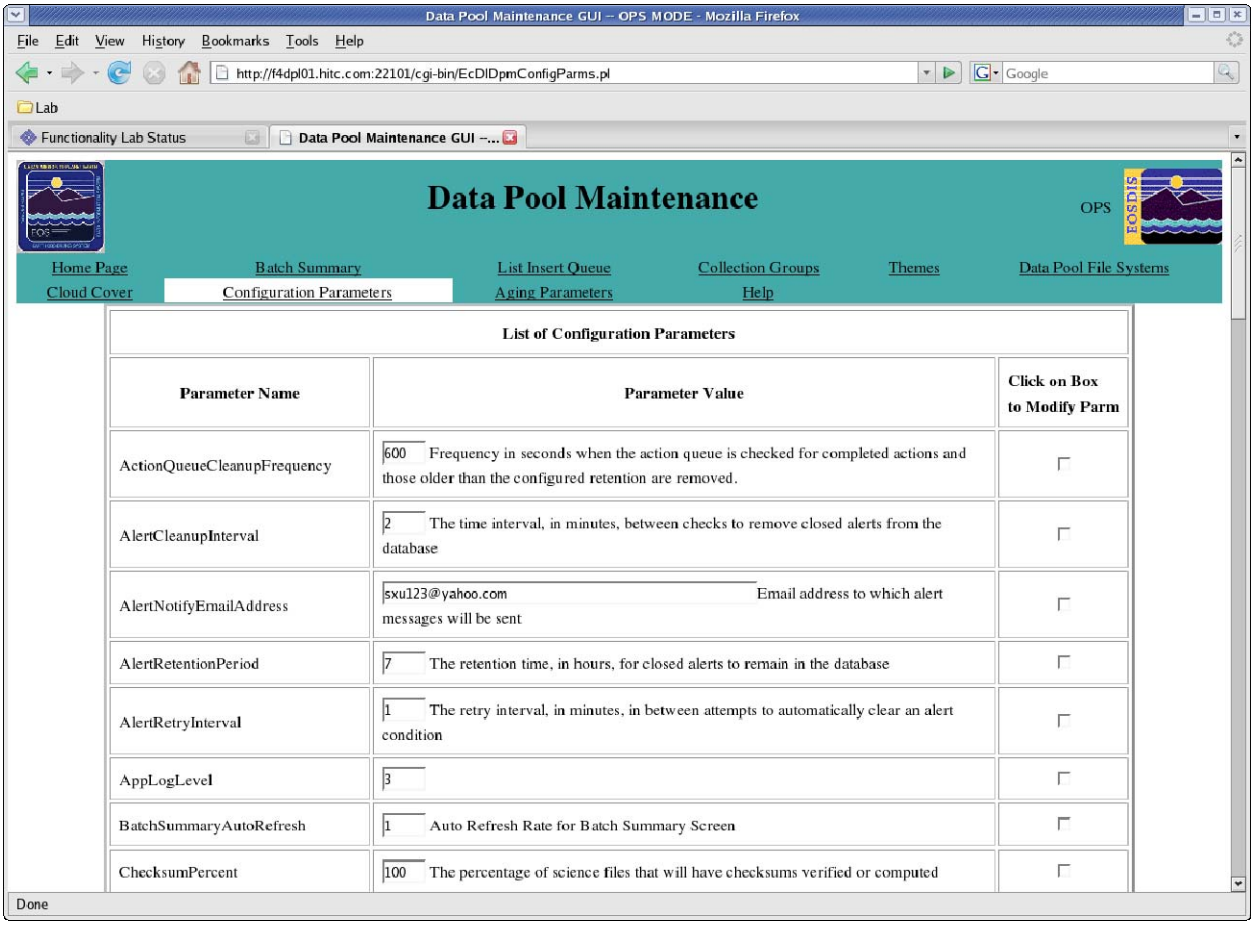


Figure 4.7.6-7. Configuration Parameters Screen. This Screen Depicts the Data Pool Configuration Parameters. The Full Capacity Operator Can Update the Parameters.

Note: Limited Capability users cannot update any parameters. Check boxes and button are non clickable

Table 4.7.6-4. Manage Configuration Parameters Field Description (1 of 5)

Field Name	Data Type	Size	Entry	Description
ActionQueueCleanUpFrequency	Integer	4	Optional	Frequency in seconds when the action queue is checked for completed actions and those older than the configured retention are removed.
AlertCleanupInterval	Integer	2	Optional	The time interval, in minutes, between checks to remove closed alerts from the database
AlertNotifyEmailAddress	Char	2	Optional	Email address to which alert messages will be sent
AlertRetentionPeriod	Integer	2	Optional	The retention time, in hours, for closed alerts to remain in the database
AlertRetryInterval	Integer	2	Optional	The retry interval, in minutes, in between attempts to automatically clear an alert condition
BatchSummaryAutoRefresh	Integer	4	Optional	The frequency in minutes when the batch summary front is refreshed.
ChecksumPercent	Integer	2	Optional	The percentage of science files that will have checksums verified or computed
Clean703Orders	Char	1	Optional	Flag indicating whether DPL should clean up order only granules: Y or N
DPLRetentionPatchInstalled	Char	1	Optional	The existence of this configuration parameter means that the DPL Retention patch has been installed and granules will not expire from the Data Pool
DatabaseRetryCount	Integer	2	Optional	The number of times a retryable database error may be retried before being considered failed
DatabaseRetryInterval	Integer	2	Optional	The number of seconds to wait between retries of a retryable database error
DefaultRetentionPeriod	Integer	4	Optional	The default retention period in days for all Data Pool Insert Actions.

Table 4.7.6-4. Manage Configuration Parameters Field Description (2 of 5)

Field Name	Data Type	Size	Entry	Description
DefaultRetentionPriority	Integer	4	Optional	The default retention priority for all Data Pool Insert actions. The valid range is 1 – 255.
DeleteCompleteActionsAfter	Integer	4	Optional	The time in minutes that operators let completed actions stay in the insert action queue before making them eligible for removal. This is intended to provide the operator with some ability to check on past actions. The time period should not be configured too long.
DisplayAIPChunkSize	Integer	4	Optional	Number of rows return per chunk for the Active Insert Processes List
FileSystemCheckInterval	Integer	2	Optional	The time interval, from 1 to 10 minutes, in between attempts to automatically clear a Data Pool file system alert condition
FileSystemRefreshRate	Integer	2	Mandatory	Time in minutes before the File Systems Page Refreshes. Values: Never, 1,5,10,15,30 mins
FilterChecksumAIP	Char	1	Mandatory	Show Checksummed Active Insert Processes on the Data Pool Maint. GUI page. Values: YES, NO
FilterCopiedAIP	Char	1	Mandatory	Show Copied Active Insert Processes on the Data Pool Maint. GUI page. Values: YES, NO
FilterExtractedAIP	Char	1	Mandatory	Show Extracted Active Insert Processes on the Data Pool Maint. GUI page. Values: YES, NO
FilterPendingAIP	Char	1	Mandatory	Show Pending Active Insert Processes on the Data Pool Maint. GUI page. Values: YES. NO
FilterValidAIP	Char	1	Mandatory	Show Validated Active Insert Processes on the Data Pool Maint. GUI page. Values: YES. NO

Table 4.7.6-4. Manage Configuration Parameters Field Description (3 of 5)

Field Name	Data Type	Size	Entry	Description
FreeSpaceResumePercent	Integer	2	Mandatory	The percentage of free space required before a Data Pool file system full condition may be cleared
GranuleLockRetentionPeriod	Integer	2	Optional	The age in hours that determines when a granule lock should be considered stale
GranuleOmLockRetentionPeriod	Integer	2	Optional	The age in minutes that determines when a granule lock by OMS should be considered stale
HEGCleanupAge	Integer	4	Optional	HEG cleanup age in days
IdleSleep	Integer	4	Optional	The number of seconds when there is nothing to do. Obsolete in 7.20
InCacheTimeLimit	Integer	4	Optional	The max time in minutes that operators are willing to wait for a DPIU process to complete whose files are in cache. After the time, DPAD kills the process and retries the action. Obsolete in 7.20
InsertRetryWait	Integer	4	Optional	The number of seconds to wait before an insert that failed should be resubmitted.
MAX_READ_DRIVES_<ARCHIVE>	Integer		Optional	One parameter per archive, Max number of simultaneous tape drives in used for the archive <ARCHIVE>
MFSOnInsert	Char	1	Optional	Availability of multiple file system on insert. Actual value set to Y(YES) / N(NO). Default is N (NO). Obsolete in 7.20
MaxConcurrentBandExtract	Integer	2	Optional	The maximum number of concurrent Band Extraction operations
MaxConcurrentDPIUThreads	Integer	2	Optional	The concurrency limit for the DPIU processing queue
MaxConcurrentEventThreads	Integer	2	Optional	The concurrency limit for the DPAD event processing queue
MaxConcurrentPublish	Integer	2	Optional	The maximum number of concurrent Data Pool publication operations

Table 4.7.6-4. Manage Configuration Parameters Field Description (4 of 5)

Field Name	Data Type	Size	Entry	Description
MaxConcurrentReadsPerTape	Integer	2	Optional	The maximum number of concurrent tape read (stage) operations for a single tape
MaxConcurrentRegister	Integer	2	Optional	The maximum number of concurrent Data Pool registration operations
MaxConcurrentRegister	Integer	2	Optional	The maximum number of concurrent Data Pool registration operations
MaxConcurrentValidate	Integer	2	Optional	The maximum number of concurrent request validation operations
MaxConsecutiveErrors	Integer	2	Optional	The maximum number of consecutive errors or timeout conditions for a service before an alert will be raised
MaxInsertRetries	Integer	4	Optional	The maximum number of times an insert should be tried again (-1 means forever).
MaxReadDrivesPerRequest	Integer	2	Optional	Max number of simultaneous tape drives in used
MaxTapeMountPerRequest	Integer	4	Optional	Maximum number of tape mount allow per request.
NewActionCheckFrequency	Integer	4	Optional	The frequency in seconds for checking for new actions. DPAD always checks if we are out of actions that can be dispatched, so unless getting things queued up in memory is urgent, this could be a time interval of minutes.
NumOfAllowedCacheProcesses	Integer	4	Optional	The maximum number of insert processes that require ARCHIVE access to cache.
NumOfAllowedInsertProcesses	Integer	4	Optional	The maximum number of insert processes running at any time.
NumOfAllowedNonCacheProcesses	Integer	4	Optional	The maximum number of insert processes that require ARCHIVE access to tape.
OnTapeTimeLimit	Integer	4	Optional	The maximum time in hours operators are willing to wait for a DPIU process to complete whose files are not in cache. After that time, DPAD kills the process and retries the action.

Table 4.7.6-4. Manage Configuration Parameters Field Description (5 of 5)

Field Name	Data Type	Size	Entry	Description
OrderOnlyFSLabel	Char	1	Optional	order only file system label
RefreshRate	Integer	4	Optional	The DPM Home Page refresh rate in seconds.
PerfLogLevel	Integer	1	Optional	Level for perf logging, 1-3.
RunAwayCheckFrequency	Integer	4	Optional	The frequency in seconds for checking for runaway processes. Recommend not making it much smaller than InCacheTimeLimit. Obsolete in 7.20.
RunawayDuration	Integer	4	Optional	Max period of time to wait for an insert to complete. Obsolete in 7.20.
SizeOfInsertQueueList	Integer	4	Optional	The number of Data Pool Insert Queue entries that can be displayed at any one time by the DPM GUI.
StartUpWait	Integer	4	Optional	The number of seconds to delay start-up while trying to clean out left over DPIU processes. Obsolete in 7.20

The Collection Groups Screen shown in Figure 4.7.6-8 allows the operator to view collection groups in the Data Pool database and navigate to the functions described in the following sections. See Table 4.7.6-5 for descriptors of the Collection Group screen.

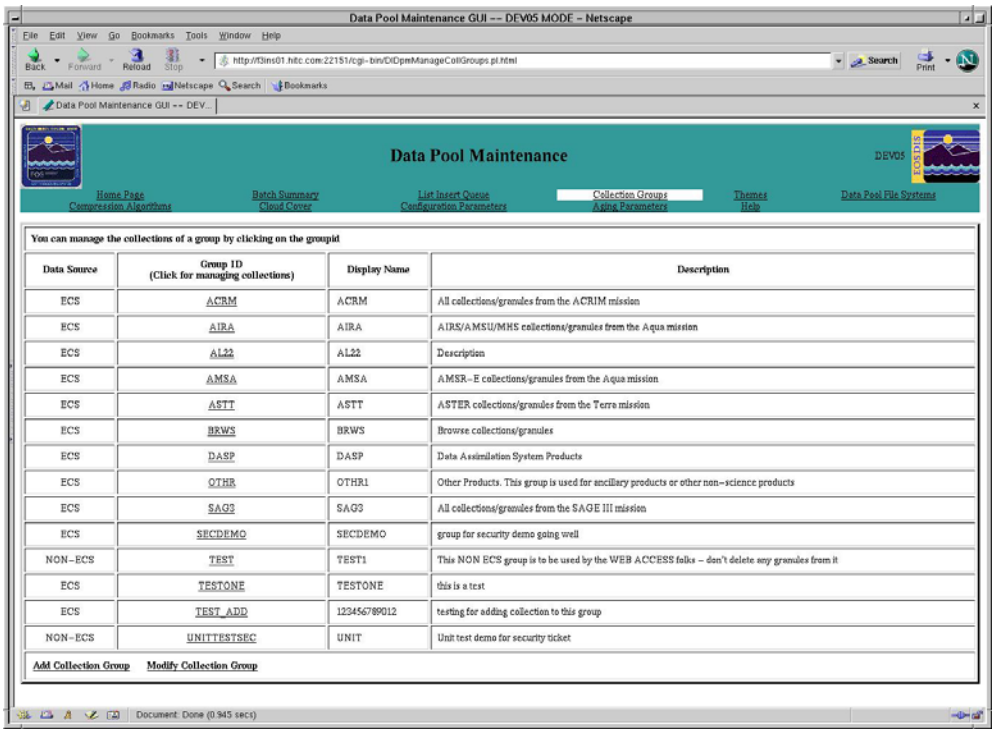


Figure 4.7.6-8. Collection Groups Screen Currently in the Data Pool

Table 4.7.6-5. Collection Group Field Descriptions

Field Name	Data Type	Size	Entry	Description
Data Source	Character	6	Required	To describe the source of the data whether ECS or NONECS.
Group ID	Character	12	Required	An up-to twelve letter identifier ([A-Z],[0-9] or underscore) of the group.
Display Name	Character	12	Optional	A twelve letter identifier of the display name (if left blank defaults to Group ID). (possible characters are [A-Z],[0-9], underscore or blank).
Description	Character	255	Required	A description for the collection group. It is scrollable up to 255 characters.

The **Add Collection Group** link will allow the user to add a new collection to the collection group and the **Modify Collection Group** link allows any changes to be made to the collection group.

Note: Limited capability users cannot click 'Add Collection Group' or 'Modify Collection Group' links.

4.7.6.1.5.1 Add New Collection Group

The full-capability operator can add a new ECS or Non-ECS collection group by clicking on the **Add Collection Group** link shown in Figure 4.7.6-8. This link will take the operator to the screen shown in Figure 4.7.6-9. To create a new group, the operator is required to enter the Group ID and Description, the Display Name is optional, and will default to the Group ID if nothing is entered. The Display Name is used for Web Drill Down. After entering the new collection group, click on the **Apply Change** button. The new collection group will be added to the Data Pool database and the List of Collection Groups screen will be refreshed. See Table 4.7.6-6 for Add Collection Group parameters.

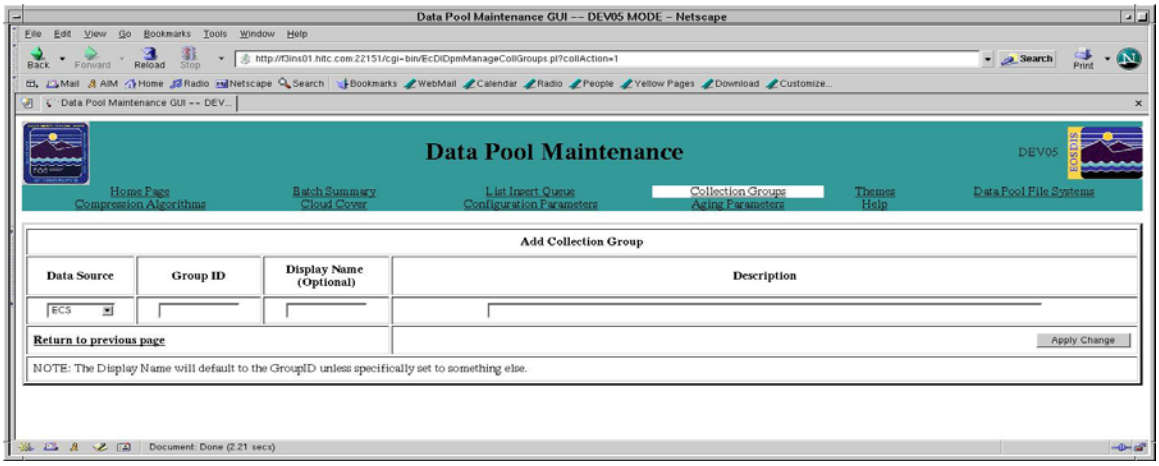


Figure 4.7.6-9. Add Collection Group Screen

Note: Limited Capability users cannot use this functionality.

Table 4.7.6-6. Add Collection Group Field Description

Field Name	Data Type	Size	Entry	Description
Data Source	Character	6	Required	To describe the source of the data whether ECS or NONECS.
Group ID	Character	12	Required	An up-to twelve letter identifier ([A-Z], [0-9] or underscore) of the group.
Display Name	Character	12	Optional	A twelve letter identifier of the display name (if left blank defaults to Group ID). (Possible characters are [A-Z], [0-9], underscore or blank).
Description	Character	255	Required	A description for the collection group. It is scrollable up to 255 characters.

4.7.6.1.5.2 Modify Collection Group Description

The full-capability operator can modify the description and display name for a collection group by clicking on the **Modify Collection Group** link shown in Figure 4.7.6-8. This link will take the operator to the screen shown in Figure 4.7.6-10. The operator can modify the description and display name for a collection group. After making a change, click on the **Check Box To Modify** checkbox, adjacent to the collection group description. After making all changes, click on the **Apply Change** button. The changes will be applied to the Data Pool database and the **List of Collection Groups** screen will be refreshed. See Table 4.7.6-7 for a description of the Modify Collection Group parameters.

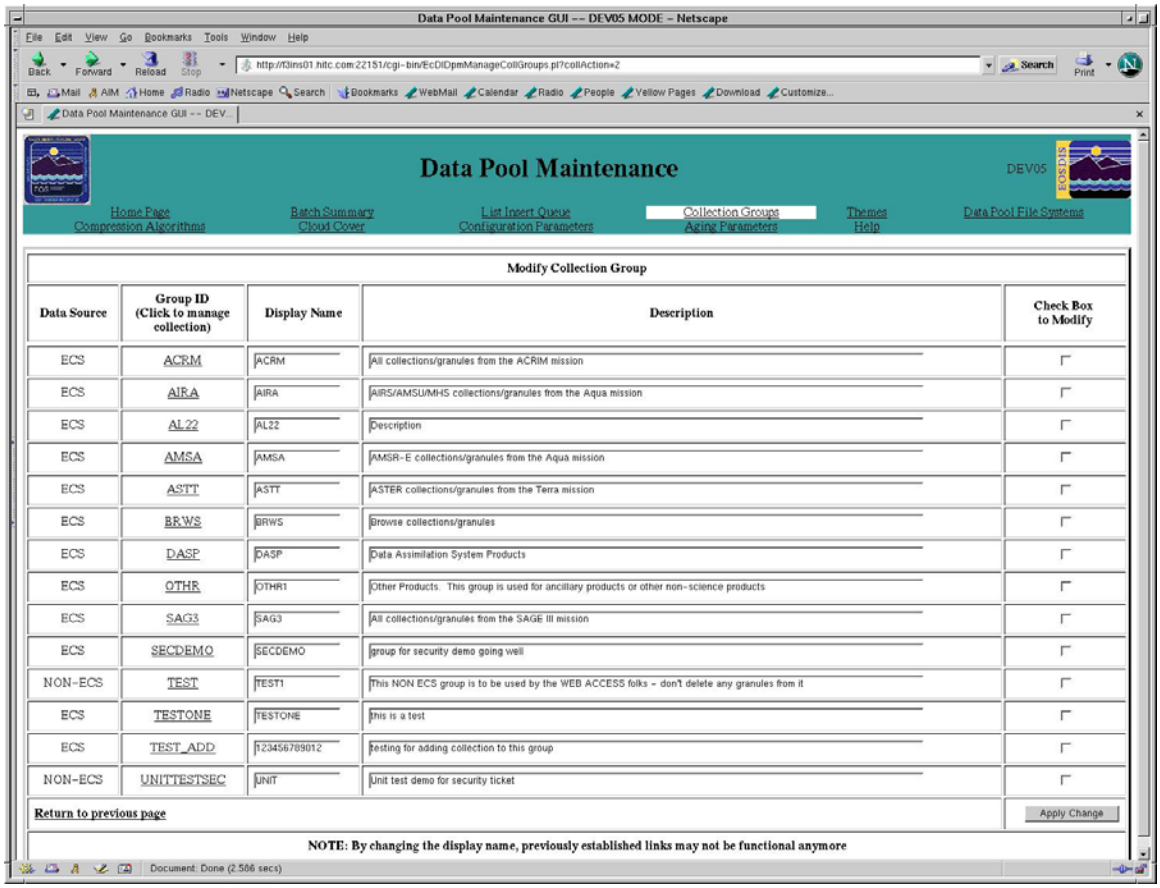


Figure 4.7.6-10. Modify Collection Group Screen (This Screen is Called from Figure 4.7.6-8 and Allows Full Capacity Operator to Modify the Collection Group).

Note: Limited Capability users cannot use this functionality.

Table 4.7.6-7. Modify Collection Group Field Description

Field Name	Data Type	Size	Entry	Description
Data Source	Character	6	Required	To describe the source of the data whether ECS or NONECS.
Group ID	Character	12	Required	An up-to twelve letter identifier ([A-Z],[0-9] or underscore) of the group.
Display Name	Char	12	Optional	Display name for the collection group.
Description	Char	100	Optional	A description for the collection group.

4.7.6.1.5.3 View Collections

The operator can view the collections associated with a collection group by clicking on the **GroupId** link shown in Figure 4.7.6-8. This link will take the operator to the Collections Associated with an ECS and Non-ECS Collection Group screen shown in Figure 4.7.6-11. **File System** l indicates a particular Data Pool file system. The default is to show all the collections from all Data Pool file system for a group. A drop down list will provide the operator the labels of all available file systems. The operator can use this list to filter the display of collections. The **Data Source** and **Group ID** are presented at the top of the table as a reference for which group is currently being viewed. See Table 4.7.6-8 for descriptions of the View Collection page entries.

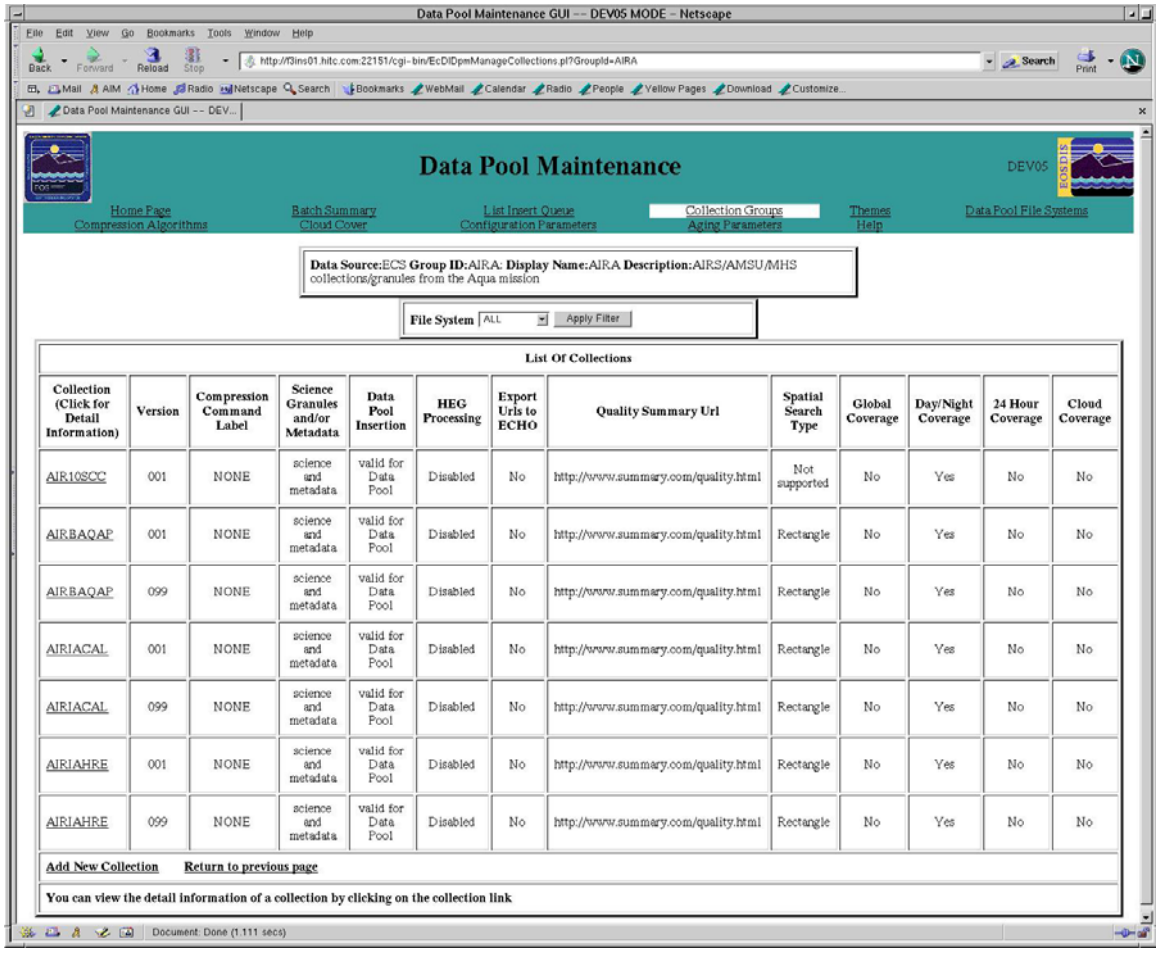


Figure 4.7.6-11. Collections Associated with Collection Groups

Note: Limited Capability users cannot click ‘Add Collection’ link.

Table 4.7.6-8. View Collection Group Field Description

Field Name	Data Type	Size	Entry	Description
Data Source	Character	6	Required	To describe the source of the data whether ECS or NONECS.
Group ID	Character	12	Required	An up-to twelve letter identifier ([A-Z], [0-9] or underscore) of the group.
Display Name	Char	12	Optional	Display name for the collection group.
Description	Char	100	Optional	A description for the collection group.
Collection	Char	8	System Generated	Name of a collection.
Version	Integer	1	System Generated	Version number of collection.
Science Granules and/or Metadata	Char	n/a	Optional	Indicate whether collection whether collection is Science Granules and/or Metadata.
Data Pool Insertion	Char	n/a	Optional	Indicates if the collection is eligible for insertion into Data Pool.
HEG Processing	Char	n/a	System Generated	Indicates if HEG processing is available or not
Export Urls to ECHO	Char	n/a	System Generated	Indicates in URL need to be exported or not
Quality Summary Url	Char	80	Optional	URL that describes the quality summary of a collection. Scrollable up to 255 characters
Spatial Search Type	Char	n/a	System Generated	Indicates if Spatial Search is required/needed.
Global Coverage	Char	1	Optional	Indicated if global coverage is needed.
Day/Night Coverage	Char	1	Optional	Indicate if day or night coverage is needed.
24 Hour Coverage	Char	1	Optional	Indicate if 24-hour coverage is needed.
Cloud Coverage	Char	1	Optional	Indicate if cloud coverage is needed.

The **Add Collection Group** link will allow the user to add a new collection to the collection group and the **Return to previous page** link will the take the user to the page prior.

4.7.6.1.5.4 View Collection Description

The operator can view the detail description for a collection by clicking on the Collection link shown in Figure 4.7.6-11. This link will take the operator to the Description of a Collection screen shown in Figure 4.7.6-12. This page will give detail information about an ECS or Non-ECS collection. Modify Collection will display the modify collection page for full capability operators. The operator can return to the previous page by clicking on the 'Return to previous page' link.

/

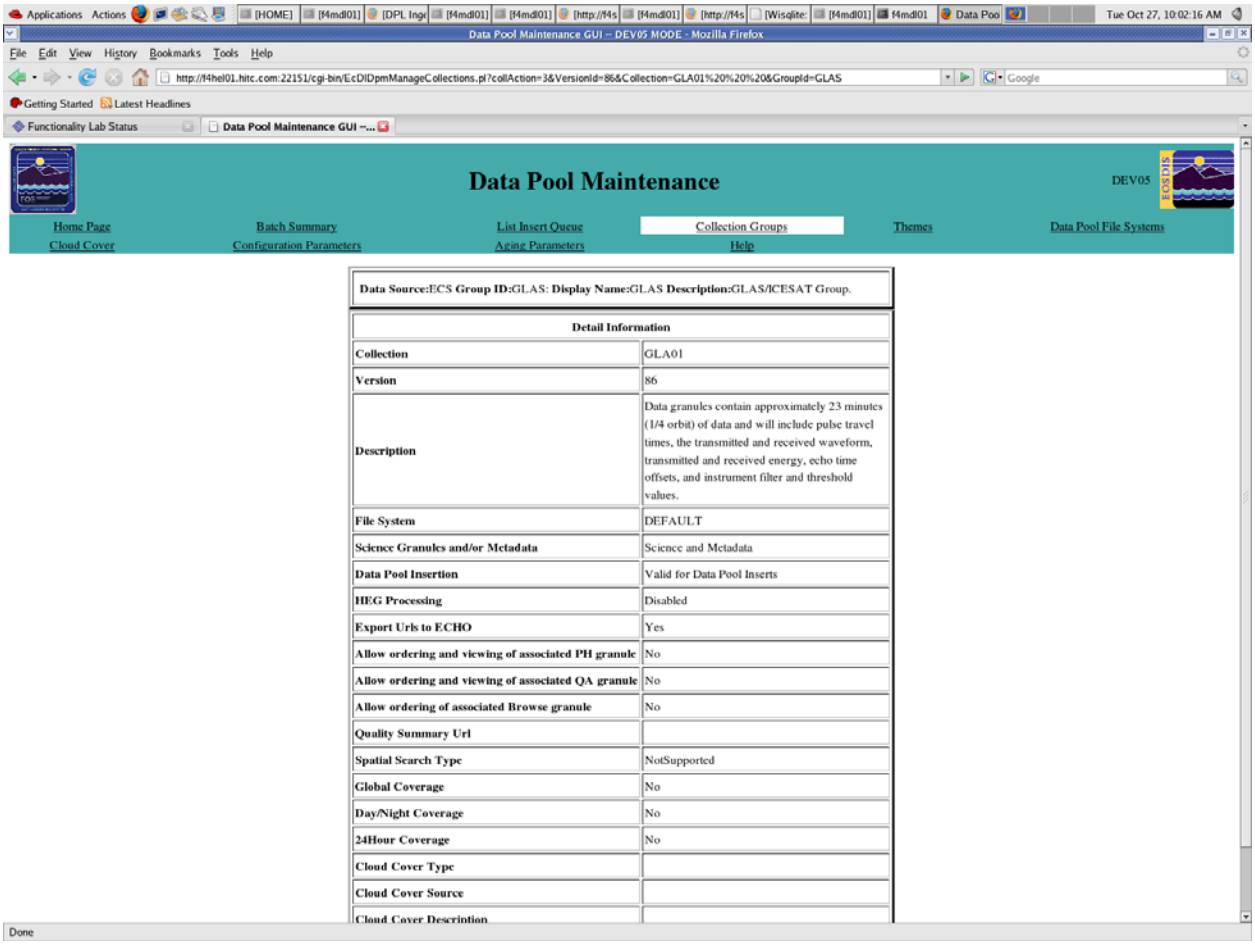


Figure 4.7.6-12. Description of a Collection

Field descriptions for the screen can be found in Table 4.7.6-9.

Note: Limited Capability users cannot click 'Modify Collection' link.

4.7.6.1.5.5 Add New Collection to Existing Collection Group

The full-capability operator can add an ECS collection by clicking on the **Add New Collection** link shown in Figure 4.7.6-11. An ECS collection can be added to an ECS Collection Group and a Non-ECS collection can be added to a Non-ECS group. The procedure for adding collections for ECS and Non-ECS groups are different. The operator can add a collection by clicking on the **Add New Collection** link in Figure 4.7.6-11. For ECS Group this link will take the operator to Figure 4.7.6-13, which displays a list of collections with its version number and description that are not in the Data Pool database. The operator can add any one of these collections to the group by clicking on the collection link. This will bring up the Add Collection page for an ECS Collection shown in Figure 4.7.6-12. The operator can add a Non-ECS collection to a Non-ECS

group by clicking on an **Add New Collection** link on a Non-ECS Collection Group Screen. This action will bring up Add Collection screen for a Non-ECS Collection shown in Figure 4.7.6-16.

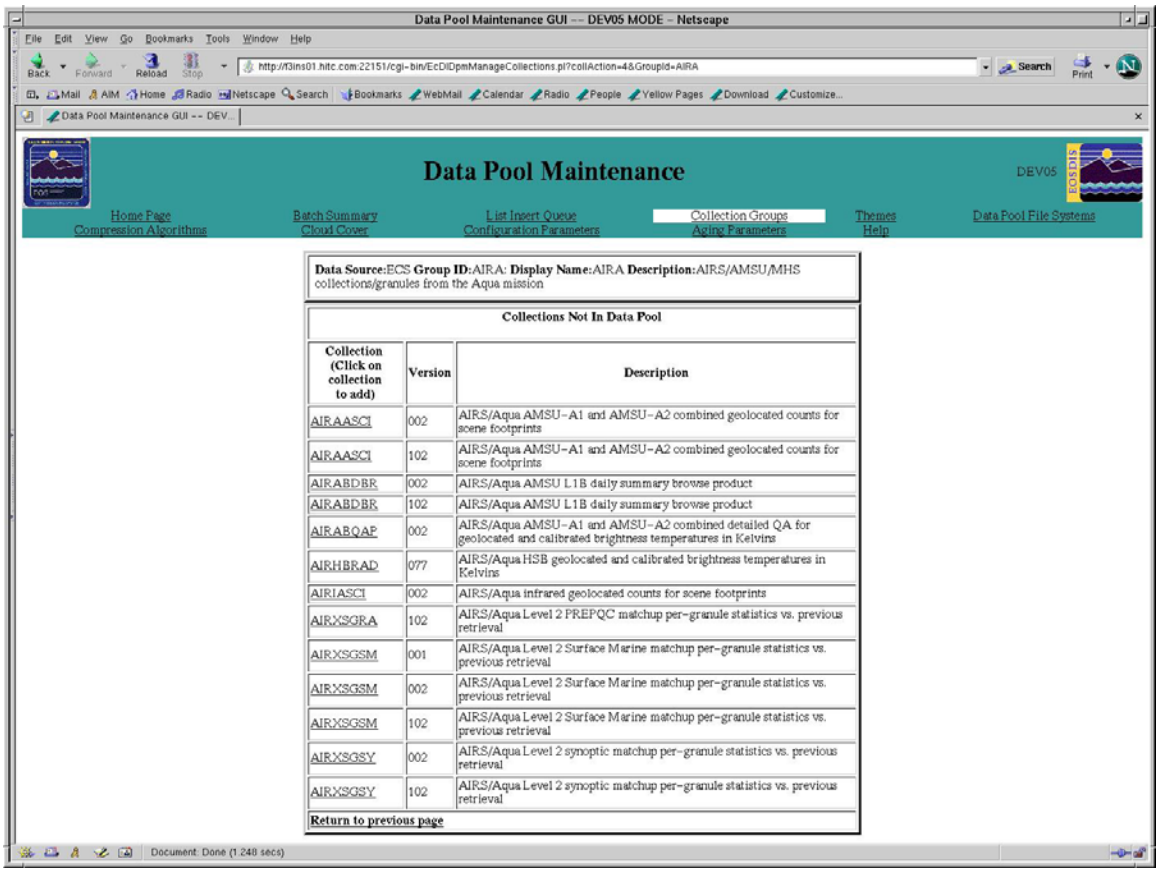


Figure 4.7.6-13. List of Collection Not in Data Pool

Note: This page is not accessible by Limited Capability users.

The full-capability operator can arrive at the Add ECS Collection page shown in Figure 4.7.6-14 by clicking on a collection link shown in Figure 4.7.6-11. Collection name, Version and Descriptions are predefined and cannot be changed. The operator can associate a collection with a File System label. Defaults for these two items are nulls. The Science Granules and /or Metadata row indicates if the collection is valid for science granule and metadata insertion or metadata only. The default value is science and metadata insertion. The operator can set the value to Metadata Only to indicate Metadata insertion only. The Data Pool Insertion indicates if the collection is eligible for insertion into Data Pool. The default value is invalid for data pool. The operator must set the value to valid for data pool to make the collection eligible for insertion into Data Pool. The Spatial Search Type indicates the types of search criteria used for Spatial searches such as GPolygon, Rectangle, or Orbit. The operator can also set the global coverage

flag to on/off. Default value for this flag is on. There are two more flag has on/off values can be set for a collection. Default for Day/Night flag is on and 24 hour flag is off. After creating the Quality Summary web page, the operators will enter the URL in the text area reserved for quality summary URL and thus associate the URL for the Quality Summary web page. A collection can be associated with a cloud cover attribute and its type. The operator can configure that in this page. There is also a text area to enter the cloud cover description. Defaults for quality summary, cloud cover attribute, cloud cover type and cloud cover description are nulls.

After making necessary selections the operator must press on **Apply Change** button to add the collection.

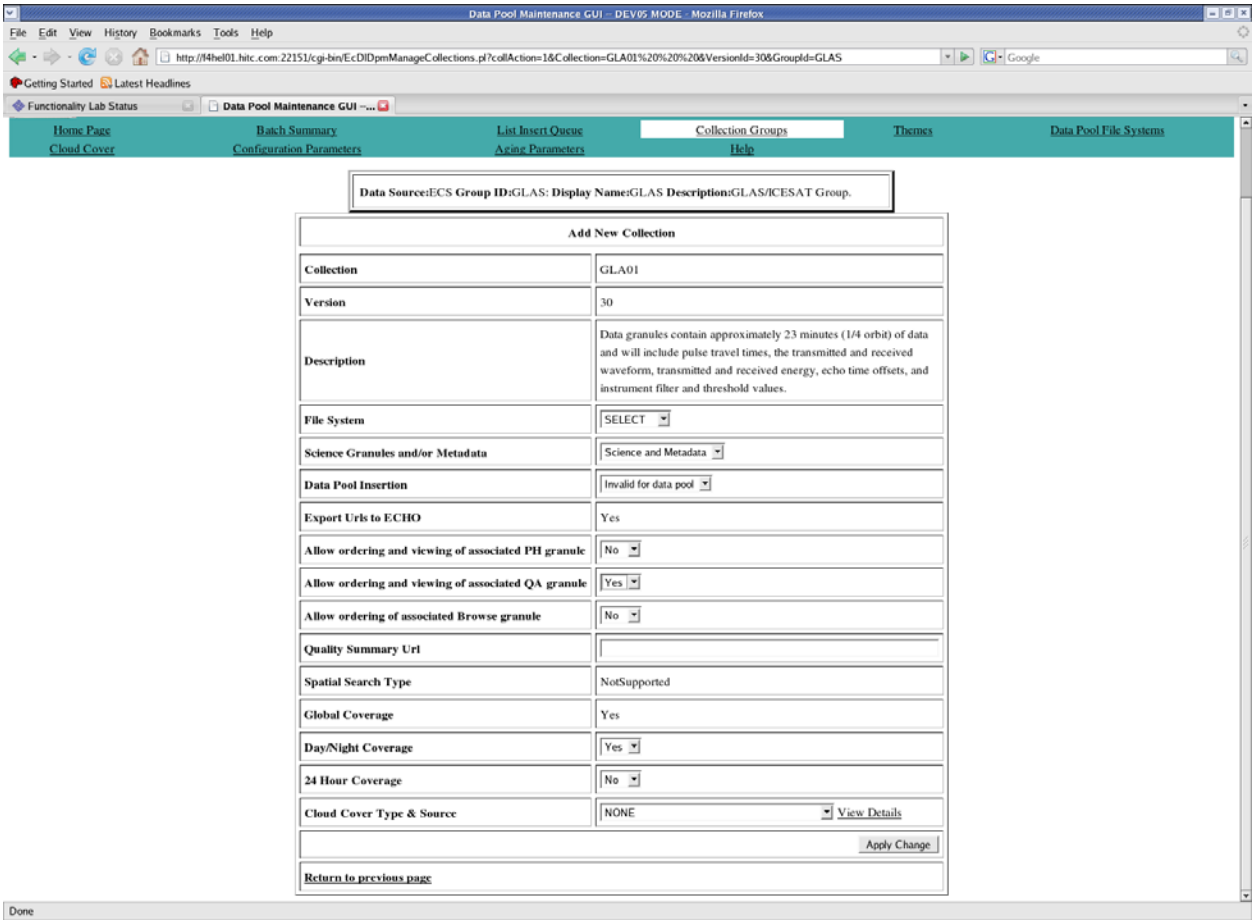


Figure 4.7.6-14. Add ECS Collection Page (This Page is only Accessible by Full Capability Operators)

Table 4.7.6-9. Add ECS Collection

Field Name	Data Type	Size	Entry	Description
Collection	Char	8	System Generated	Name of a collection.
Version	Integer	1	System Generated	Version number of collection.
Description	Char	80	Optional	Description of collection. Scrollable up to 255 characters.
File System	Char	n/a	Optional	File system path
Science Granules and/or Metadata	Char	n/a	Optional	Indicate whether collection whether collection is Science Granules and/or Metadata.
Data Pool Insertion	Char	n/a	Optional	Indicates if the collection is eligible for insertion into Data Pool.
Export Urls to ECHO	Char	1	Optional	Indicates if this collection is to be exported to ECHO.
Order PH	Char	1	Mandatory	If set to 'Y', allows associated PH granules to be ordered. The default value is 'N'. (Not applicable for Non-ECS or collection group 'OTHR'.)
Order QA	Char	1	Mandatory	If set to 'Y', allows associated QA granules to be ordered. The default value is 'N'. (Not applicable for Non-ECS or collection group 'OTHR'.)
Order Browse	Char	1	Mandatory	If set to 'Y', allows associated browse granules to be ordered. The default value is 'N'. (Not applicable for Non-ECS or collection group 'OTHR'.)
Quality Summary URL	Char	80	Optional	URL that describes the quality summary of a collection. Scrollable up to 255 characters
Spatial Search Type	Char	n/a	System Generated	Indicates if Spatial Search is required/needed.
Global Coverage	Char	1	Optional	Indicated if global coverage is needed.
Day/Night Coverage	Char	1	Optional	Indicate if day or night coverage is needed.
24 Hour Coverage	Char	1	Optional	Indicate if 24-hour coverage is needed.
Cloud Cover Type and Source	Char	n/a	Optional	Source and type name for a cloud cover.

Entries for Cloud Cover attribute and type must be verified against the XML small file archive.

An error window as shown in Figure 4.7.6-15 will pop up to indicate that collection cannot be added due to wrong cloud cover information. Click **OK** to dismiss the error window.

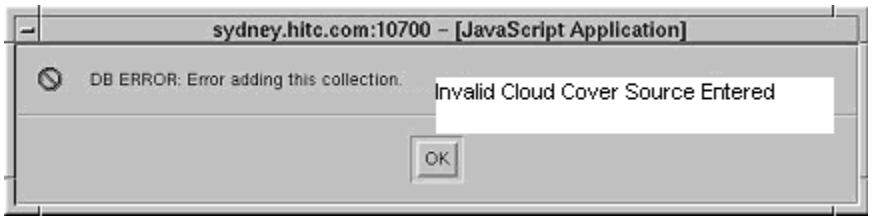


Figure 4.7.6-15. Error Window

The operator can add a Non-ECS collection to a Non-ECS group by clicking on an **Add New Collection** link in a Collections Associated with a Non-ECS Collection Group Screen. This action will bring up Add Collection screen for a Non-ECS Collection shown in Figure 4.7.6-16. The operator needs to enter a Collection name and Version number. These two fields are required. The operator can provide an optional collection Description for the collection. The operator can associate a collection with a File System label. Defaults for these two items are nulls. The Science Granules and /or Metadata row indicates if the collection is valid for science granule and metadata insertion or metadata only. The default value is science and metadata insertion. The operator can set the value to Metadata Only to indicate Metadata insertion only. The Data Pool Insertion indicates if the collection is eligible for insertion into Data Pool. The default value is invalid for data pool. The operator must set the value to valid for data pool to make the collection eligible for insertion into Data Pool. NONECS collections can also have the option to configure Spatial Search Type for a collection. Options provided are 'Not supported', 'Rectangle', Gpolygon and 'Orbit'. Default value for Spatial Search Type is 'Not Supported'. The operator can also set the global coverage flag to on/off. Default value for this flag is on. There are two more flag has on/off values can be set for a collection. Default for Day/Night Coverage flag is on and 24 hour coverage flag is off. After creating the Quality Summary web page, the operators will enter the URL in the text area reserved for quality summary URL and thus associate the URL for the Quality Summary web page. A collection can be associated with a Cloud Cover Type and Source attribute. The operator can configure that in this page. There is also a text area to enter the cloud cover description. Defaults for quality summary, cloud cover attribute, cloud cover type and cloud cover description are null. After making necessary selections operator must press on **Apply Change** button to add the collection. Table 4.7.6-10 gives descriptors for each of the Add New Non-ECS Collection entries.

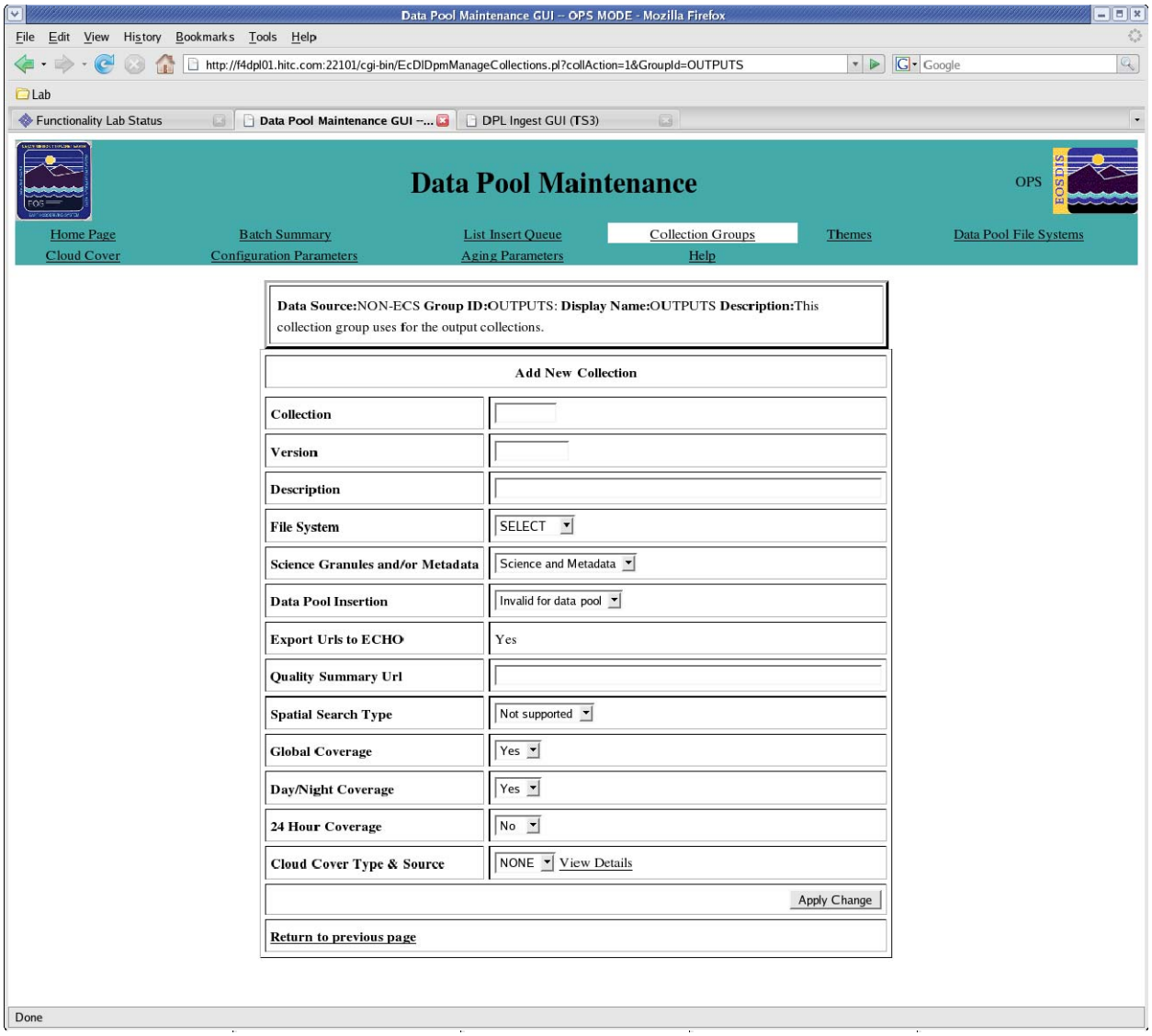


Figure 4.7.6-16. Add Non-ECS Collection Page (This Page is Only Accessible by Full Capability Operators)

Note: Limited Capability users cannot use this functionality.

Table 4.7.6-10. Add Non-ECS Collection

Field Name	Data Type	Size	Entry	Description
Collection	Char	8	Required	Name of a collection.
Version	Integer	1	Required	Version number of collection.
Description	Char	80	Required	Description of collection. Scrollable up to 255 characters.
File System	Char	n/a	Optional	File system path
Science Granules and/or Metadata	Char	n/a	Optional	Indicate whether collection whether collection is Science Granules and/or Metadata.
Data Pool Insertion	Char	n/a	Optional	Indicates if the collection is eligible for insertion into Data Pool.
Export Urls to ECHO	Char	1	Optional	Indicates if this collection is to be exported to ECHO.
Quality Summary URL	Char	80	Optional	URL that describes the quality summary of a collection. Scrollable up to 255 characters
Spatial Search Type	Char	n/a	Optional	Indicates if Spatial Search is required/needed and its type.
Global Coverage	Char	1	Optional	Indicated if global coverage is needed.
Day/Night Coverage	Char	1	Optional	Indicate if day or night coverage is needed.
24 Hour Coverage	Char	1	Optional	Indicate if 24-hour coverage is needed.

Entry for Non-ECS Collection name is verified against input error. It is also verified against same name and same version ID. An error window, as shown in Figure 4.7.6.17 and Figure 4.7.6.18, will pop up for each case on the Add Collection screen. Click **OK** to dismiss the error window.

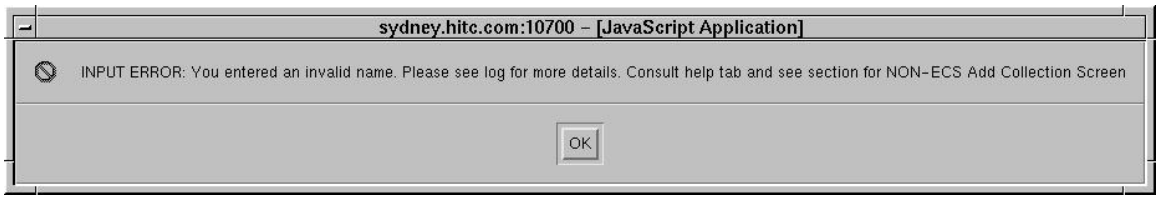


Figure 4.7.6-17. Input Error Window

Figure 4.7.6-18. DB Error Window

4.7.6.1.5.6 Modify Existing Collection

The full-capability operator can modify a collection by clicking on the **Modify Collection** link shown in Figure 4.7.6-12 will take the operator to the Modify Collection page. There is one difference between the ECS and NON-ECS modify page. The ECS modify page does not allow the operator to modify a collection's description. The NON-ECS modify page allows the description field to be updated. Figure 4.7.6-19 describes modify an ECS collection example page and Figure 4.7.6-20 describes a NON-ECS modify page.

Both modify pages displays current information and allow operator modifications. After all desired changes are entered, the operator needs to click on the button called **Apply Change.** This action will change the data in database.

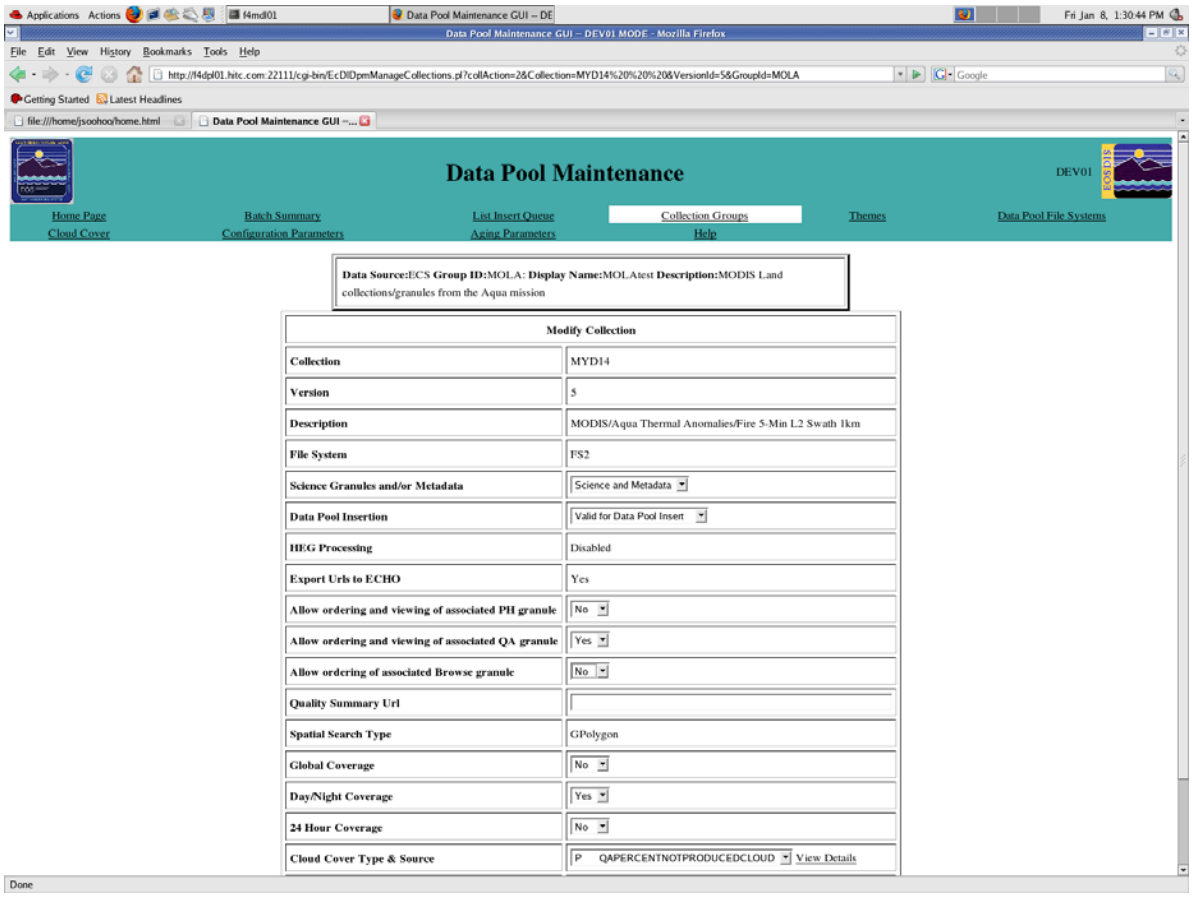


Figure 4.7.6-19. ECS Modify Collection Screen

Note: Limited Capability users cannot use this functionality.

Field descriptions for the screen can be found in Table 4.7.6-9.

Starting with Release 7.23, the cloud cover source can be modified for collections that already have granules in the public DPL, as opposed to 7.22, when the cloud cover source can be modified only for collection without DPL public granules. To correctly change the cloud cover source for such collections, the DPL Maintenance GUI functionality must be used together with the cloud cover utility script (EcDlCloudCoverUtilityStart). The following operations are permitted:

a. **Remove** the cloud cover source for a specified collection: set the cloud cover source for the collection to "NONE" and run the EcDlCloudCoverUtilityStart –operation **remove** for the specified collection. This operation should be used when the DAAC does not want to present cloud cover counts to its users during the DPL Web Access web drill down steps.

b. **Reconfigure** the cloud cover source for a specified collection: set the cloud cover source for the collection to the new source (if the new source doesn't already exist it will have to be created) and run the EcDlCloudCoverUtilityStart –operation **repopulate** for the specified collection. This operation should be used when the DAAC determined that the cloud cover source has been incorrectly configured for a collection.

c. **Enable/Configure** the cloud cover source for a specified collection: set the cloud cover source for the collection to the desired cloud cover source (a new source must be created if necessary) and run the EcDlCloudCoverUtilityStart –operation **populate** for the specified collection. This operation should be used when the DAAC determined that the cloud cover source is absent for a collection that should have had a cloud cover source.

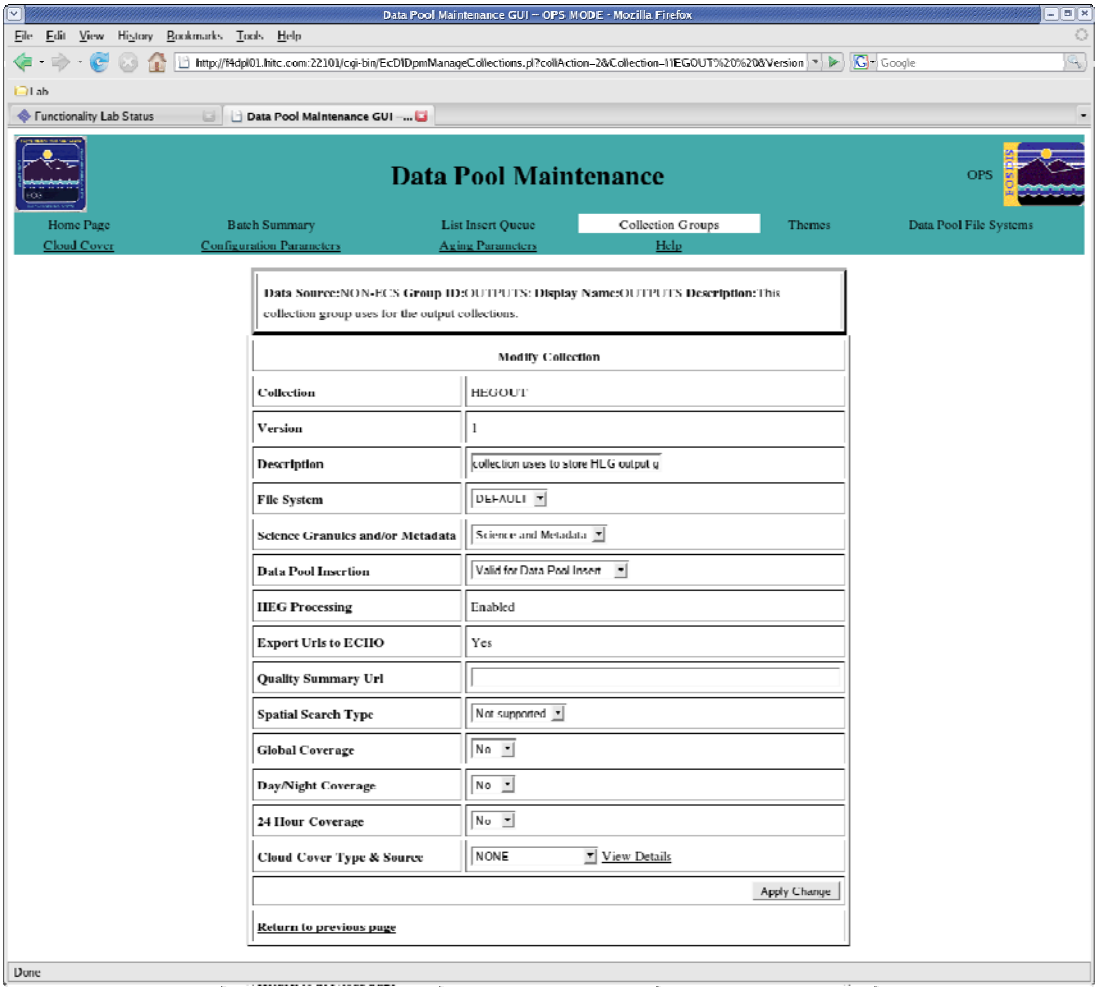


Figure 4.7.6-20. Non-ECS Modify Collections Screen

Field descriptions for the screen can be found in Table 4.7.6-10.

Note: Limited Capability users cannot use this functionality.

4.7.6.1.6 Data Pool File System Tab

Manage File System screen shown in Figure 4.7.6-21 allows the operator to view a list of file systems and information on Free Space Flag, Availability for insert, and Min Freed Space Amount. From this page the full capability operator can also configure a new file system and modifying an existing one by clicking on the link **Add New File System** and **Modify Data Pool File System Information** link respectively. Clicking on **Add New File System** will take the operator to 'Add New File System' page shown in Figure 4.7.6-22. The operators need to add five fields --- 1) File System Label: A label representing an existing Data Pool file system. 2) Free Space Flag: Value needs to be set is either ON or OFF. If is set to ON that means free space is available. If it is set to OFF then that means free space is not available. 3) Availability for Insert: Value needs to be set is either 'Available' or 'Unavailable'. If the value is set to 'Available' that means file system is available for Data Pool insert. If the value is set to 'Unavailable' that means file system is not available for Data Pool insert. 4): Absolute Path: indicates path name to location. 5) Min Freed Space: Need to enter an integer value, which represent megabytes of space. This amount space must remain free in order to make the file system available for insert. Clicking on Modify File System will take the operator to 'Modify File System Information' page shown in Figure 4.7.6-23. The operator can change Free Space Flag, Availability for insert flag, and the Min Freed Space Amount in this page. There are check boxes associated with each file system. The operator can change multiple file system at one time by checking the desired file system's checkboxes and press on **Apply Change** button.

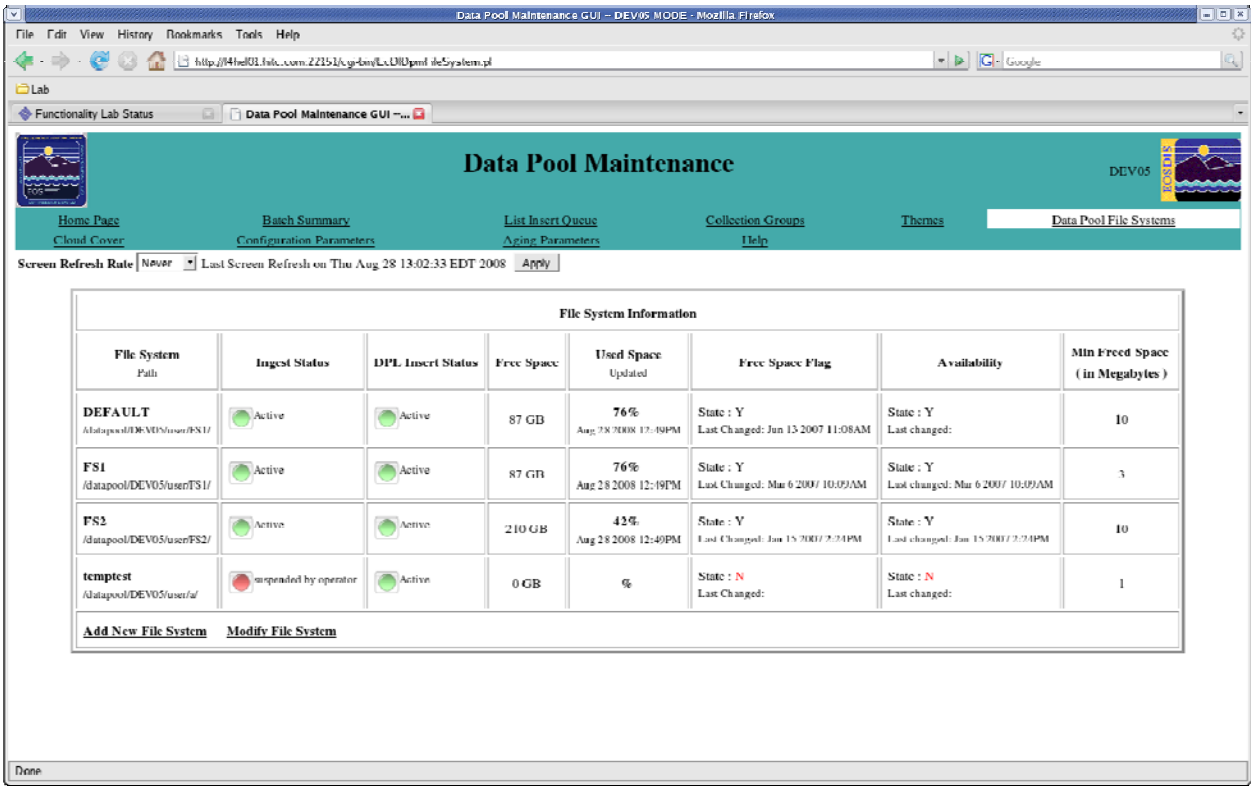


Figure 4.7.6-21. Data Pool File System Information Screen

Field descriptions for the screen can be found in Table 4.7.6-11.

Note: Limited Capability users cannot click 'Add New File System' or 'Modify File System' links.

Table 4.7.6-11. File System Information Field Description

Field Name	Data Type	Size	Entry	Description
Label	char	10	Required	File System Label. Limited to 10 characters. This is displayed in the File System Path column.
Absolute Path	char	255	Required	File system's absolute path. Only relative path is modifiable. Limited to 255 characters for the entire path. This is displayed in the File System Path column.
Ingest Status	Int	1	Derived	Indicates if the file system is enabled for DPL ingest processes.
DPL Insert Status	Int	1	Derived	Indicates if the file system is enabled for public datapool insert processes.
Free Space	Int	5	Derived	Indicates the space available on this file system (in GB)
Used Space	Int	2	Derived	Indicated the percentage of the file system used and the date this statistic was last updated.
Free Space Flag	char	1	Optional	Indicates if space is available for Data Pool insert. 'ON' value indicates that space is available. Default is 'ON'.
Availability	char	1	Optional	File system available for insert. Value 'YES' indicate it is available and value 'NO' it is not available. The default value is 'YES'.
Min Freed Space (in Megabytes)	int	4	Optional	Amount space must be freed in order to make the file system available

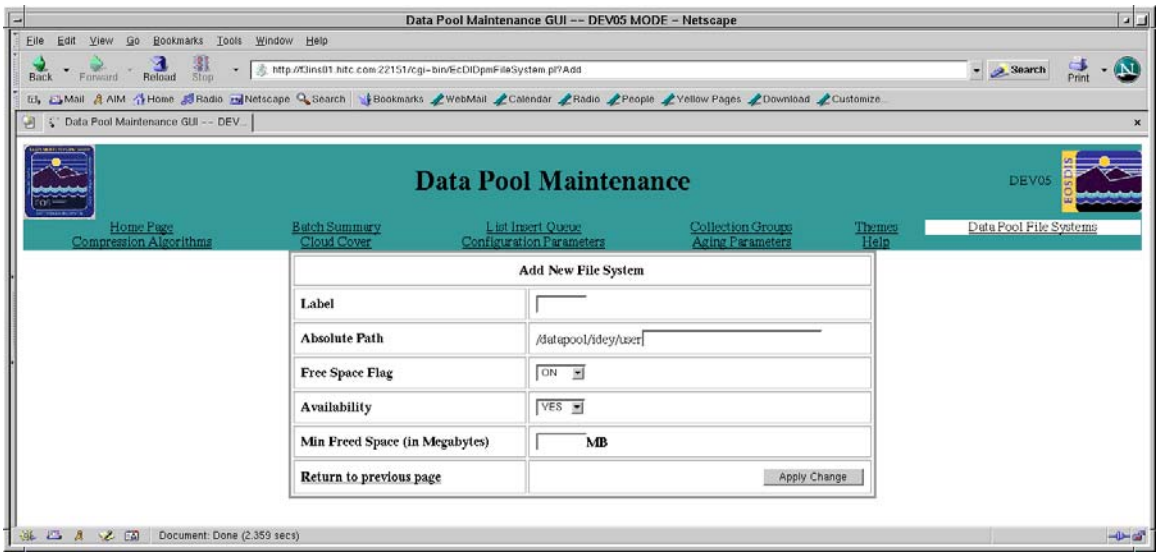


Figure 4.7.6-22. Add New File System Screen

Field descriptions for the screen can be found in Table 4.7.6-12.

Note: Limited Capability users cannot use this functionality.

Table 4.7.6-12. Add New File System Field Description

Field Name	Data Type	Size	Entry	Description
Label	char	10	Required	File System Label. Limited to 10 characters.
Absolute Path	char	255	Required	File system's absolute path. Only relative path is modifiable. Limited to 255 characters for the entire path.
Free Space Flag	char	1	Optional	Indicates if space is available for Data Pool insert. 'ON' value indicates that space is available. Default is 'ON'.
Availability	char	1	Optional	File system available for insert. Value 'YES' indicate it is available and value 'NO' it is not available. The default value is 'YES'.
Min Freed Space (in Megabytes)	int	4	Optional	Amount space must be freed in order to make the file system available

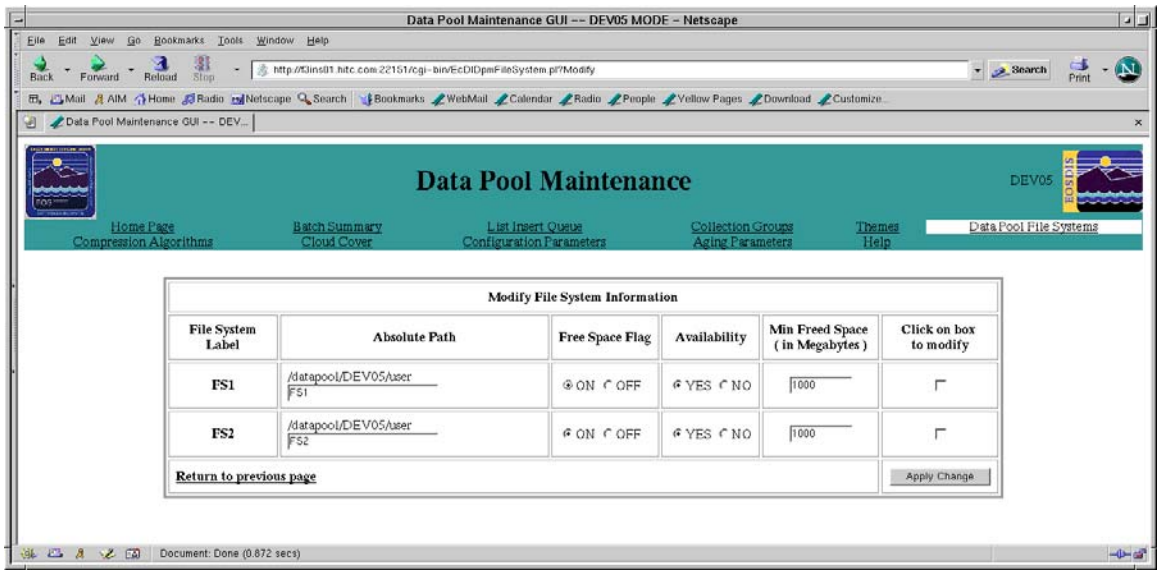


Figure 4.7.6-23. Modify File System Information Screen

Field descriptions for the screen can be found in Table 4.7.6-13.

Note: Limited Capability users cannot use this functionality.

Table 4.7.6-13. Modify File System Information Field Description

Field Name	Data Type	Size	Entry	Description
File System Label	char	10	Required	File System Label. Limited to 10 characters.
Absolute Path	char	255	Required	File system's absolute path. Only relative path is modifiable. Limited to 255 characters for the entire path.
Free Space Flag	char	1	Optional	Indicates if space is available for Data Pool insert. 'ON' value indicates that space is available. Default is 'ON'.
Availability	char	1	Optional	File system available for insert. Value 'YES' indicate it is available and value 'NO' it is not available. The default value is 'YES'.
Min Freed Space (in Megabytes)	int	4	Optional	Amount space must be freed in order to make the file system available
Click on box to modify	checkbox	1	Optional	Select when modifications are needed

4.7.6.1.7 Themes Tab

The Themes screen shown in Figure 4.7.6-24 allows the operator to view a list of themes in alphabetical order. This list can be filtered using three filter criteria: **Web Visible**, **Insert Enabled** and **Beginning Letters**. The options for **Web Visible**: Yes, No and ALL. The options for **Insert Enabled**: Yes, No and ALL. All of these criteria can be used together or separately. After selecting the option click **Apply Filter** button to view the filtered list of themes. From this page the operator can also delete a theme by selecting the corresponding Click On Box To Delete check box and clicking on the "**Apply Change"** button. The operator can add a new theme by clicking on the **Add A New Theme** link**.** This link will take the operator to "Add New Theme" page shown in Figure 4.7.6-25. The operator needs to add four fields regarding a theme: name, description, valid for insert or not and valid for web drill down or not. The operator also can modify an existing theme by clicking on the "**Modify Theme**" link from Figure 4.7.6-24. This link will take the operator to the Modify Theme page shown in Figure 4.7.6-28. Theme name is the only field that is not editable. The operator can modify the description of a theme by simply retyping in the text area. The operator also can change the option for Insert enabled and web enabled by selecting or deselecting the appropriate boxes. After making the selection the operator needs to select the check box corresponding to the theme and then press the **Apply Change** button. Upon pressing this button the changes will take effect in the Data Pool database and also the Manage Themes page in Figure 4.7.6-24 will be refreshed.

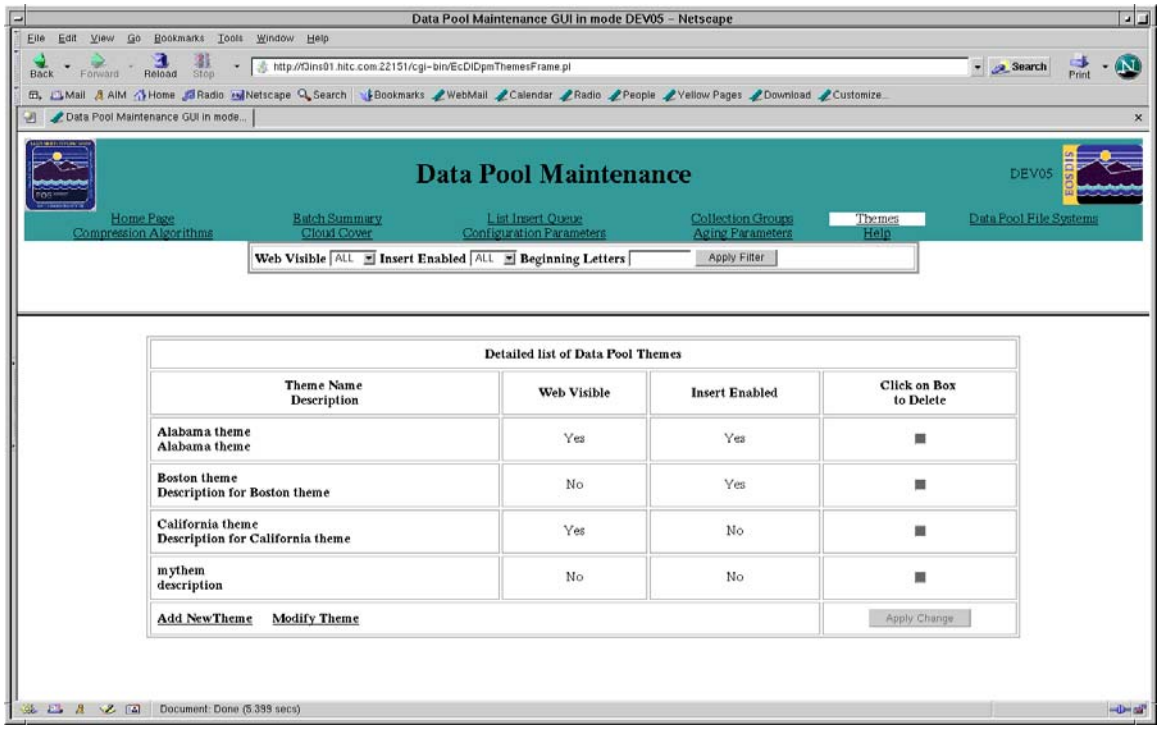


Figure 4.7.6-24. Themes Screen

Note: Limited Capability users cannot click 'Add New Theme' or 'Modify Theme' links. They also cannot delete themes. All check boxes and 'Apply Change' button cannot be clicked.

Table 4.7.6-14 lists the filter theme field descriptions.

Table 4.7.6-14. Filter Theme Field Description

Field Name	Data Type	Size	Entry	Description
Theme Name Description	char char	40 100	Required Required	Partial or full name of a theme. Description of the theme.
Web Visible	char	1	Optional	Availability for Web scroll down. The default will be system generated.
Insert Enabled	char	1	Optional	Enabled for Data Pool insert. The default will be system generated.
Click on Box to Delete	check box	1	Optional	Option to delete theme name and its corresponding information once box is checked

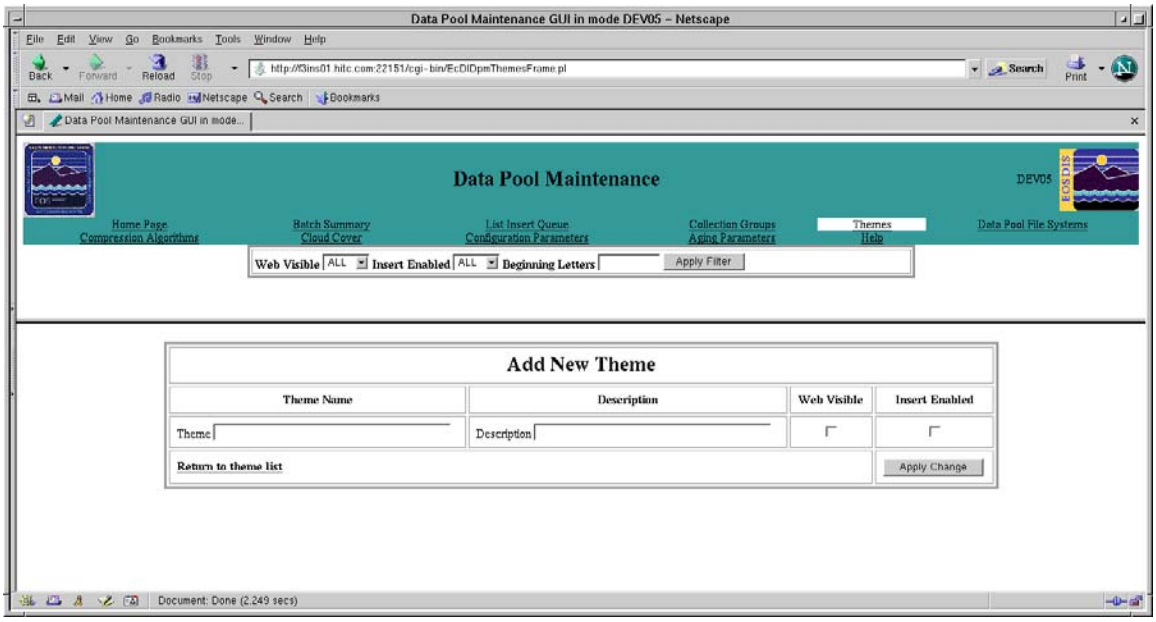


Figure 4.7.6-25. Add a New Theme Screen

Note: Limited Capability users cannot use this functionality

See Table 4.7.6-15 below for field descriptors for the Add New Themes page.

Table 4.7.6-15. Add a New Theme Field Description

Field Name	Data Type	Size	Entry	Description
Theme Name	char	20	Required	Name of a theme. Scrollable up to 40 characters.
Description	char	100	Required	Description of a theme. Scrollable up to 255 characters.
Web Visible	Check box	1	Optional	Availability for Web scroll down.
Insert Enabled	Check box	1	Optional	Enabled for Data Pool insert.

Theme names will be verified against input errors and name duplication. An error window will pop in each case over the **Add A New Theme** page to indicate the error, shown in Figure 4.7.6-26 and Figure 4.7.6-27. Click **OK** to dismiss the window.

Figure 4.7.6-26. Input Error Screen

Figure 4.7.6-27. DB Error Screen

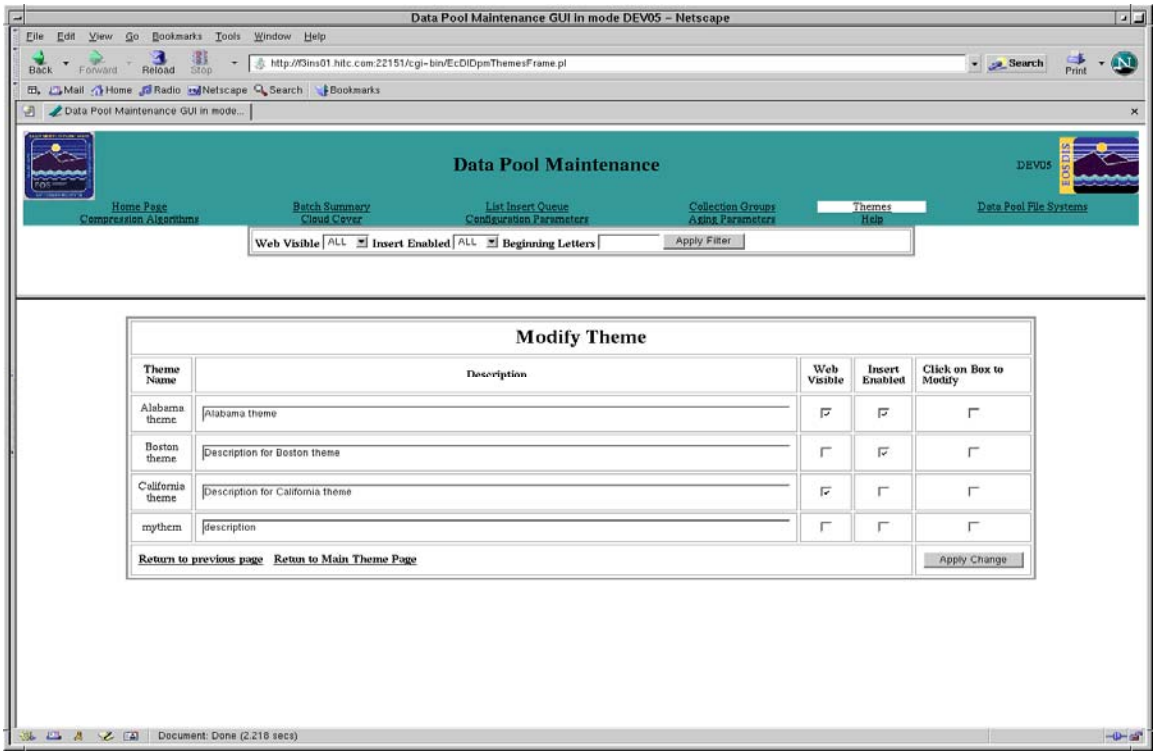


Figure 4.7.6-28. Modify Theme Screen

Note: Limited Capability users cannot use this functionality.

See Table 4.7.6-16 for Modify Theme Field Descriptions field descriptors.

Table 4.7.6-16. Modify Theme Field Description

Field Name	Data Type	Size	Entry	Description
Theme Name	char	20	Required	Name of a theme. Scrollable up to 40 characters.
Description	char	100	Optional	Description of a theme. Scrollable up to 255 characters.
Web Visible	check box	1	Optional	Availability for Web scroll down. Default will be not Web visible.
Insert Enabled	check box	1	Optional	Enabled for Data Pool insert. Default will be not available for insert.
Click on Box to Modify	checkbox	1	Optional	Select when modifications are needed

4.7.6.1.8 Cloud Cover Tab

Cloud Cover Information screen shown in Figure 4.7.6-29 allows the operator to view a list of Cloud Cover source names, their types and descriptions. It also provides check boxes beside each cloud cover information rows to delete any of the entries. Only full capability operators can execute this delete operation. The full capability operators can also configure a new cloud cover information and modifying description of an existing one by clicking on the link Add New Cloud Cover and Modify Source Description link respectively. Clicking on **Add New Cloud Cover** will take the operator to 'Add A New Cloud Cover Information' page shown in Figure 4.7.6-30. The operators need to add three fields --- 1) Source Type: A drop down list consisting of types. Currently there are two types: Core Metadata and PSA (Product Specific Attribute). If 'Core Metadata' is selected then source name will be automatically populated. 2) Source Name: Need to enter a valid source name if 'PSA' is selected for Source Type. 3) Source Description: Need to enter a description for the source. This description can be 255 characters long. Clicking on **Modify Source Description** will take the operator to '**Modify Cloud Cover Description'** page shown in Figure 4.7.6-31. The operator can change the source description. There are check boxes associated with each cloud cover information item. The operator can change information at one time by checking the desired cloud cover information's checkboxes and press on **Apply Change** button. See Table 4.7.6-17 for field descriptors of the cloud cover pages.

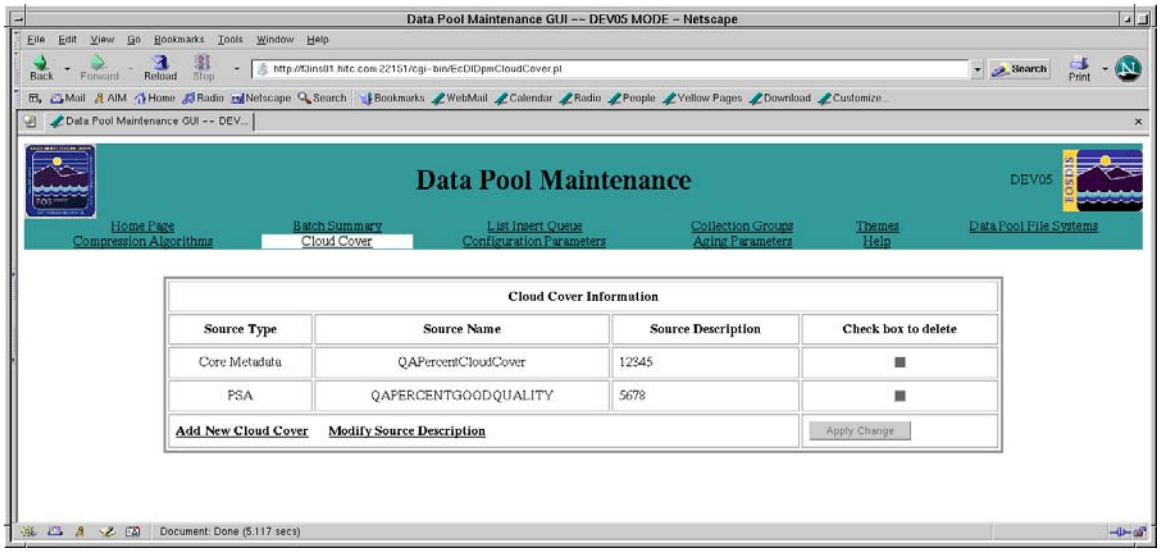


Figure 4.7.6-29. Cloud Cover Information Screen

Note: Limited Capability users are not allowed to delete cloud cover information.

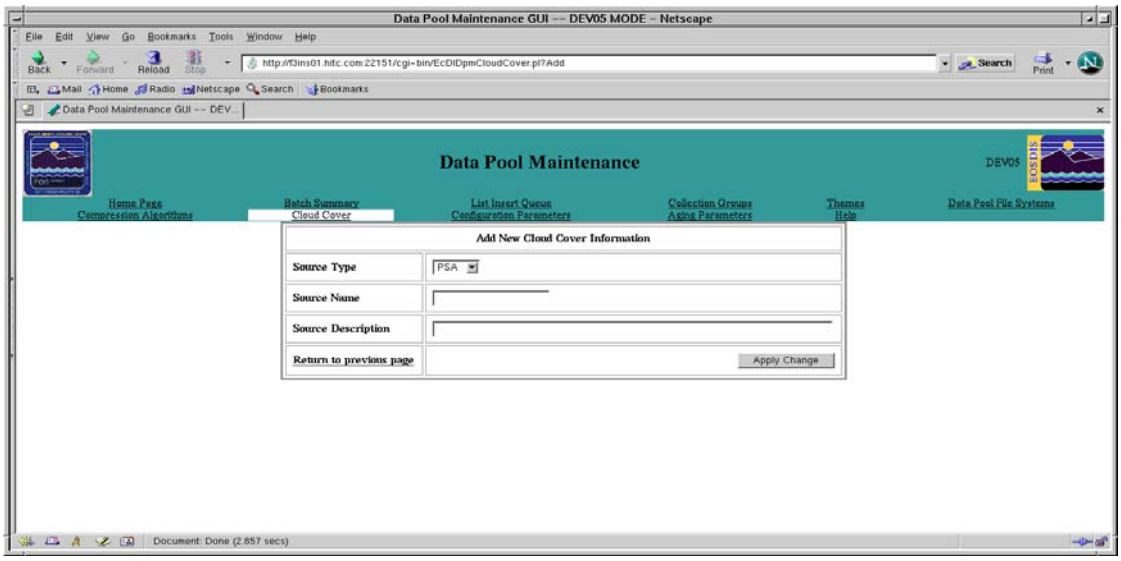


Figure 4.7.6-30. Add a New Cloud Cover Information Screen

Note: This page is not accessible by Limited Capability users.

Table 4.7.6-17. Add A New Cloud Cover Information Field Description

Field Name	Data Type	Size	Entry	Description
Source Type	char	30	Required	Cloud Cover source type
Source Name	char	20	Required	Valid source name
Source Description	char	30	Optional	Description about the source name. Up to 255 characters long
Click on box to delete	checkbox	1	Optional	Option to delete theme name and its corresponding information once box is checked

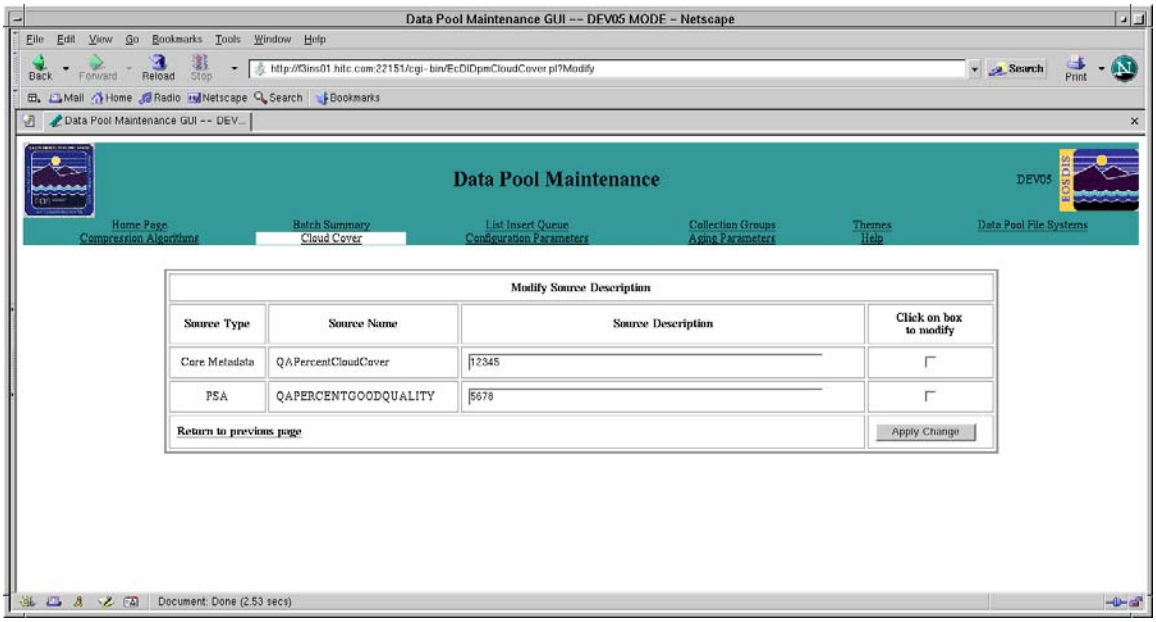


Figure 4.7.6-31. Modify Cloud Cover Description Screen

Note: This page is not accessible by Limited Capability users.

Table 4.7.6-18 describes the Modify Cloud Cover Description Fields.

Table 4.7.6-18. Modify Cloud Cover Description Field Description

Field Name	Data Type	Size	Entry	Description
Source Type	char	30	Required	Cloud Cover source type
Source Name	char	20	Required	Valid source name
Source Description	char	30	Optional	Description about the source name. Up to 255 characters long
Click on box to modify	check box	1	Optional	Select when medications are needed

4.7.6.1.9 Aging Parameters Tab

The Aging Parameters Page (Figure 4.7.6-32) allows the operator to view a list of Aging Parameters, their starting priority values, aging step values and maximum priority values. It also provides check boxes beside each aging parameter information rows to modify any of the entries.

Aging step values and priority values can be modified. Only full capability operators can execute this modify operation. The operator needs to add new values in the text boxes and then click the **Click On Box To Modify** checkbox at the end of the row. After making all changes click on **Apply Change** button. This will refresh the screen with new values and also update the database.

The fields of the Aging Parameters Page are described in Table 4.7.6-19.

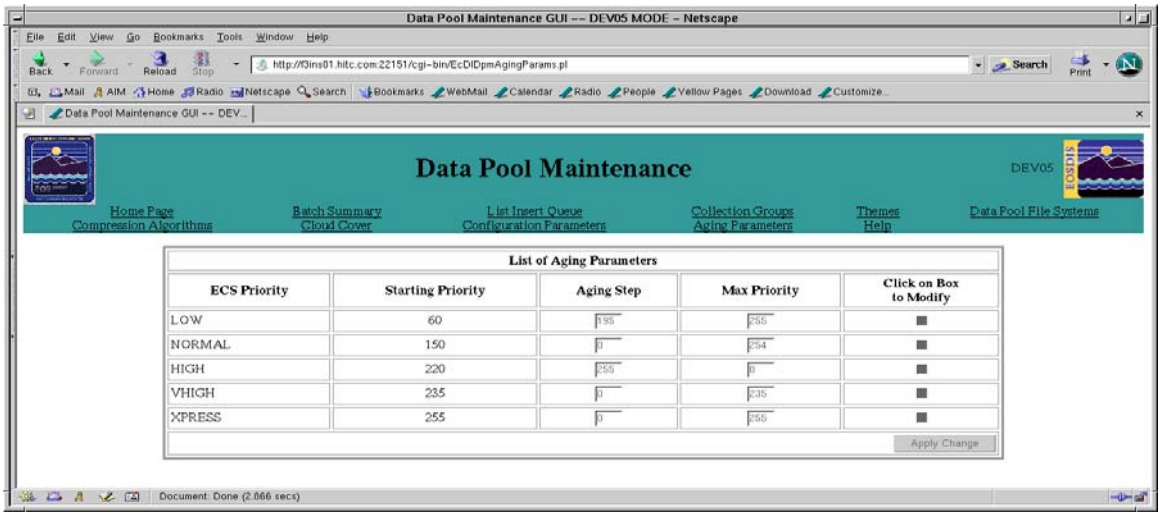


Figure 4.7.6-32. List of Aging Parameters Screen

Table 4.7.6-19. Aging Parameters Field Descriptions

Field Name	Data Type	Size	Entry	Description
ECS Priority	char	10	Required	Determines the level of priority for the Aging Parameter for ECS: Low, Normal, High, Very High, Express
Starting Priority	int	4	Required	Provides ascending order of Aging Parameters according to it priority number
Aging Step	int	4	Optional	Time interval to increase the priority value
Max Priority	int	4	Optional	Maximum priority value for an ECS priority level
Click on Box to Modify	checkbox	n/a	Optional	Select when modifications are needed

4.7.6.1.10 End Session Tab

The **End Session** tab is provided to end a session on demand. This tab is available only from the Data Pool Home Page. Upon clicking on **End Session** link it will bring up the **End Session** page shown in Figure 4.7.6-33.

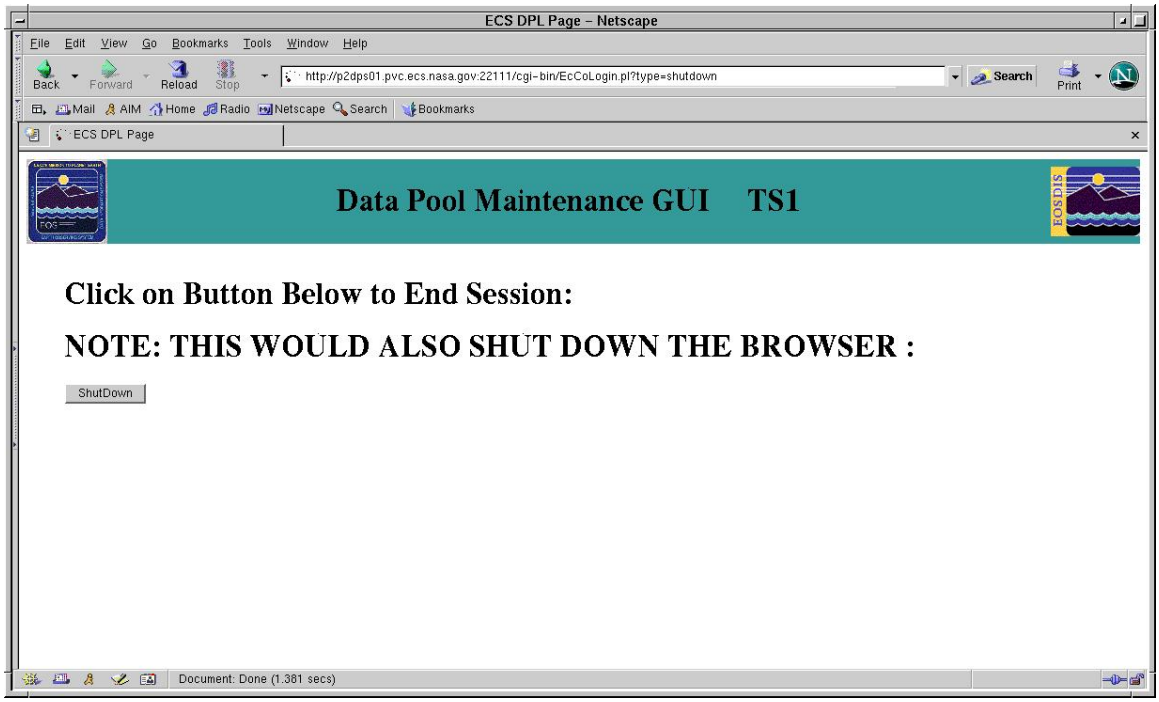


Figure 4.7.6-33. End Session Page

4.7.6.2 Data Pool Maintenance Main Screen

See Figure 4.7.6-2.

4.7.6.3 Required Operating Environment

The following environment is required for the DPM GUI to work properly:

- The O/S requirements are Linux 2.x or higher

4.7.6.4 Databases

The DPM GUI accesses the Data Pool database.

4.7.6.4.1 Interfaces and Data Types

The DPM GUI exchanges data between the Web Browser and Sybase, using Perl CGI and DBI Modules for the Interface.

4.7.6.5 Special Constraints

There are no special constraints to running the DPM GUI.

4.7.6.6 Outputs

There are no outputs from the DPM GUI except for status and error messages.

4.7.6.7 Event and Error Messages

The DPM GUI writes status and error messages to the EcDlDataPoolGUI.log file in the directory /usr/ecs/<MODE>/CUSTOM/logs.

4.7.6.8 Reports

The DPM GUI does not generate reports.