4.6.1 Data Pool Ingest GUI

The Data Pool (DPL) Ingest GUI is a web-based interface that allows operators to access and manipulate the DPL Ingest system. Using this GUI, an operator can monitor and fix Ingest requests, view system alerts, and see at a glance the status of the DPL Ingest system in part and in whole. The DPL Ingest GUI also allows in-depth configuration of the entire DPL Ingest system without the operator having to manually configure the DPL Ingest database. It provides a fast and secure way to easily manage the entire DPL Ingest system, complete with full operator permission configuration and management so that only authorized persons may perform actions or change configuration settings.

Since the DPL Ingest GUI is a web-based interface, it can be accessed from virtually anywhere there is access to the internal network. No custom software installation is required – all that is needed is a web browser (see Section 4.6.1.28 Browser Requirements). Because this is a web-based application, the DPL Ingest GUI can be run by any number of operators from any number of locations, even remote locations, provided that a remote connection is properly configured.

This document shows and explains in detail all of the available features and functionality of the DPL Ingest GUI, from the first login to complex operator actions and configuration, as well as tips for getting extra help.

4.6.1.1 Login Page

This page first appears when the application is loaded. The operator will be required to enter a pre-assigned user name and password, as shown in Figure 4.6.1-1. Once the operator is logged in, the home page will be displayed and the application will be enabled.

If the authorization scheme has been disabled, the home page (shown in Figure 4.6.1-2) would be displayed immediately instead of the login page, and the operator will not be required to log in.

Figure 4.6.1-1. Login Page

Using the GUI in Protected Mode

If your DAAC requires a password-protected login with different permission levels, the following applies:

- Sort settings are remembered for each session – that is, every time an operator logs in. They are reset when the operator logs off or a new session is started.
- Filter settings are always remembered for each operator, since these are stored in the database.

Using the GUI in Open Mode

If your DAAC does *not* require a password-protected login, then each operator essentially uses a single "virtual operator" which has all permissions and stores a single set of filter settings that are shared across all sessions. This means that an operator at one terminal can affect the filter settings of an operator at another terminal.

Sort settings are not stored in the database and are therefore remembered for each session. Please note however, that sort settings may be lost if the browser is closed of a new session is otherwise started.

Session Timeout

Depending on the installation of Tomcat at your particular site, the session timeout can vary and is not configurable through the GUI.

Miscellaneous Features

- **The Reset Button**: Throughout the GUI, you will see "Reset" buttons on some pages. These simply reset the form values so you can start over again – pressing/clicking Reset does not submit any changes to the database.
- **Whitespace in forms:** In general, whitespace is stripped from most text input fields unless it is meant to contain whitespace, like comment fields. For example, on the Provider Configuration page to add a new Data Provider, all of the input fields are stripped of any accidentally input whitespace when submitted.

4.6.1.2 Home Page

The Home Page provides a general overview of the Data Pool Ingest system status, as shown in Figure 4.6.1-2. This page includes the following:

- General system statistics
- The Data Pool Ingest statuses, which may be suspended if active, and resumed if suspended. These include:
    - General Ingest Status
    - Email Service Status
- The status of the Ingest services, which **cannot** be changed by the operator, including (see also Figure 4.6.1-2):
    - The Notification Service
    - The Polling Service
    - The Processing Service

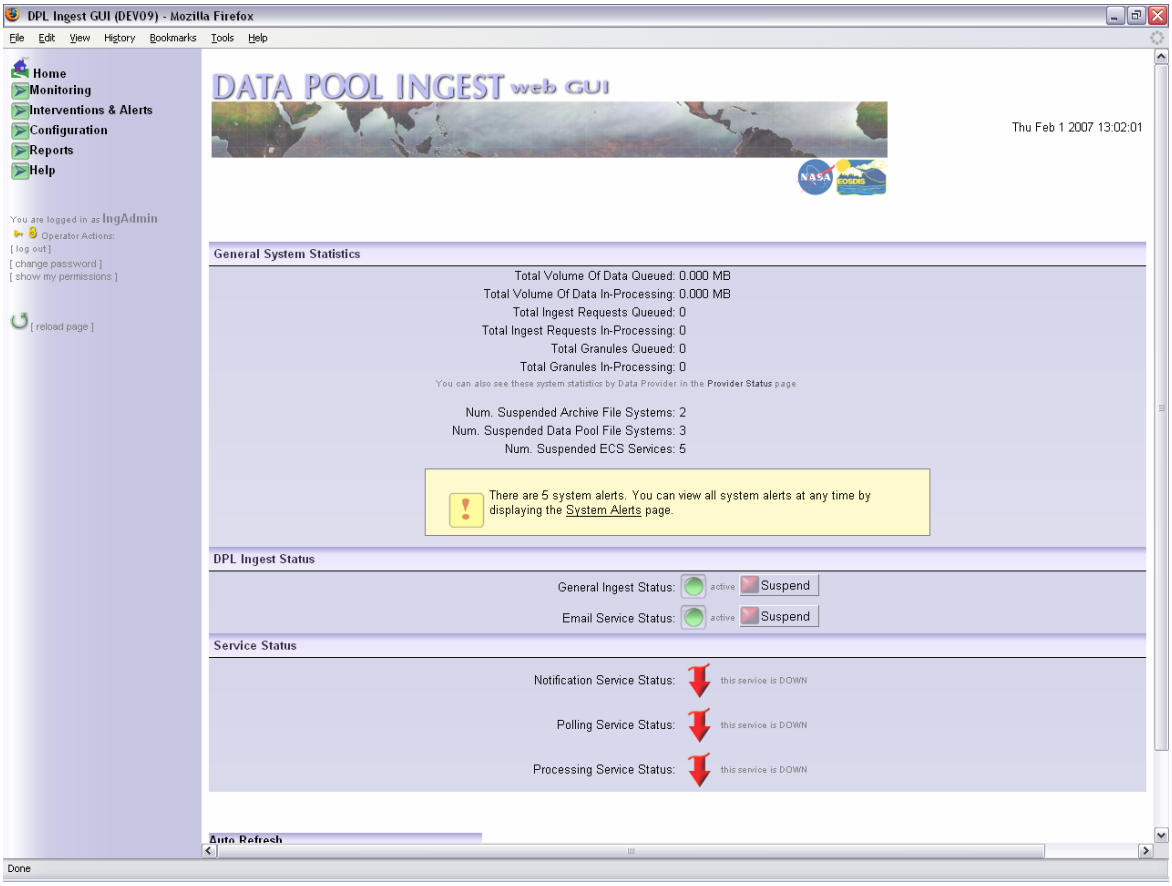


Figure 4.6.1-2. Home Page

4.6.1.2.1 General System Statistics

This section provides general information about current requests and granules in the system, as well as the various services and file systems used in processing. Summary information is not included about providers and transfer hosts, though this data can be found on the Provider Status page (Section 4.6.1.10) and the Transfer Host Status page (Section 4.6.1.13).

Detail descriptions of the data found in this section is available in Table 4.6.1-1.

Table 4.6.1-1. Home Page Field Descriptions

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

4.6.1.2.2 DPL Ingest Status

This section consists of two buttons that enable the user to halt various actions throughout the data pool ingest system.

General Ingest Status – By pressing this button, the operator is able to stop polling from all polling locations and prevent any new granules from being activated. Any granules that are already active **will** complete ingest. These actions can easily be resumed by pressing the "Resume" button.

Email Service Status – By pressing this button, the operator will stop any further email notifications from being sent concerning completed, cancelled, failed, or terminated requests from any provider. Once the button is pressed again, email notifications will resume and emails will be sent for all requests from providers configured for email notifications that completed while email service was suspended.

4.6.1.2.3 Service Status

This page indicates the status of the three primary services that make up the Data Pool Ingest system.

The Ingest services cannot be started and stopped via the GUI. Instead, they are managed using start and stop scripts found in the utilities directory of the given mode. For the status of these services to be accurate, the IngestServiceMonitor script must also be running for each mode. This script is installed in the utilities directory of each mode and can be started with the command: EcDlIngestServiceMonitorStart [MODE].

The services are as follows:

- *Notification Service Status* - Indicates whether the notification service is up or down. If up, no notifications will be sent, but a queue of notifications will be collected and distributed once the service is restarted.
- *Polling Service Status* - Indicates whether the polling service is up or down. If this service is down, PDRs will not arrive from any configured polling location, but any PDRs that remain in the directories will be added once the service is restarted.
- *Processing Service Status* - Indicates whether the processing service is up or down. If this service is down, no actions on any requests or granules will start, continue, or complete and Granules will "hang" in their current state.

4.6.1.3 The Navigation Panel

Navigation throughout the DPL Ingest GUI is accomplished through an Explorer-like menu in the left pane of the application, as shown in Figure 4.6.1-2 and Figure 4.6.1-3. These menus expand and contract to hide or view menu items under each category.

The navigation panel is static; it will not reload every time a new menu item is selected.

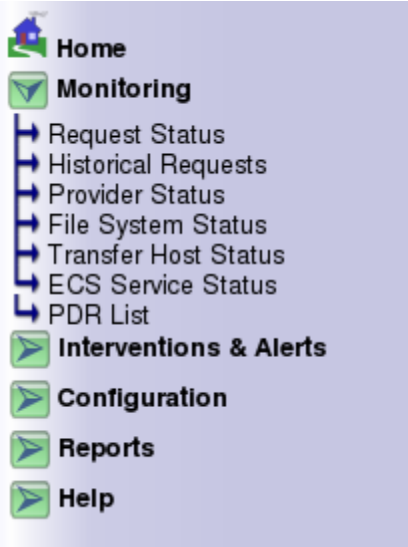


Figure 4.6.1-3. Navigation Panel

A Note on the Back and Forward Buttons

In order to properly navigate through the application, the operator should not use the browser's built-in back and forward buttons, as this may cause an error to occur in the application. All navigation should be accomplished through use of the navigation panel and list navigators (e.g., custom back and forward buttons for lists of requests and granules). See Figure 4.6.1-4.

Figure 4.6.1-4. Built-in Back/Forward Browser Buttons

Error Pages

When errors occur (e.g., an invalid action was sent), the GUI will display such errors on the page for which it was generated and in most cases the items causing the error will be highlighted in red. An example is trying to resume an already active Provider, as shown in Figure 4.6.1-5.

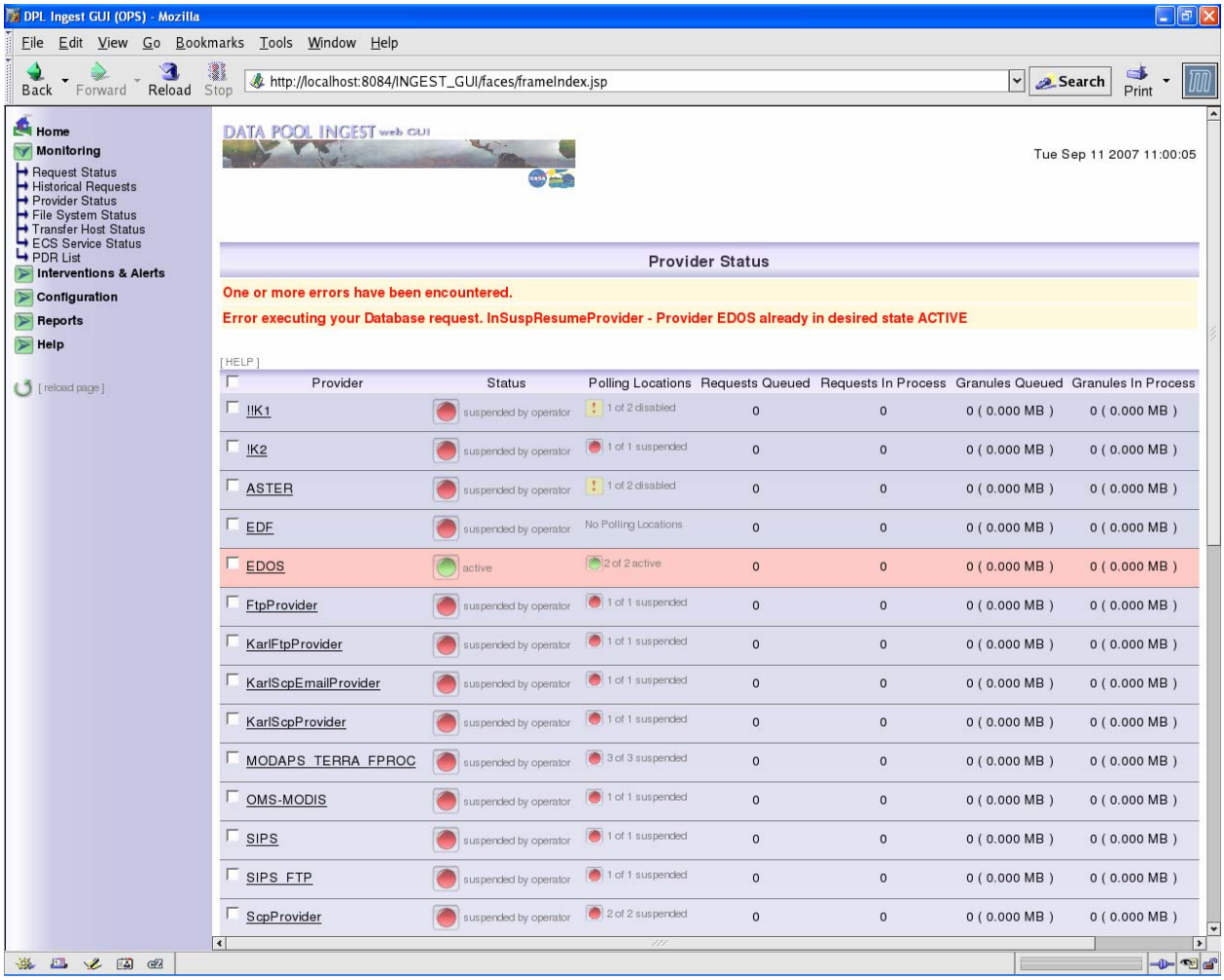


Figure 4.6.1-5. Error Indicators

In other cases, the GUI may have trouble processing an operator's action for an unknown reason. Although this is rare, an error screen will be displayed allowing you to reset your session so that the GUI can properly process further actions. See Figure 4.6.1-6 for an example. This error screen also displays the specific problem so that a detailed error message can be sent to a qualified person for analysis if the error occurs frequently.

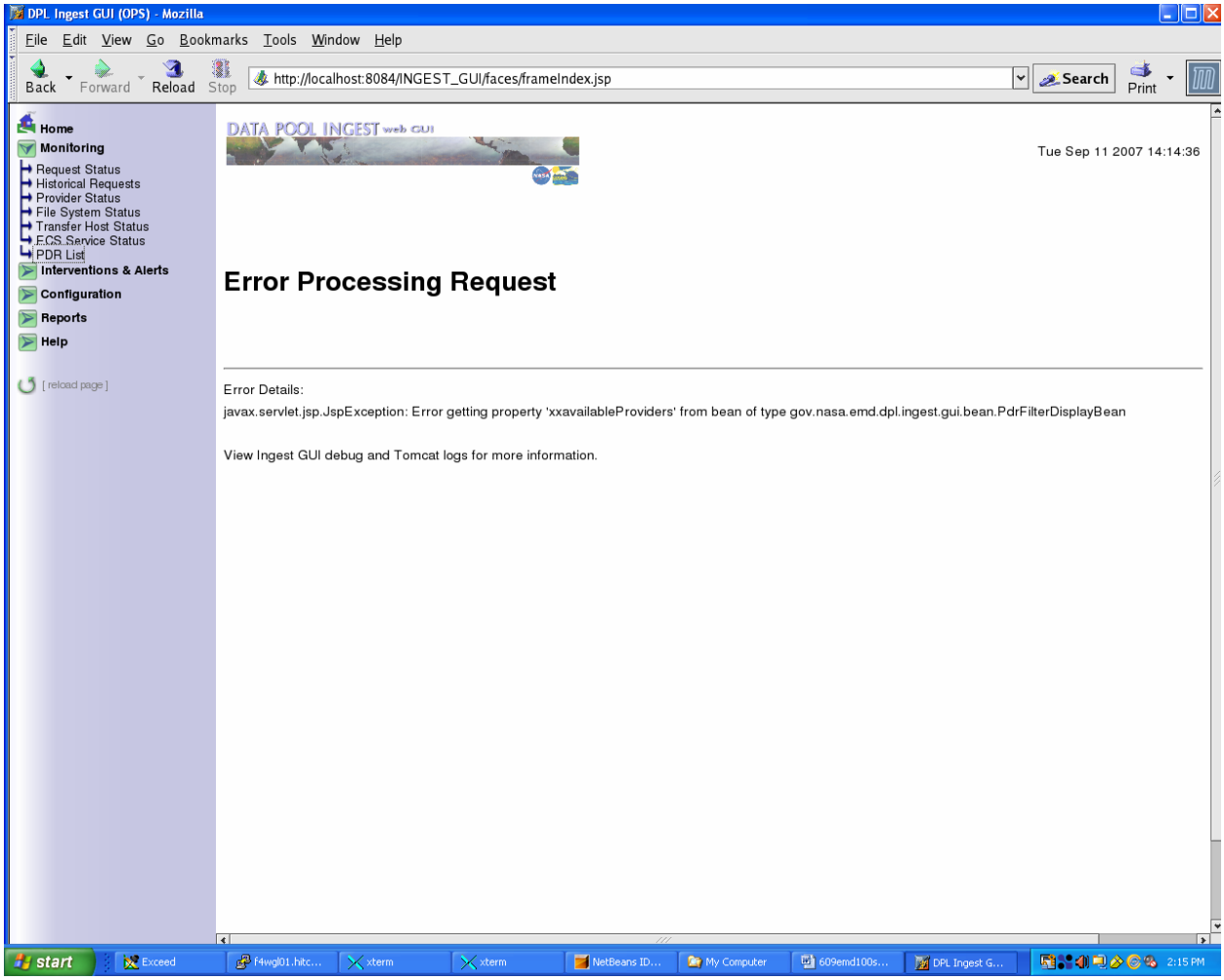


Figure 4.6.1-6. Error Processing Request

4.6.1.3.1 Current Operator Settings

The navigation panel also contains a section below the menus that allows the current logged-in operator to perform the following actions (see Figure 4.6.1-7):

- Log out
- Change your password
- Show all of your permissions

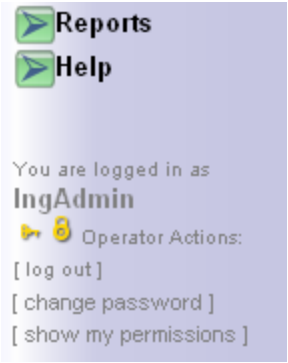


Figure 4.6.1-7. Operator Information Panel

Depending on the settings of the currently logged in operator, various functions of the DPL Ingest GUI will be disabled. An example of how disabled functions will appear is shown in Figure 4.6.1-8.

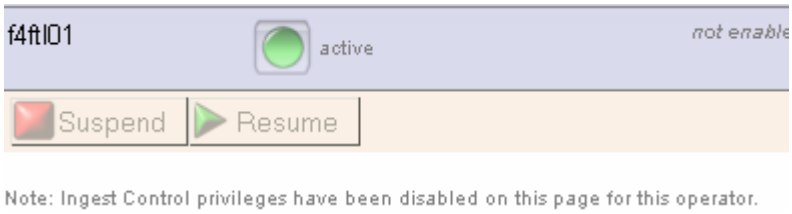


Figure 4.6.1-8. Disabled Permissions

Operator Actions Explained

Log Out

This allows you to log out of the current session (without closing the browser). The login page will be displayed upon successful logout (see Figure 4.6.1-9).

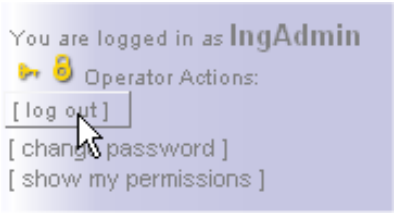


Figure 4.6.1-9. Log Out Button

Change Password

Click on "change password" to change the current operator's password – a box will appear below the link, as shown in Figure 4.6.1-10. Type the new password into the two boxes and click "Ok."

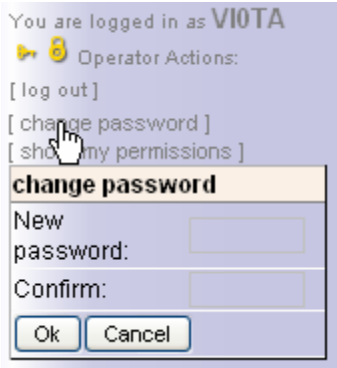


Figure 4.6.1-10. Operator Password Settings

Show My Permissions

Click on "show my permissions" to view or hide the current permissions – a box will appear below the link, as shown in Figure 4.6.1-11.

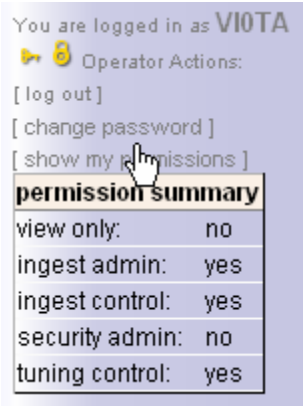


Figure 4.6.1-11. Operator Permission Settings

4.6.1.4 Pagination Arrows

On the Request Status page and details page, Historical Requests page and details page, and the Open Interventions page and details page, there are a set of pagination arrows used for maneuvering through the lists of requests and granules that are displayed. The maximum number of rows displayed at a time is configurable by the operator.

The items on the list that will be displayed on each page will be determined by the current sorting setting (see Section 4.6.1.6.3).

The pagination arrows are shown in the upper left-hand corner of any list of requests or granules, as shown in Figure 4.6.1-12.

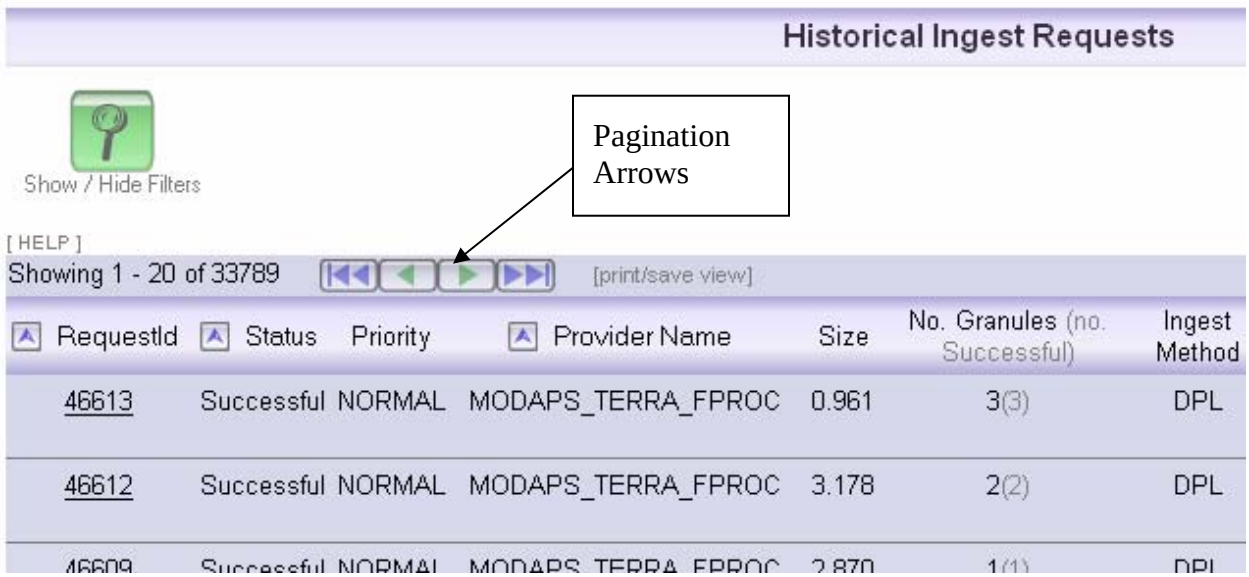


Figure 4.6.1-12. Pagination Arrows on the Historic Requests page

The meanings of these icons are as follows:

- - Go to the first page of the list, as determined by the current sorting setting. If you are already on the first page, the button will be disabled.
- - Go to the previous page in the list, as determined by the current sorting setting. If you are already on the first page, the button will be disabled.
- - Go to the next page in the list, as determined by the current sorting setting. If you are already on the last group in the listing, the button will be disabled.
- - Go to the last page in the list. If you are already on the last page, the button will be disabled.

4.6.1.5 Automatic Screen Refresh

The monitoring pages of the DPL Ingest GUI have an automatic screen refresh feature that allows the operator to control how often the page is automatically reloaded with new information. This is controlled by a small panel at the bottom of each screen, as shown in Figure 4.6.1-13.

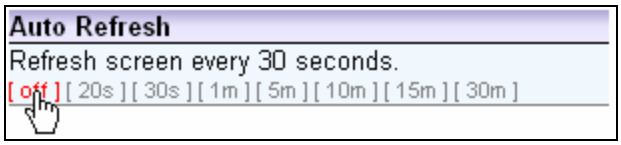


Figure 4.6.1-13. Auto Refresh Control Panel

The operator may change the refresh rate for any page or completely turn it off. Note that each page has an independent refresh rate and that these settings are remembered for the current session only – they are lost if the operator logs out or the application is restarted.

To change the refresh settings, click on the desired rate (or off). The page will reload and the new settings will take effect.

A dynamic clock will appear in the upper right-hand corner, informing the operator how long it will be until the next refresh, as shown in Figure 4.6.1-14.

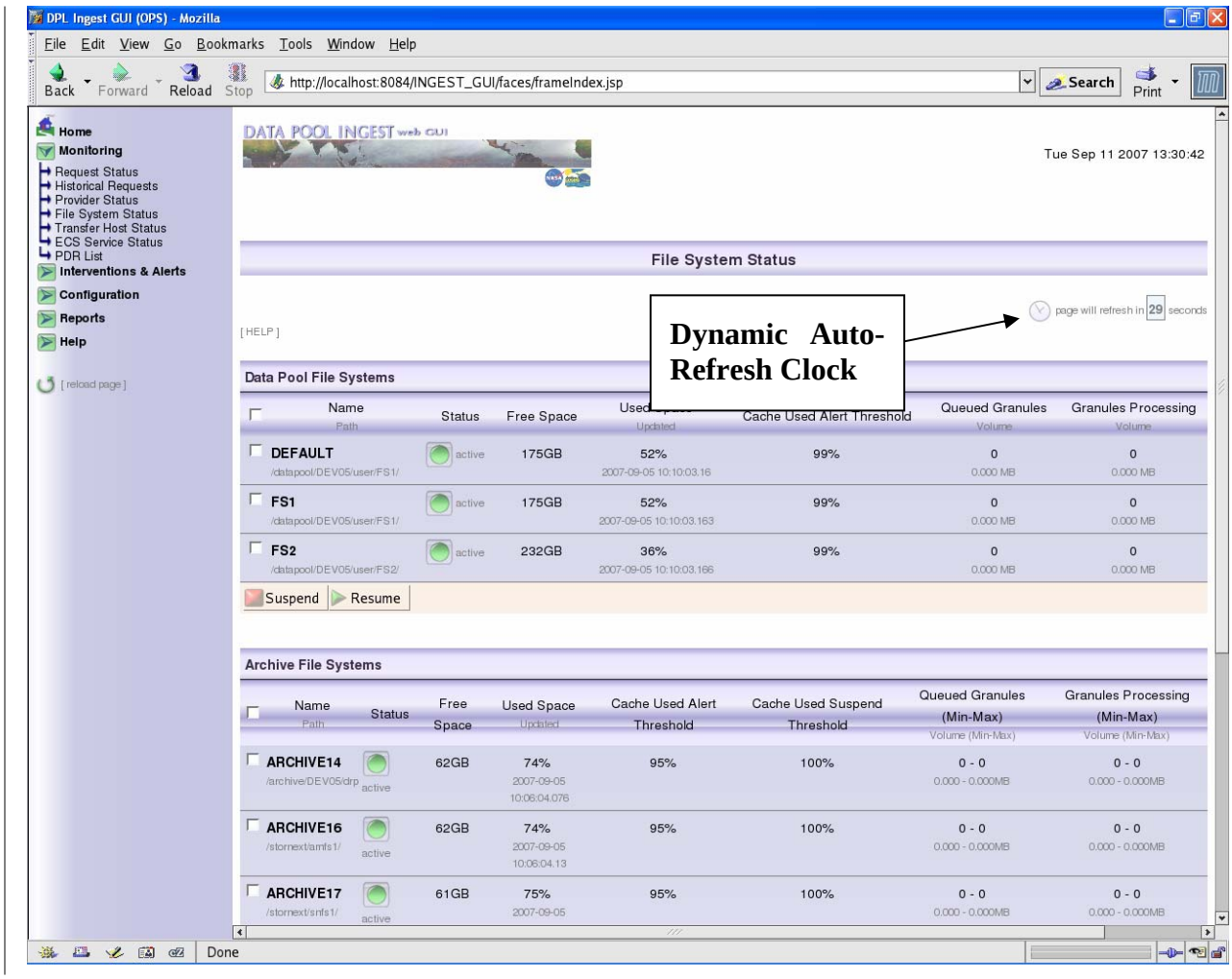


Figure 4.6.1-14. Dynamic Auto-Refresh Clock

The refresh counter will be paused whenever the mouse is in motion. This is to prevent a refresh from occurring when the operator is in the middle of an action, as shown in Figure 4.6.1-15.

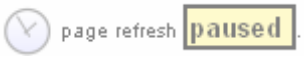


Figure 4.6.1-15. Paused Auto-Refresh Clock

Note: Some pages have different available refresh rates. This is designed to reduce the load on the database for certain actions that could affect performance.

4.6.1.6 Ingest Requests Page

This page displays the current active ingest requests, as shown in Figure 4.6.1-16. The operator may select any eligible request and perform one of several actions:

- Cancel the request(s) – *This is an irreversible action, there is no way to 'un-cancel' a request.*
- Suspend the request(s) – *This action may be performed only if the selected requests are not already suspended or cancelled and is used to stop new granules from being activated. Active granules in suspended requests will continue through processing.*
- Resume the request(s) – *This action may be performed only if the selected requests are suspended.*
- Change the DPL Ingest Priority of the request(s) – *Requests in terminal states cannot have their priority changed. A default priority will be assigned to requests based upon the configuration of the request's provider.*

See Section 4.6.1.6.1 below for detailed explanations of each Request action. Table 4.6.1-2 contains descriptions of the Request Status page columns.

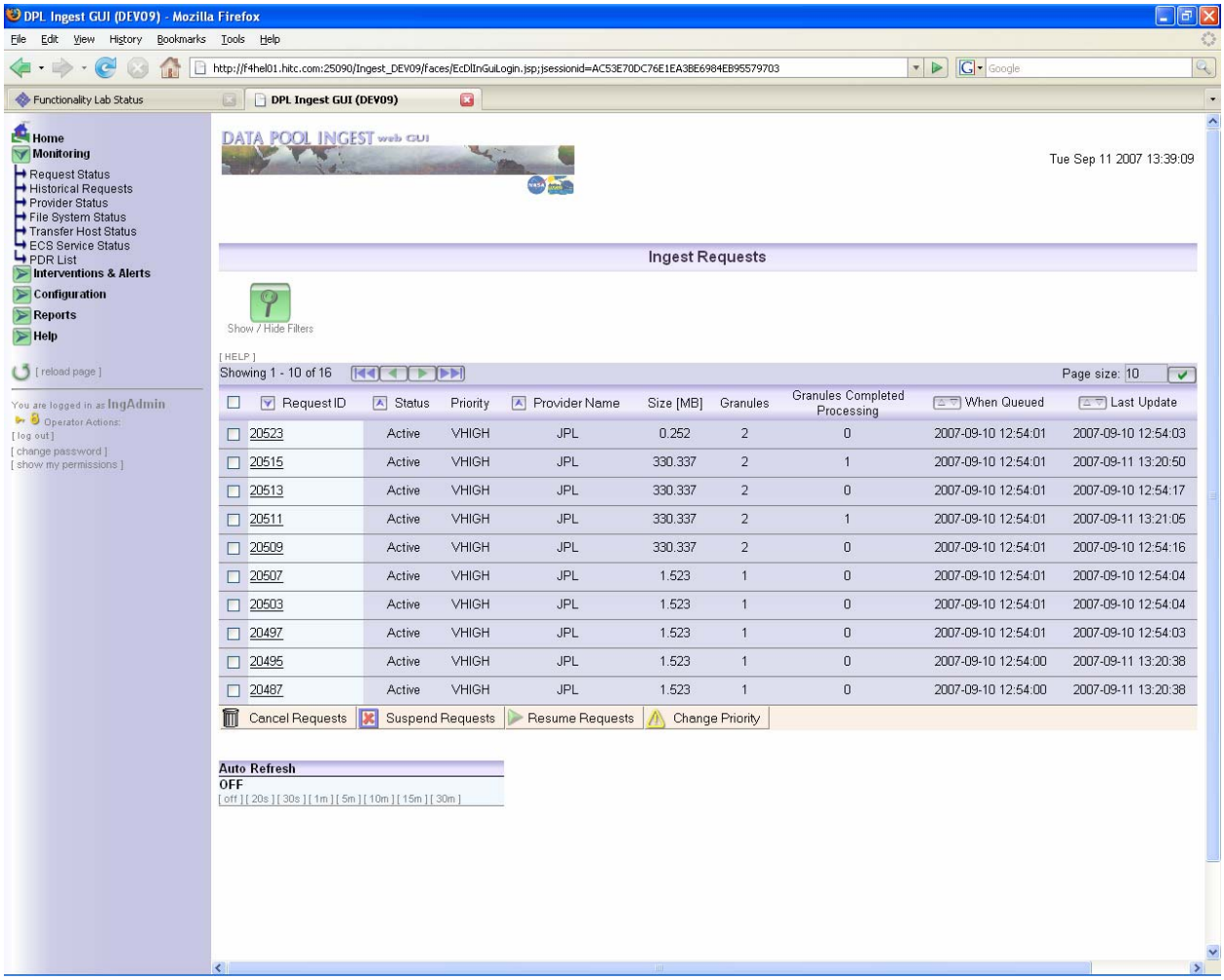


Figure 4.6.1-16. Request Status Page

Table 4.6.1-2. Request Status Page Column Descriptions

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

Table 4.6.1-3 below describes the allowable actions that can be taken for Requests in their various states. A checkmark (✓) indicates that the action is allowed.

Table 4.6.1-3. Ingest Request Allowed Actions

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

4.6.1.6.1 Request Actions

Changing Request Statuses

To change the status of request(s) (cancel, suspend, or resume), select the desired request(s) by checking the boxes on the left side of the request list. You can also select or deselect all the requests by checking the box at the very top of the list. See Figure 4.6.1-17.

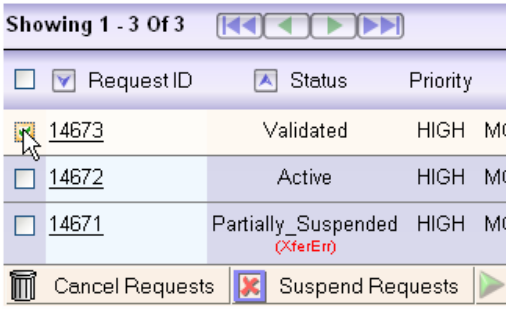


Figure 4.6.1-17. Canceling a Request

Some Requests may not have checkboxes because they are in a terminal state. Actions may not be processed for these requests. See Figure 4.6.1-18.

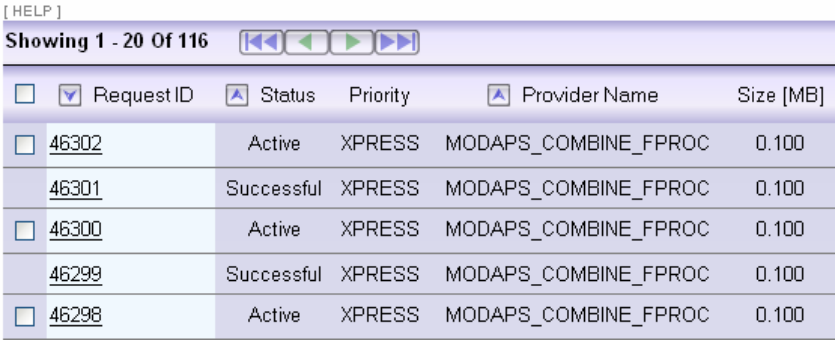


Figure 4.6.1-18. Requests with No Checkboxes

Then click on the button of the desired status change action at the bottom of the list. A box will appear below to enter a reason for the status change. See Figure 4.6.1-19.

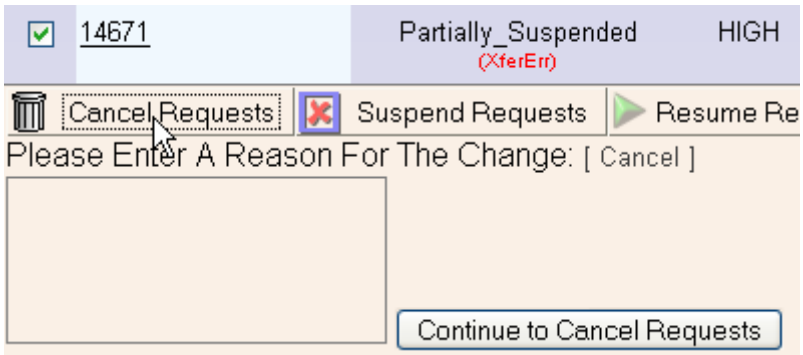


Figure 4.6.1-19. Explanation field for Canceling Request

Once you have entered the reason, click on the button next to the text box to continue the action. You will be prompted for confirmation before the action is carried out.

Click on the [cancel] link to close the box if you do not wish to process the action.

Changing Request Priorities

To change the priority of ingest request(s), select the desired request(s) and click on the Change Priority button at the bottom of the list. A dropdown lists appears to select the new priority. See Figure 4.6.1-20.

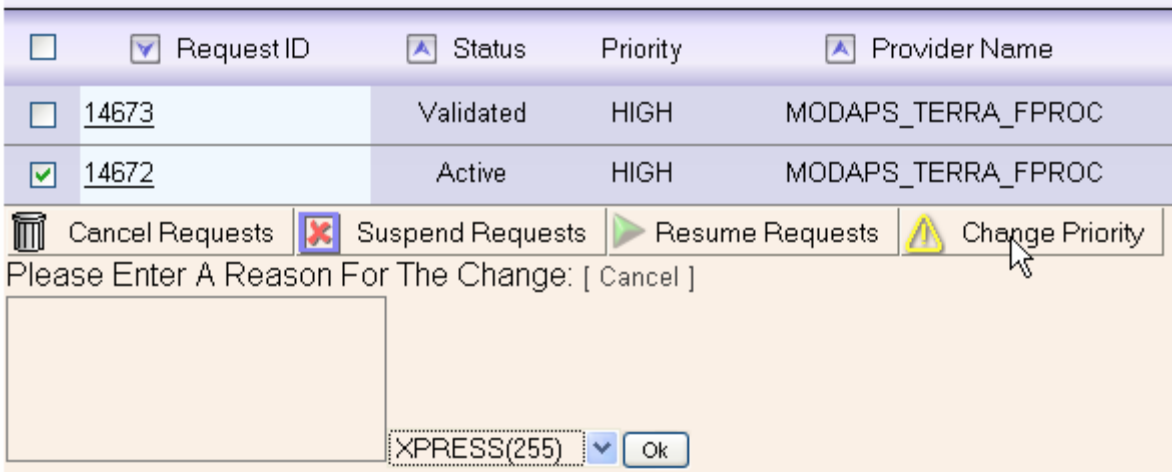


Figure 4.6.1-20. Changing Request Priorities

Enter a reason for the change in priority. Then select the desired priority from the drop down list and then click the OK button to continue the action. You will be prompted for confirmation before the action is carried out.

Click on the [cancel] link to close the box if you do not wish to process the action.

4.6.1.6.2 Filters

The request list on the Ingest Requests page can be filtered using the filter panel that appears on the same page. This is opened (or closed) by clicking on the green filter button at the top of the page, as shown in Figure 4.6.1-21. Filter settings are associated with an operator profile and are always remembered, even when logging out of the session.

Filter settings are shared among all operators if authentication is not enabled. See Section 4.6.1.11 for more details on how this works.

Figure 4.6.1-21. Ingest Request List Filter Panel

This panel shows the current filter settings and allows the operator to change them. There are two tabs on this panel, one that provides filter options based upon the attributes of the various requests (Criteria Based Filtering), as shown in Figure 4.6.1-21, and the other that will cause only a single request ID to be displayed (Filter By Request ID), as shown in Figure 4.6.1-22.

Under Criteria Based Filtering, there are several different types of filters that can be applied concurrently to the request list. These are as follows:

- **Data Providers –** By selecting a provider from the drop-down list, only requests from that provider will be displayed in the request list.
- **Request Detail Criteria** – The operator can either filter by a request state, or by an error state by selecting from the dropdown menu, as shown in Figure 4.6.1-22.
    - *Request States* – If this option is selected, multiple states may be included in the filter by holding down the CTRL key and selecting all of the desired states. Only requests in the selected states will be displayed.
    - *Error Types* – By selecting an error type, only requests in intervention with at least one granule currently in that error state will be displayed. Only one error type may be selected.

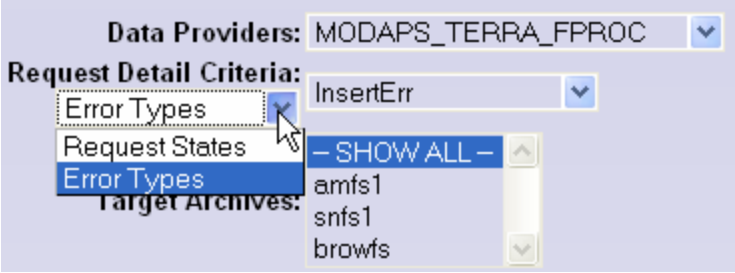


Figure 4.6.1-22. Selecting the Type of Request Detail Criteria.

- **Target Archives –** Multiple archives may be included in the filter by holding down the CTRL key and selecting all of the desired archives. Only requests with granules from data types configured to be sent to the selected archives will be displayed.
- **Date Range Criteria** – The operator can either filter by the time when a request was last updated or when it was last queued, as shown in Figure 4.6.1-23.
    - *Last Updated* – Only requests that were updated from the "to" and "from" dates will be displayed. The *Last Updated* date/time of a Request is changed whenever the state of a granule or a request is changed.
    - *Queued* – Only requests that were added to the request list from the given date to the given date will be displayed
    - *Queued within Last Hour* – Only requests that were queued within the last one hour from the current time.
    - *None* – No date range filtering will be applied

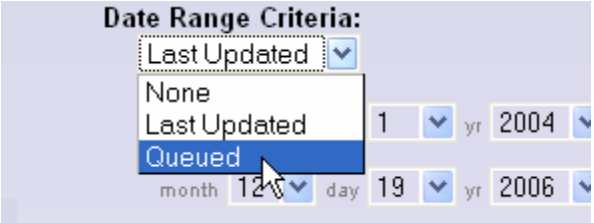


Figure 4.6.1-23. Selecting Date Range Criteria

To filter by a single Request ID, press on the "Filter By Request ID" tab. A single field for entering a Request ID number will appear, as shown in Figure 4.6.1-24. The request ID filter can only be applied by itself and not in combination with any other filter attributes.

Figure 4.6.1-24. Filtering By Request ID

Once the desired filter options are selected, the operator has the option of saving these settings as the default by selecting the "Save As Default Settings" box prior to clicking "Apply Filter" (see Figure 4.6.1-25). Thereafter, the operator can click "Load Default Settings" to load the defaults. If no default is stored, the filters will be set so that all requests will be shown.

Figure 4.6.1-25. Saving Default Filter Settings

Once all settings are selected, press the "Apply Filter" button. A new page will appear showing only the requests meeting the filter criteria. Filtering options will be hidden until the green "Show / Hide Filters" button is pressed again.

4.6.1.6.3 Sorting

The request list on the Ingest Requests page can be sorted by clicking on the desired column at the top of the request list, as shown in Figure 4.6.1-26. The direction of the arrow next to the column indicates how that column may be sorted, either in ascending or descending order. All columns, unless they are date columns or the Request ID column, can be sorted in ascending order. The Request ID column is sorted in descending order. Date columns can be sorted in either ascending or descending order, as shown in Figure 4.6.1-27.

Unlike filter settings, sort settings are remembered for the session only.

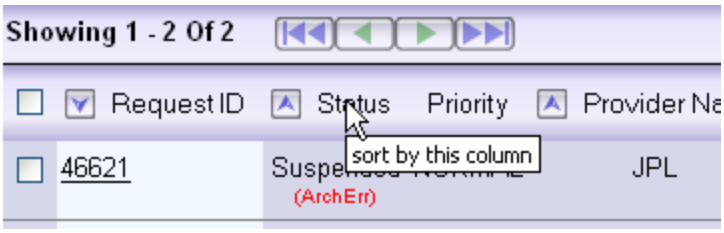


Figure 4.6.1-26. Request List Sorting

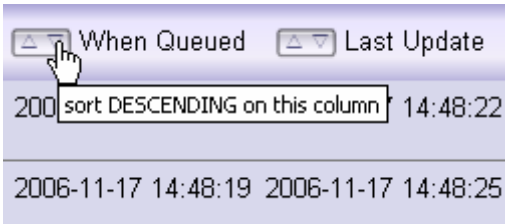


Figure 4.6.1-27. Date Sorts

4.6.1.7 Ingest Request Detail

To view the details of an ingest request (which also displays the list of associated granules), click on the desired request ID on the Ingest Request List, as shown in Figure 4.6.1-28.

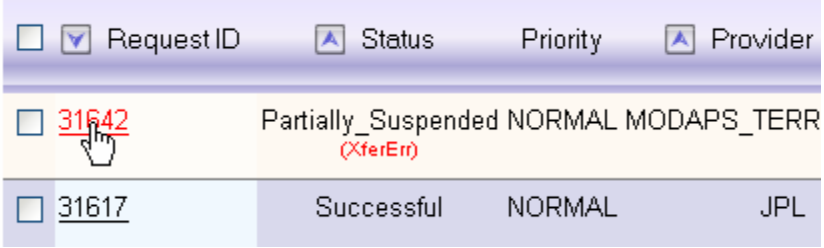


Figure 4.6.1-28. Viewing Request Details

The Ingest Request Detail page is shown below in Figure 4.6.1-29. Specific sections of this page are described in more detail in the following subsections. Table 4.6.1-4 contains descriptions for the Request Info Panel fields.

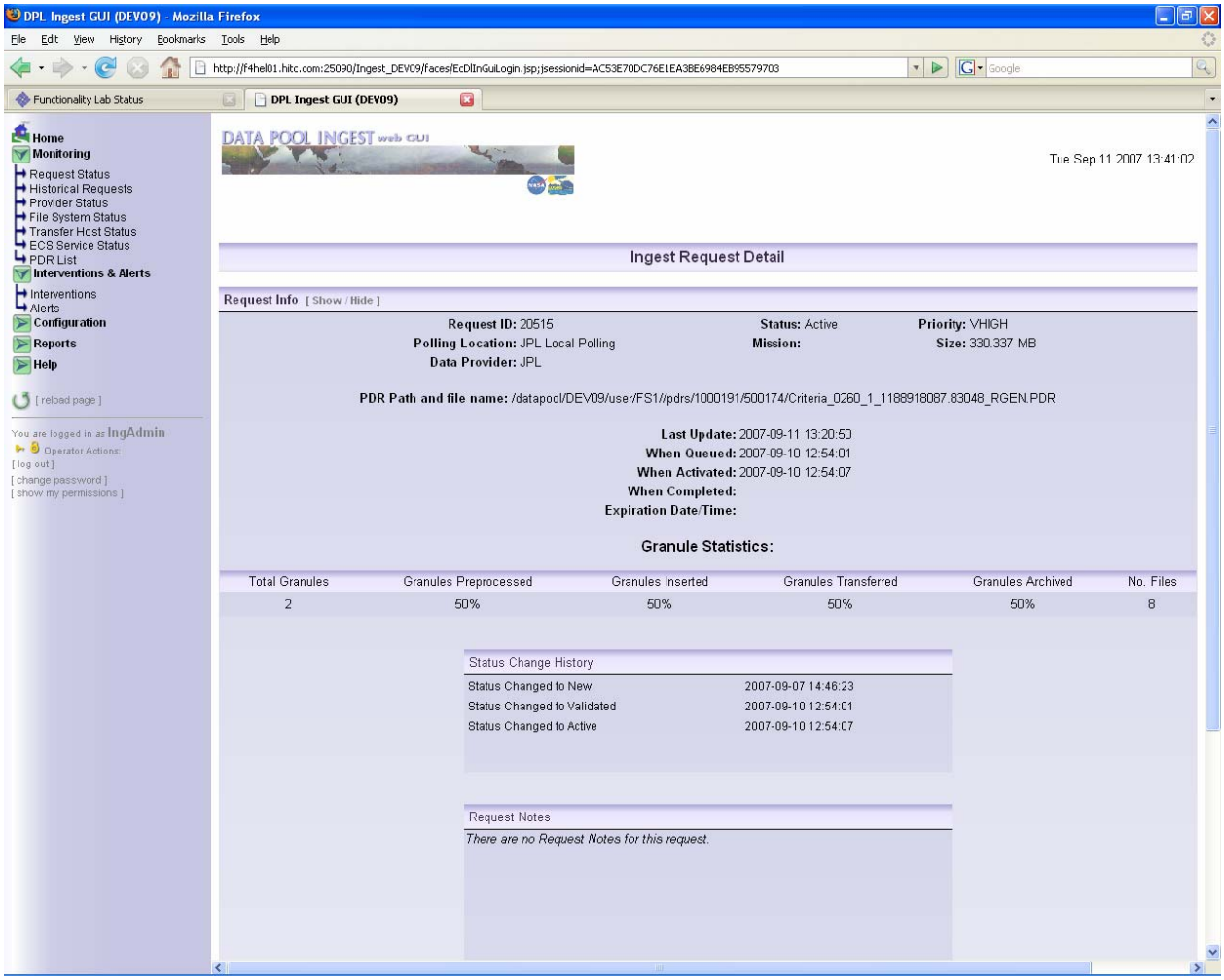


Figure 4.6.1-29. Ingest Request Detail Page

4.6.1.7.1 Request Info

The top of the Ingest Request Detail page shows the complete detailed information particular to the current request, including the complete date information of when major changes to the request were completed, as shown in Figure 4.6.1-30.

Figure 4.6.1-30. Request Info Panel

Table 4.6.1-4. Request Detail Page – Request Info Panel Field Descriptions

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

If there is an intervention pending against the request, then there will be a link to the intervention detail page, as shown in Figure 4.6.1-30. Click on the "[view details]" link to navigate to the intervention detail page. More information on intervention details can be obtained in Section 4.6.1.15.

4.6.1.7.2 Granule Statistics

This section of the request details shows the overall statistics for all of the granules associated with this request, as shown in Figure 4.6.1-31. Table 4.6.1-5 lists the granule statistics panel field descriptions.

Granule Statistics:

Total Granules	Granules Preprocessed	Granules Inserted	Granules Transferred	Granules Archived	No. Files
2	100%	0%	100%	100%	3

Figure 4.6.1-31. Granule Statistics

Table 4.6.1-5. Request Detail Page – Granule Statistics Panel Field Descriptions

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

4.6.1.7.3 Status Change History

This section shows a complete record of the status changes for the request in a scrollable table, as shown in Figure 4.6.1-32.

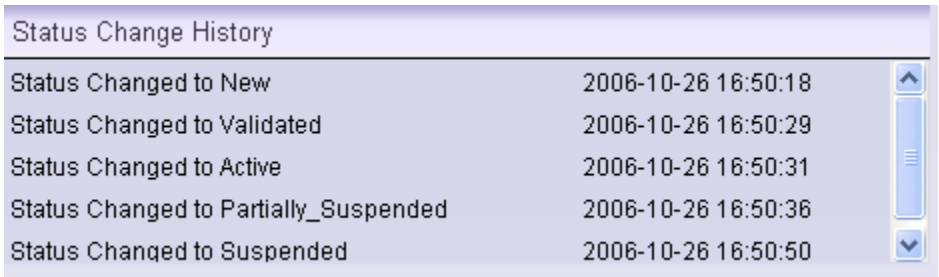


Figure 4.6.1-32. Status Change History

4.6.1.7.4 Request Notes

Requests notes are annotations that can be useful in tracking changes to the request. These will either be added automatically by the server or manually by the operator. Automatic annotations are added when the operator performs an action on the request or granules in the request.

In Figure 4.6.1-33 below, the first request note was automatically added after the operator "IngAdmin" failed one of the request granules. The second annotation was added manually by the operator "IngAdmin" to give more details on why the granule was failed.

You can add a request note, but not edit or delete one. To add a request note, click "[Add annotation…]" at the bottom of the annotation list, as shown in the figure below:

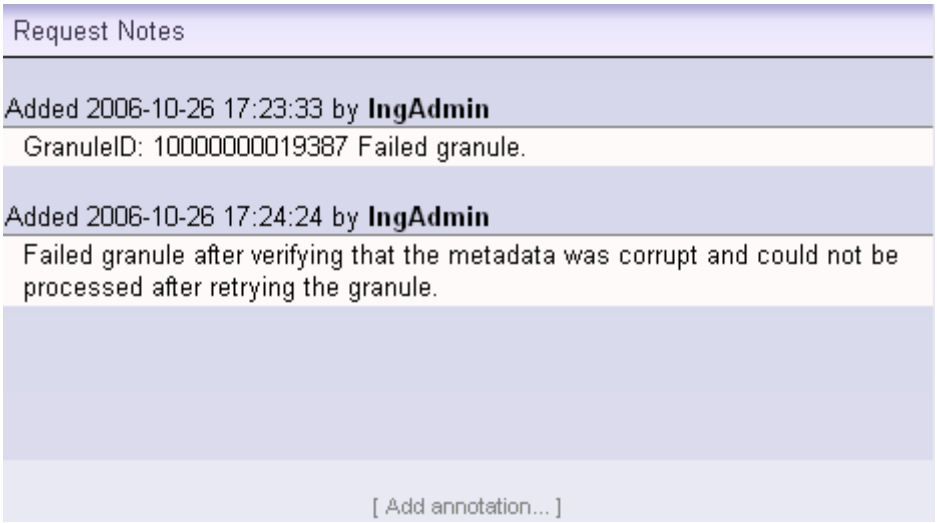


Figure 4.6.1-33. Request Notes

An area will appear below where you can add a new annotation. After you are finished, click "Add this Annotation," as shown in Figure 4.6.1-34. It will be time stamped after it is added.

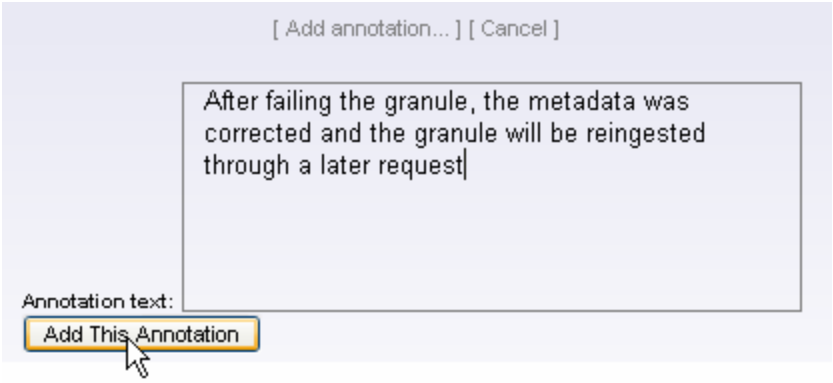


Figure 4.6.1-34. New Annotation Text Box

4.6.1.7.5 Granule List Panel

This is the list of all granules associated with this request, as shown in Figure 4.6.1-35. By default, this list is sorted in ascending alphabetical order by Granule status, always showing suspended granules first. The operator also has the ability to sort by other criteria, including:

- descending granule states, with suspended granules last
- Granule sequence number

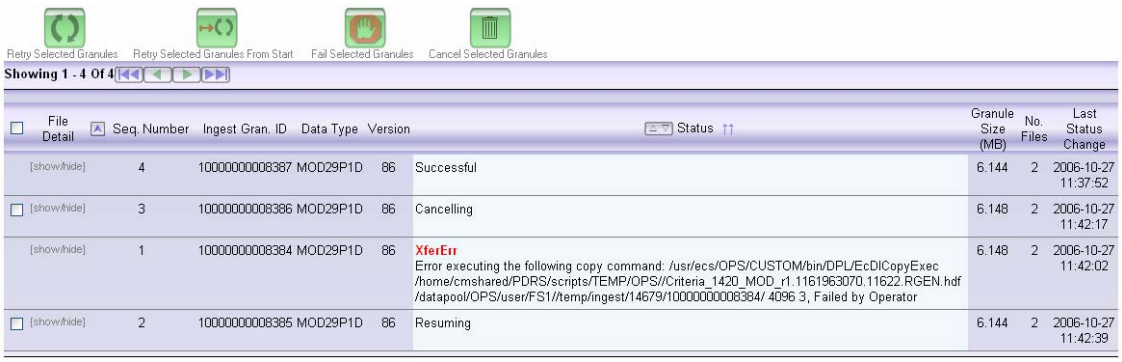


Figure 4.6.1-35. Granule List

Table 4.6.1-6 lists the granule list panel column descriptions.

Table 4.6.1-6. Request Detail Page – Granule List Panel Column Descriptions

Field Name	Description
Checkbox column	This column may contain a checkbox next to the granule, if the granule is not in a terminal state. This allows an action to be processed for the selected granule(s). The checkbox at the top of the column selects or de-selects all the granules in the list that have checkboxes.
File Detail	The column holds a link to display the detailed file information for each granule – this information appears for each granule at the top of the table when clicked on.
Seq. Number	The order in which a granule was found in the PDR
Ingest Gran ID	Unique Identifier assigned to the granule
Data Type	Data Type found in the PDR describing the granule
Version	Version found in the PDR describing the granule. The version will be extracted from the database if none is in the PDR
Status	Current granule status (see Table 4.6.1-7) and detailed error information
Granule Size (MB)	Sum of the size of all files associated with the granule
No. Files	Number of files found associated with the granule in the PDR
Last Status Change	Date and time the granule's status was last updated

A Note on Suspended Granules

Nearly all granules that encounter a problem during processing will eventually move into the "suspended" state. The only exception is if a granule fails checksum verification each of the configured number of retries. Except in the case of failed checksum verification or a PDR Validation failure, granules are not failed until the operator explicitly takes an action to fail suspended granules.

Granule Actions

The following actions listed in Table 4.6.1-7 may be performed on granules in the granule list, depending on granule state:

Table 4.6.1-7. Granule Allowed Actions

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

Retry selected granules: This applies only to granules that are currently suspended and retries them from the last known good state of processing. Every time a granule is retried, an annotation is added identifying the time, operator, and action (see Figure 4.6.1-33) .

Retry selected granules from START: This applies only to granules that are currently suspended and retries them from the beginning of processing. Every time a granule is retried, an annotation is added identifying the time, operator, and action.

Fail selected granules: This applies only to granules that are currently suspended and transitions the granule into a failed state, with the status indicating the type of error that originally caused the suspensions.

Error types are determined by what state the granule is in when it is failed. These states are: XferErr (transferring), ChecksumErr (Checksumming), PreprocErr (Preprocessing), ArchErr (Archiving), InsertErr (Inserting), and PubErr (Publishing).

NOTE: After a granule is failed, an annotation is added identifying the time, operator, and action.

To perform a granule action, select one or more granules by checking the box on the left side of the line for that granule (if available) and click on the desired action button at the top of the granule list. You will then be asked for confirmation before the action is carried out.

Cancel selected granules: This applies only to granules that are not yet in a terminal state. It manually cancels the granules. After a granule is cancelled it is expected that the granule will be re-ingested by the operator

View Granule File Information

Each granule has additional detailed information in the "File Detail" column. This column contains the list of files associated with that granule; if any of the files are in a failed or suspended state, the error details are also shown. To view this information, click the [show/hide] link for the desired granule, as shown in Figure 4.6.1-36. Table 4.6.1-8 lists the granule file information column descriptions.

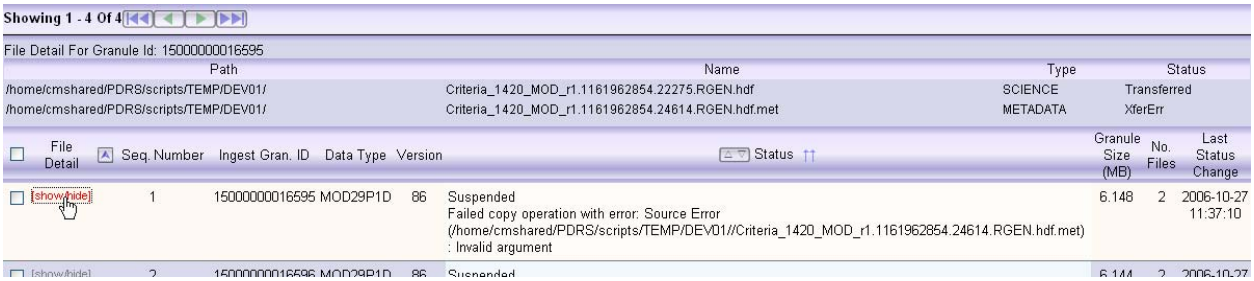


Figure 4.6.1-36. Granule File Information

Table 4.6.1-8. Granule File Information Column Descriptions

Field Name	Description
Path	Directory identified in the PDR where the file can be found
Name	Name of the file
Type	Internal file type of the file translated from the file type in the PDR according to a predefined table (e.g., SCIENCE, METADATA, BROWSE)
Status	Last action performed on the file or the most recent, unresolved, error encountered while processing the file

4.6.1.8 Historical Ingest Requests Page

This page shows all of the ingest requests that have reached a terminal state and have been moved from the active ingest requests list, which occurs after a configured interval has elapsed (configured on the Global Tuning page, Section 4.6.1.24). The DPL Ingest Database keeps a persistent record of *all* requests that have undergone ingest processing and can thus be viewed on this page (see Figure 4.6.1-37 below). The operator has the ability to configure how long this historical information is kept on the bottom of this page (see Figure 4.6.1-38) and can also be set on the Global Tuning Configuration page (Section 4.6.1.24). Table 4.6.1-9 lists the historical ingest requests column descriptions.

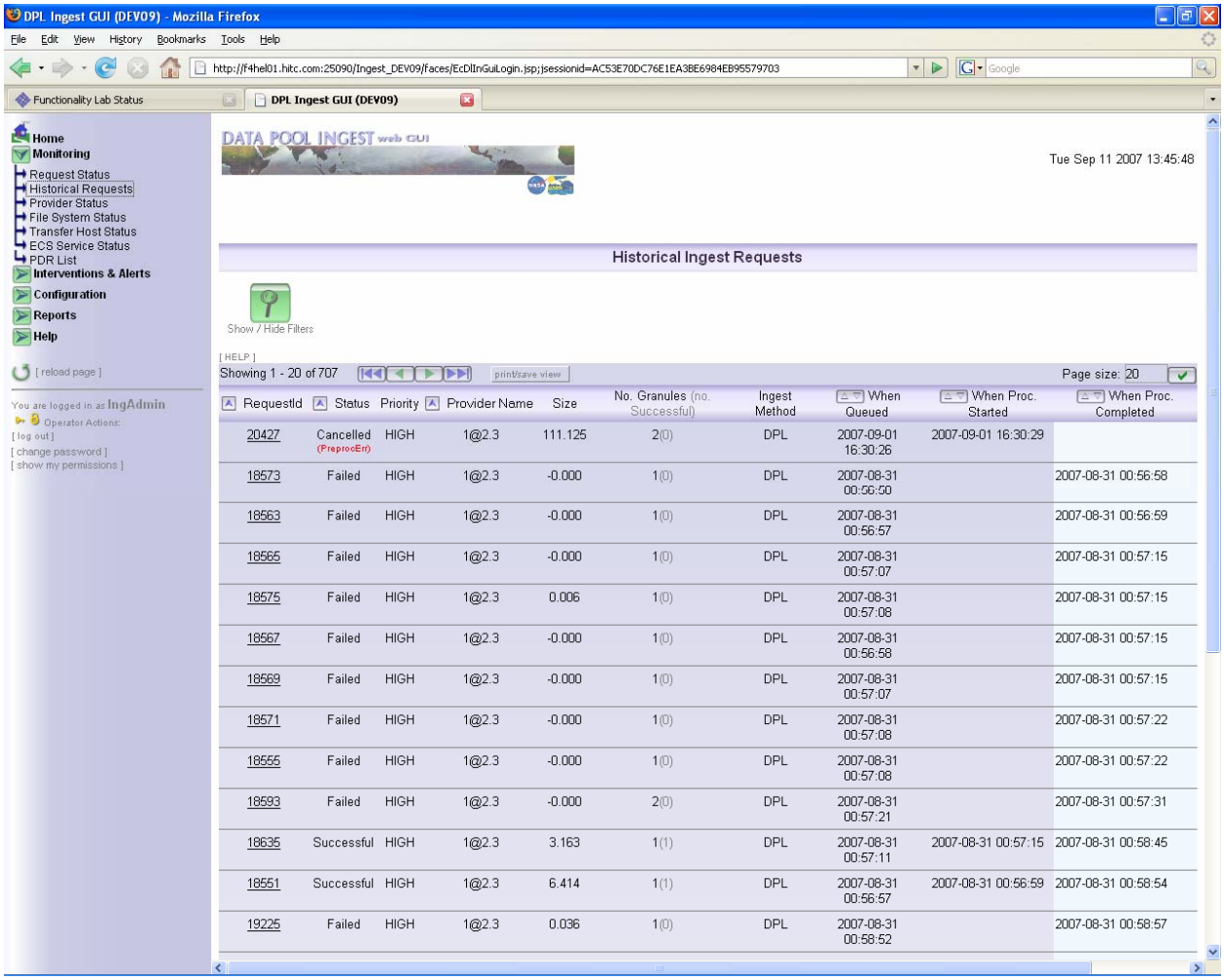


Figure 4.6.1-37. Historical Requests Page

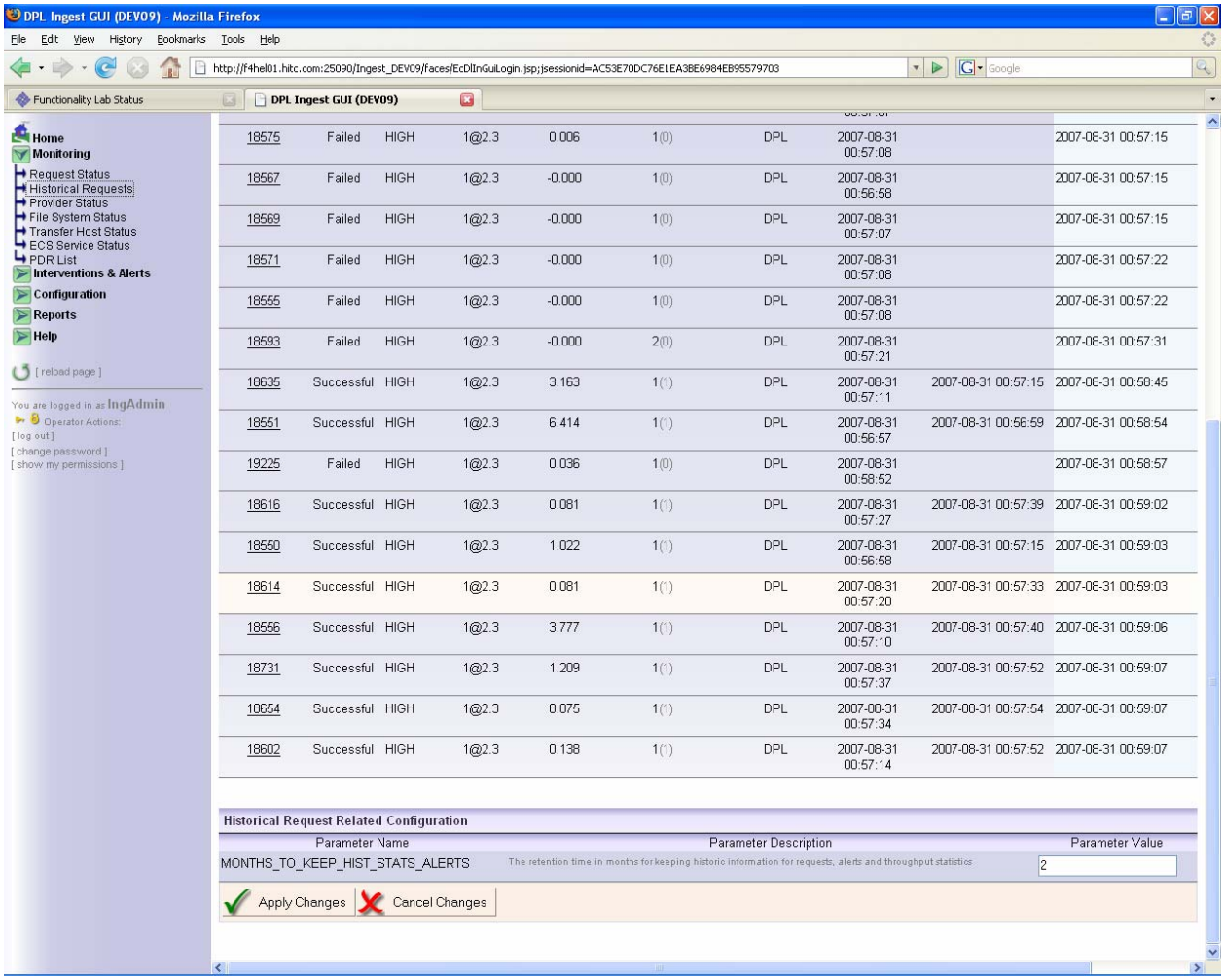


Figure 4.6.1-38. Historical Request Related Configuration

Table 4.6.1-9. Historical Ingest Requests Column Descriptions

Field Name	Description
Request ID	Unique ID for an ingest request
Status	Terminal state reached by the request
Priority	The final priority assigned to the request during processing
Provider Name	Name of the provider from which the request was obtained
Size	Sum of the size in MB of all granules in the request
No. Granules	Total granules included in the request
Ingest Method	Whether the request was processed by Classic Ingest, or the new Data Pool Ingest system. “DPL” indicates Data Pool Ingest, while “CLASSIC” indicates Classic Ingest.
When Queued	Time the request was encountered by the polling service
When Proc. Started	Time the request was activated by processing
When Processing Completed	Time the request reached a terminal state

4.6.1.8.1 Viewing Historical Request Details

To view request details, click on a request ID, which displays a request detail page similar to that for an Active Ingest Request, as shown in Figure 4.6.1-39.

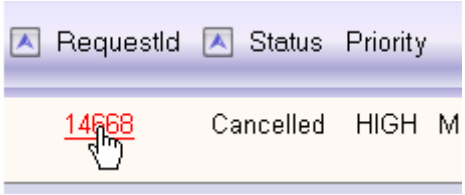


Figure 4.6.1-39. Viewing Historic Request Details

4.6.1.8.2 Printing and Saving Historical Request Lists as Reports

The operator can view the entire Historic Request list by clicking the "print/save view" button next to the pagination arrows at the top of the Historic Request List, as shown in Figure 4.6.1-40.

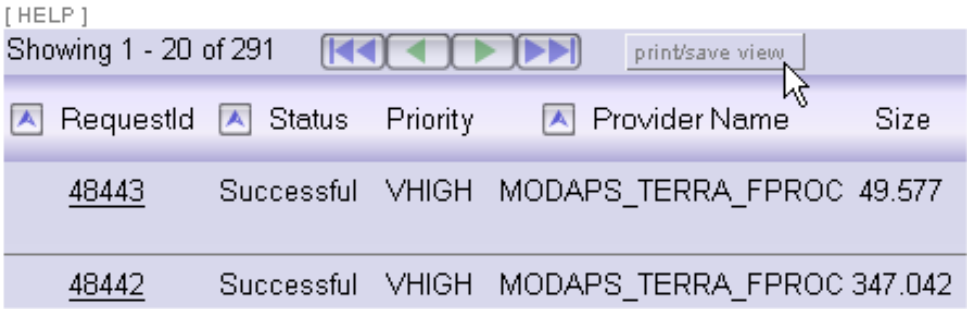


Figure 4.6.1-40. Print/Save View Button

This will display a complete list of all the historic requests, though this list will be restricted by current filter settings. A new window will be opened and you will be prompted to continue, as shown in Figure 4.6.1-41.

Because the list could potentially contain thousands of records, it may take several minutes to load the entire list into the browser window. At this point, the window will display "Processing Your Request" (see Figure 4.6.1-42) while the web server retrieves the data – this page may be displayed for several minutes. Once the entire list is loaded, the page will display the list as normal (Figure 4.6.1-43).

Saving and Printing

From here you can save the list as HTML by using the browser's built-in save functionality (usually File > Save As…). Most browsers will also allow you to save the page as text only. To print, either press the "Print This Report" button directly on the page, or use the menu (File > Print…); this will load your browser's built-in print dialog box, an example of which is shown in Figure 4.6.1-44.

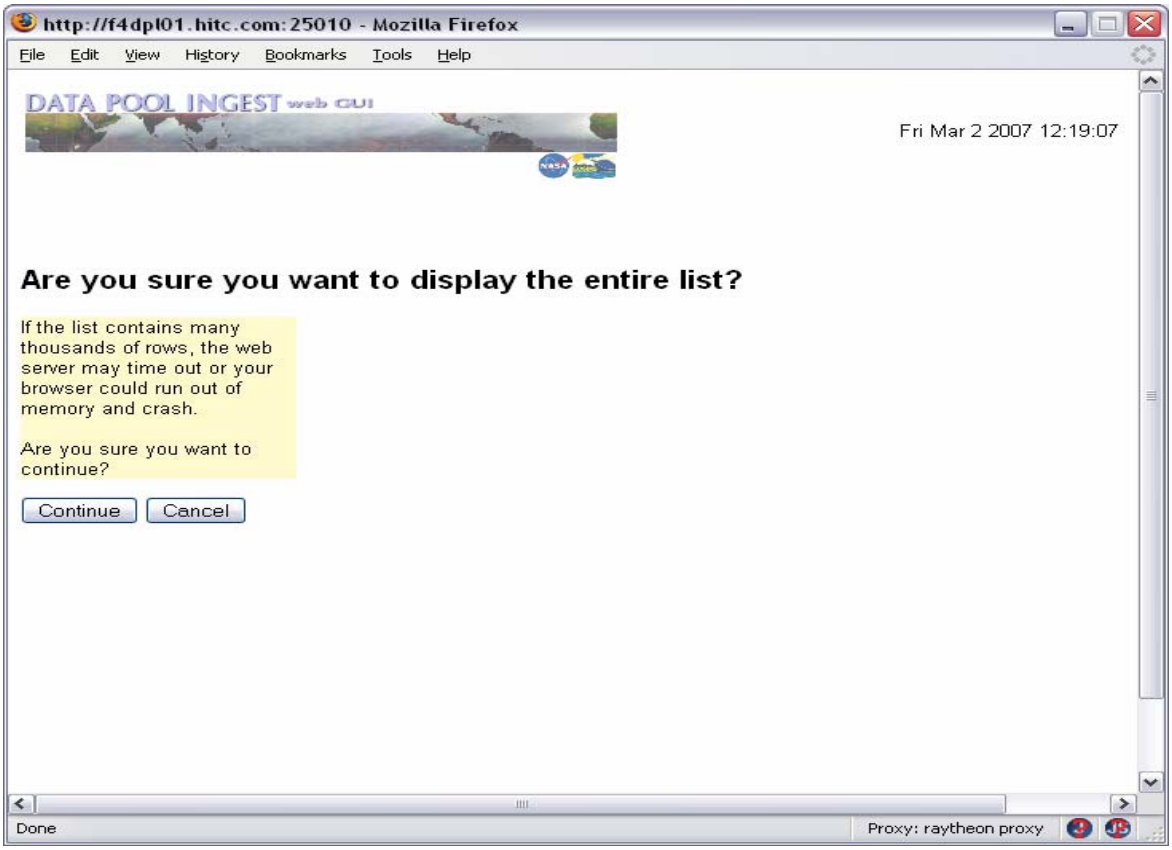


Figure 4.6.1-41. Prompt to Display Entire Historic Request List

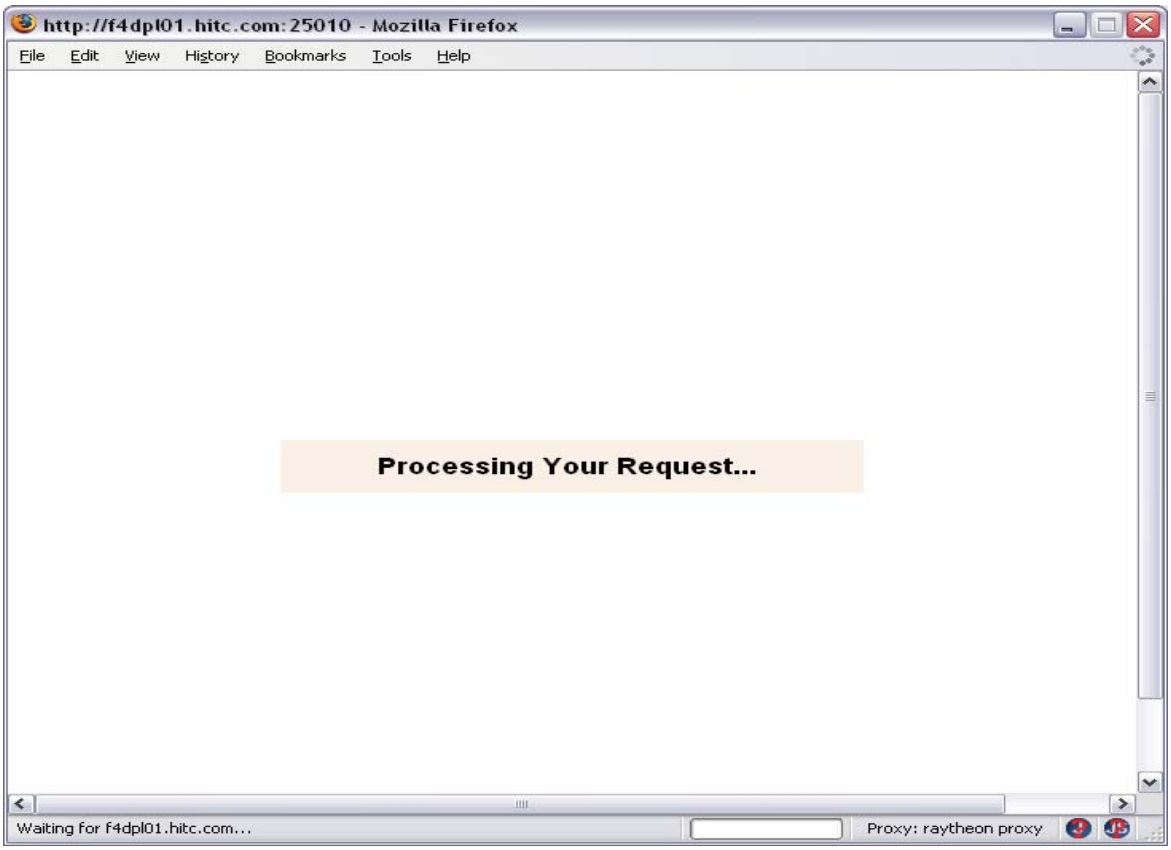
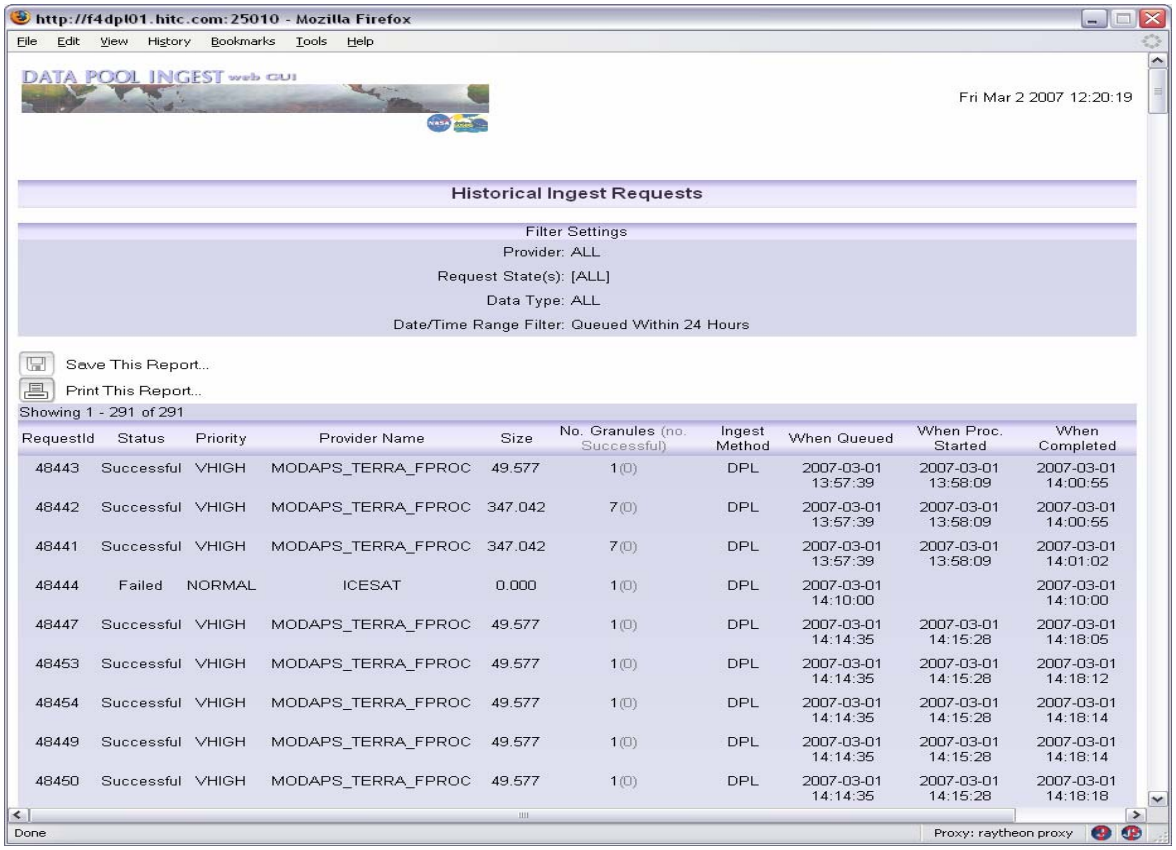


Figure 4.6.1-42. "Processing Your Request" Wait Screen



http://f4dpl01.hitc.com:25010 - Mozilla Firefox

File Edit View History Bookmarks Tools Help

DATA POOL INGEST web GUI

Fri Mar 2 2007 12:20:19

Historical Ingest Requests

Filter Settings

Provider: ALL

Request State(s): [ALL]

Data Type: ALL

Date/Time Range Filter: Queued Within 24 Hours

Save This Report...

Print This Report...

Showing 1 - 291 of 291

RequestId	Status	Priority	Provider Name	Size	No. Granules (no. Successful)	Ingest Method	When Queued	When Proc. Started	When Completed
48443	Successful	VHIGH	MODAPS_TERRA_FPROC	49.577	1(0)	DPL	2007-03-01 13:57:39	2007-03-01 13:58:09	2007-03-01 14:00:55
48442	Successful	VHIGH	MODAPS_TERRA_FPROC	347.042	7(0)	DPL	2007-03-01 13:57:39	2007-03-01 13:58:09	2007-03-01 14:00:55
48441	Successful	VHIGH	MODAPS_TERRA_FPROC	347.042	7(0)	DPL	2007-03-01 13:57:39	2007-03-01 13:58:09	2007-03-01 14:01:02
48444	Failed	NORMAL	ICESAT	0.000	1(0)	DPL	2007-03-01 14:10:00		2007-03-01 14:10:00
48447	Successful	VHIGH	MODAPS_TERRA_FPROC	49.577	1(0)	DPL	2007-03-01 14:14:35	2007-03-01 14:15:28	2007-03-01 14:18:05
48453	Successful	VHIGH	MODAPS_TERRA_FPROC	49.577	1(0)	DPL	2007-03-01 14:14:35	2007-03-01 14:15:28	2007-03-01 14:18:12
48454	Successful	VHIGH	MODAPS_TERRA_FPROC	49.577	1(0)	DPL	2007-03-01 14:14:35	2007-03-01 14:15:28	2007-03-01 14:18:14
48449	Successful	VHIGH	MODAPS_TERRA_FPROC	49.577	1(0)	DPL	2007-03-01 14:14:35	2007-03-01 14:15:28	2007-03-01 14:18:14
48450	Successful	VHIGH	MODAPS_TERRA_FPROC	49.577	1(0)	DPL	2007-03-01 14:14:35	2007-03-01 14:15:28	2007-03-01 14:18:18

Done

Proxy: raytheon proxy

Figure 4.6.1-43. Print/Save View of Historical Ingest Requests

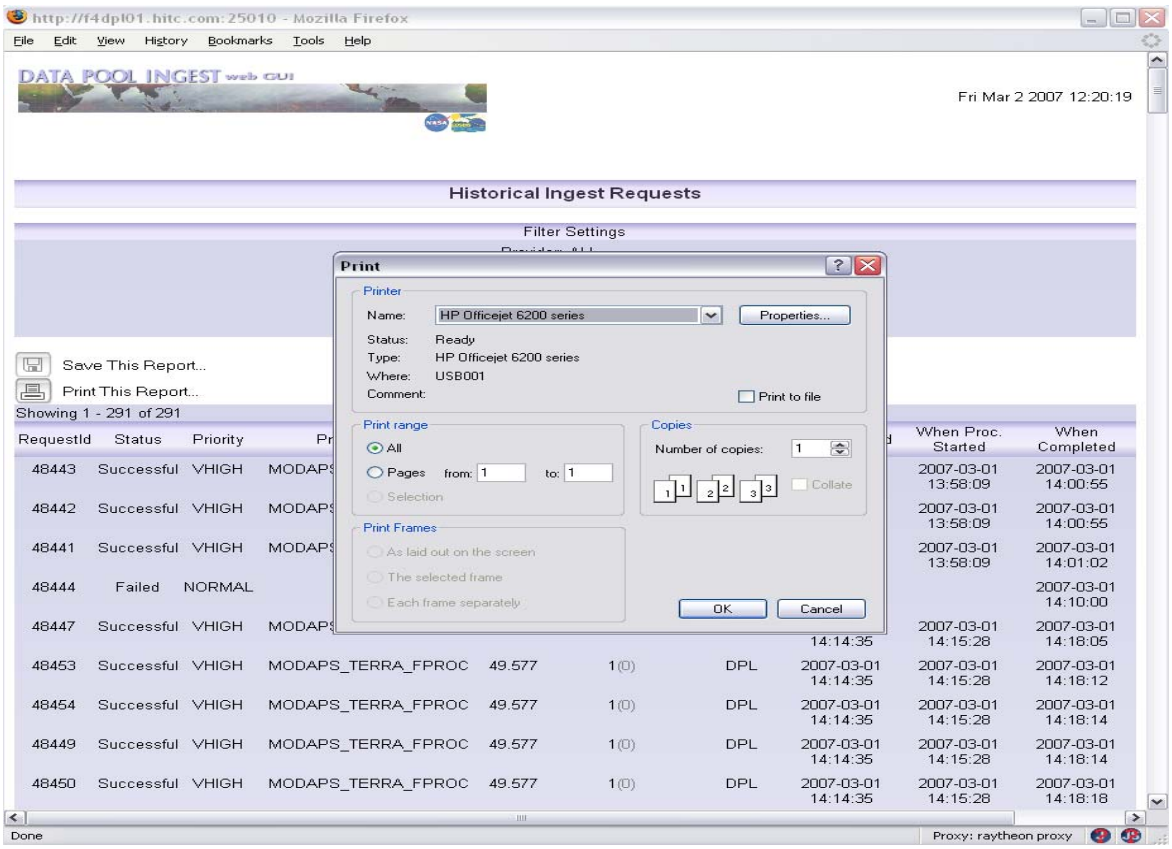


Figure 4.6.1-44. Print Dialog Box

4.6.1.8.3 Historical Request Filters

The historic request list on this page can be filtered using the filter panel that appears on the same page. This is opened by clicking on the green filter button at the top of the page, as shown in Figure 4.6.1-45. If authentication is enabled, filter settings are always remembered, even when logging out of the session. They are never lost unless the operator profile is completely removed or authentication is disabled.

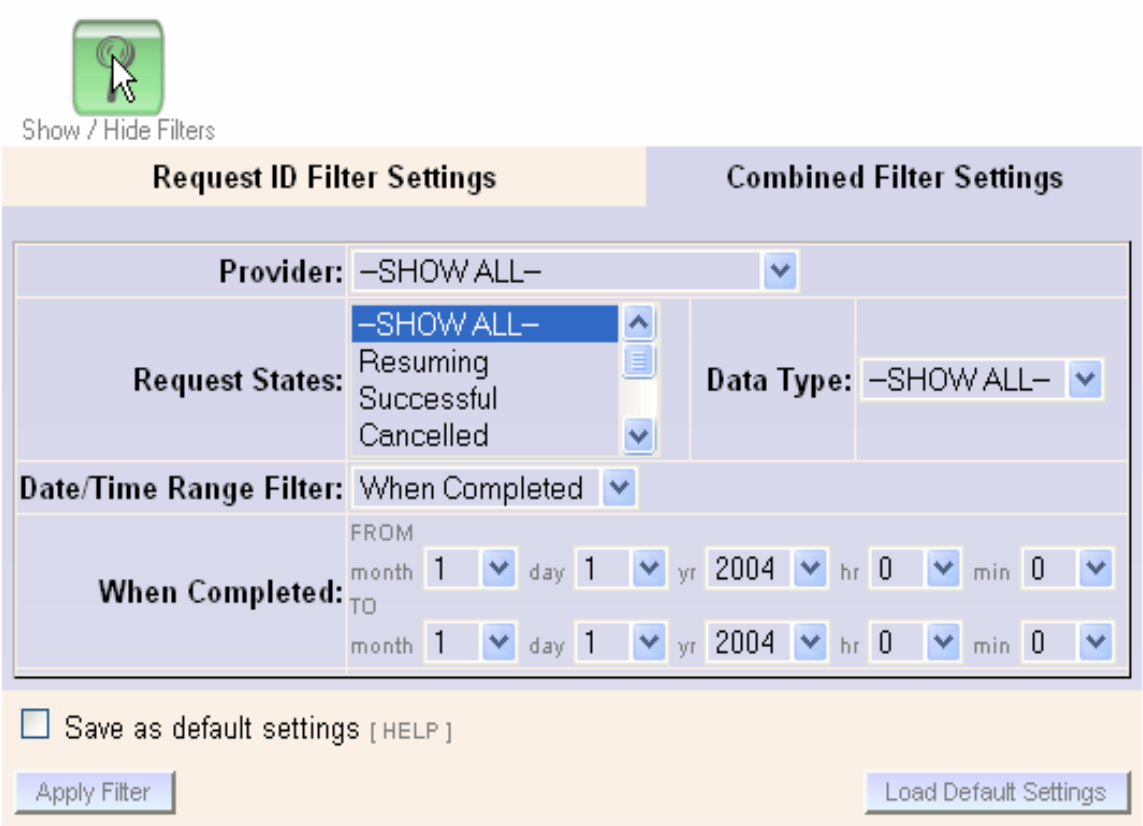


Figure 4.6.1-45. Filter Panel

This panel shows the current filter settings and allows the operator to change them. There are two tabs on this panel, one that provides filter options based upon the attributes of the various requests ("Combined Filter Settings"), as shown in Figure 4.6.1-45, and the other that will filter by a single request ID ("Request ID Filter Settings"), as shown in Figure 4.6.1-47.

Under Criteria Based Filtering, there are several different types of filters that can be applied concurrently to the request list. These are as follows:

- **Data Providers –** By selecting a provider, only requests from that provider will be displayed in the request list.
- **Request States** – If this option is selected, multiple states may be included in the filter by holding down the CTRL key and selecting all of the desired states. Only requests in the selected states will be displayed.
- **Data Type** – By selecting a data type, only requests with granules of the selected data type will be displayed
- **Date/Time Range Filter** – The operator can either filter by the time when a request was last updated or when it was last queued, as shown in Figure 4.6.1-46.

- *When Completed* – Only requests that completed from the given date to the given date will be displayed. Completion time is recorded once all granules reach a terminal state.
- *When Queued* – Only requests that were added to the request list from the given date to the given date will be displayed
- *Queued Within 24 Hours* – Only requests that were added to the request list within the last 24 hours from the current date
- *None* – No date/time range filtering will be applied

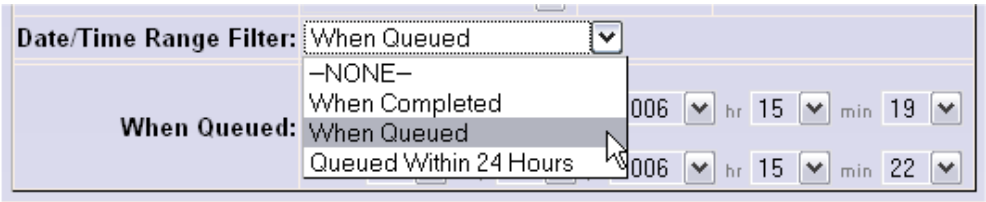


Figure 4.6.1-46. Selecting a Date Range Criteria

To filter by a single Request ID, press on the "Request ID Filter Settings" tab. A single field for entering a Request ID number will appear, as shown in Figure 4.6.1-47. The request ID filter can only be applied by itself and not in combination with any other filter attributes.

Figure 4.6.1-47. Filtering By Request ID

Once the desired filter options are selected, the operator has the option of saving a set of default settings by selecting the "Save As Default Settings" box prior to clicking "Apply Filter" (see Figure 4.6.1-48). Thereafter, the operator can click "Load Default Settings" to restore these saved defaults. If no default is stored, all requests will be shown by default. If authentication is disabled, there will be no option for saving or loading default settings.

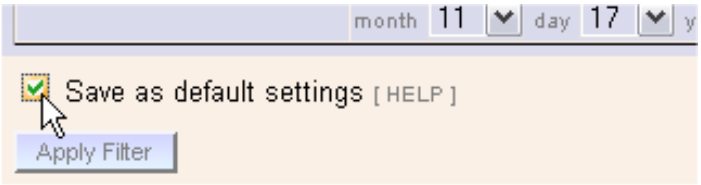


Figure 4.6.1-48. Saving Default Filter Settings

Once all settings are selected, press the "Apply Filter" button. A new page will appear with showing only the requests meeting the filter criteria. Filtering options will be hidden until the green "Show / Hide Filters" button is pressed again.

4.6.1.9 Historical Ingest Request Detail Page

The request detail page for a historical request (Figure 4.6.1-49) is similar to the one for an Active Ingest Request, with the request details followed by a granule list. The details on this page are somewhat different in that information pertaining to historical data is shown. Since the request is in a terminal state, no actions can be processed for this request, so action buttons are not present. Tables 4.6.1-10 through 4.6.1-12 contains information for the Historical Ingest Request Detail page such as the request info field descriptions, the request info column descriptions, and the granule list column descriptions.

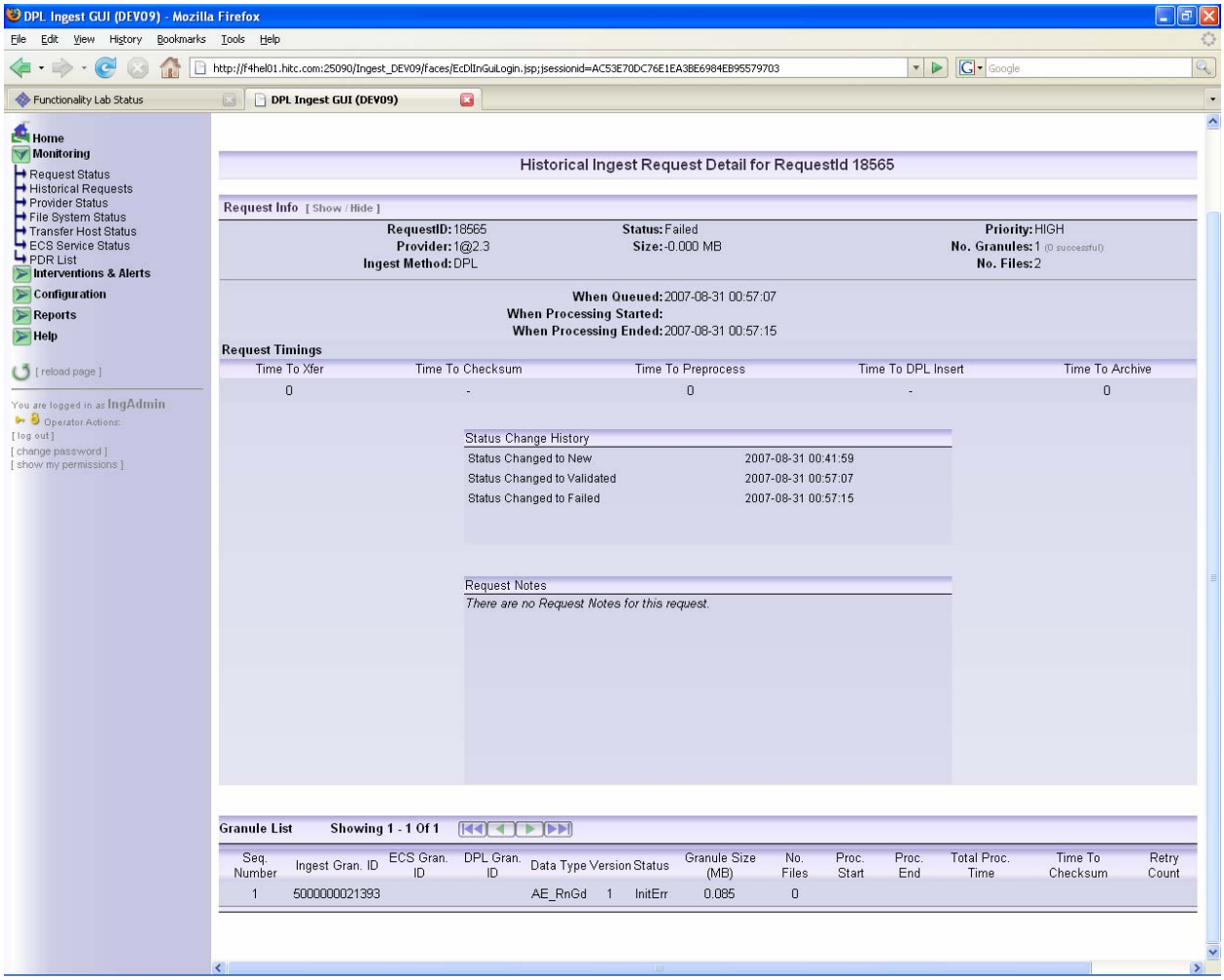


Figure 4.6.1-49. Historical Request Detail Page

Page Sections

- Request Info – *General information about the request*

Table 4.6.1-10. Historical Ingest Request Detail Page – Request Info Field Descriptions

Field Name	Description
Request ID	Unique ID for an ingest request
Status	The final state of the request (see Table 4.6.1-3 for a list of possible request states)
Priority	The precedence which a request will have for activation and various processing actions.
Provider	Unique name assigned to the provider associated with the polling location where the request was found
Size	Sum of the size of all granules in the request
No. Granules	Total number of granules in the PDR
Ingest Method	Whether the request was processed by Classic Ingest, or the new DataPool Ingest system
No. Files	Number of files found associated with the granule in the PDR

- Request Timings – *Seconds of time that passed during various processing actions*

Table 4.6.1-11. Historical Ingest Request Detail Page – Request Timings Column Descriptions

Field Name	Description
Time to Xfer	Total seconds of time that passed during all granule transfers
Time to Checksum	Total seconds of time that passed during all granule checksum operations
Time to Preprocess	Total seconds of time that passed during all granule preprocessing operations
Time to Insert	Total seconds of time that passed to insert all granules into the SDSRV
Time to Archive	Total seconds of time that passed to copy all granules into the archive

- Granule List – *Detailed granule information*

Table 4.6.1-12. Historical Ingest Request Detail Page – Granule List Column Descriptions

Field Name	Description
Seq Number	The order in which a granule was found in the PDR
Ingest Gran ID	Unique Identifier assigned to the granule by the DPL Ingest System
ECS Gran ID	Unique Identifier assigned to the granule for insert in the SDSRV
DPL Gran ID	Unique Identifier assigned to the granule for registration in the Data Pool
Data Type	Data Type found in the PDR describing the granule
Version	Version found in the PDR describing the granule
Status	Terminal state reached by the granule
Granule Size (MB)	Sum of the size of all files associated with the granule
No. Files	Number of files found associated with the granule in the PDR
Proc. Start	Time of granule activation
Proc. End	Time granule reached a terminal state
Total Proc. Time	Total seconds that lapsed in between granule activation and completion
Time to Checksum	Total seconds that passed during granule checksum across all files
Retry Count	Number of times the granule was retried (or retried from start)

4.6.1.10 Provider Status Page

This page displays the status and information about each configured data provider in the Data Pool Ingest system (see Figure 4.6.1-50 for a general overview). Table 4.6.1-13 contains the Provider Status page column descriptions.

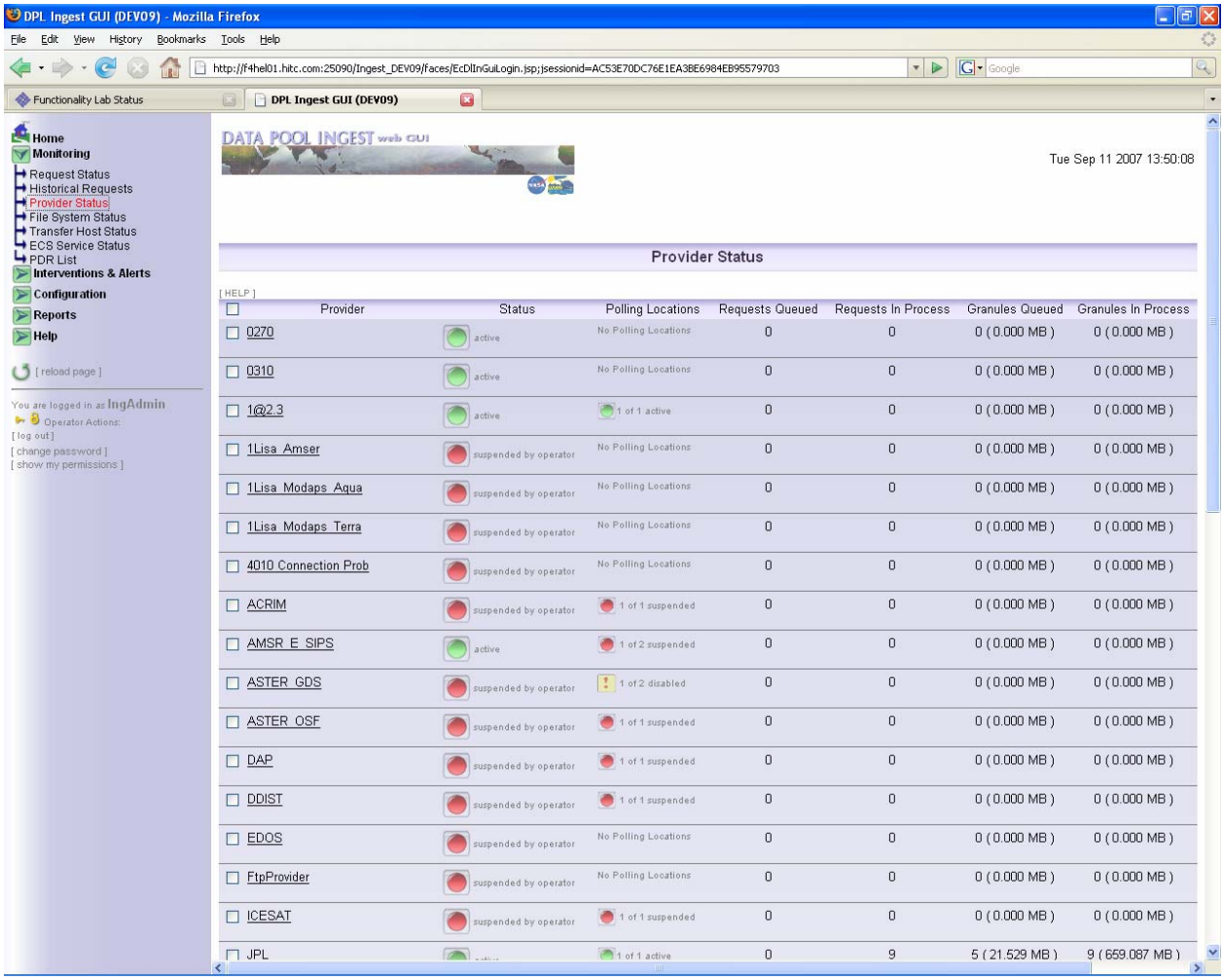


Figure 4.6.1-50. Provider Status Page (General Overview)

Table 4.6.1-13. Provider Status Page Column Descriptions

Field Name	Description
Provider	Provider name configured to identify an External Data Provider
Status	Whether the provider is active, suspended by server, or suspended by operator
Polling Locations	Total number of active polling locations on the provider, or the number of polling locations that are suspended out of the total number configured
Requests Queued	Total number of requests waiting for activation from the provider
Requests In-Process	Total number of requests that are active and not suspended from the provider
Granules Queued	Total number and volume (in MB) of granules waiting for activation in requests from the provider
Granules In-Process	Total number and volume (in MB) of granules that are active and not suspended in requests from the provider

Possible Status Indicators

There are three possible status indicators for a provider.

- Active – at least one polling location is active

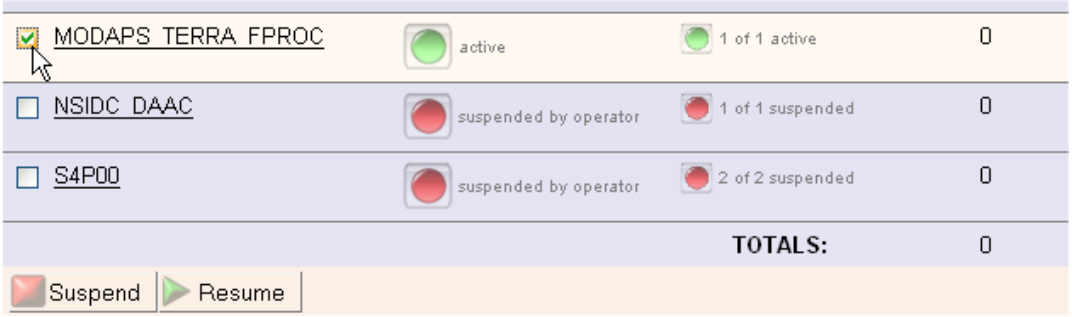
- Suspended by Server (indicating all polling locations are suspended) – the server has suspended the Polling Location automatically.

- Suspended by Operator (indicating all polling locations are suspended) – operator manually suspended the Polling Location from the GUI

4.6.1.10.1 Provider Status Actions

You can suspend or resume any of the Data Providers listed on this page. The status column shows a green (active) or red (suspended) icon. To change the status of one or more providers, do the following:

1. Select the desired provider; multiple providers may be selected at once:



2. Click the appropriate action button at the bottom of the list:

3. You will be prompted for confirmation. The page will reload with the status of the selected providers changed.

The Impacts of Suspending a Provider

Suspending a Data Provider will stop the activation of Ingest Requests from that Provider, but Ingest Requests that are already active will be completed. Ingest will also stop polling all of the Polling Locations associated with that Data Provider; The impact then is that no new Requests from that suspended Data Provider will be queued except if a polling cycle is in progress, in which case the polling cycle will be completed.

4.6.1.11 Provider Status Detail

The detail page of a provider shows the detail information of the Provider, the configured Notification Types, and the individual status of each polling location associated with the provider, as shown in Figure 4.6.1-51, and allows the operator to suspend or resume the Polling Locations accordingly.

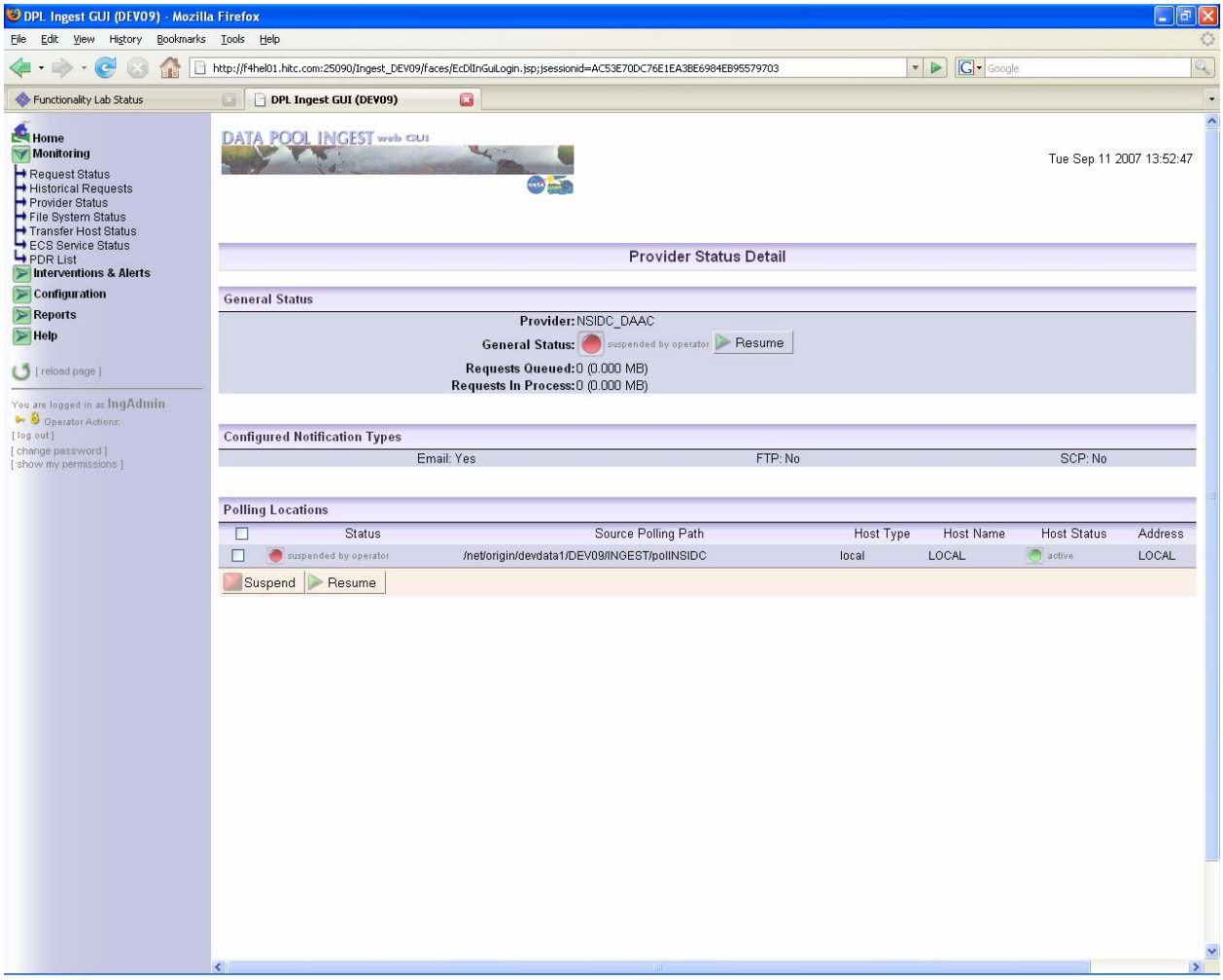


Figure 4.6.1-51. Provider Status Detail Page

4.6.1.11.1 General Status

This section of the Provider Status Detail page provides an overview of current processing through the provider, as shown in Figure 4.6.1-52. Table 4.6.1-14 contains the general status field descriptions for the Provider Status detail page.

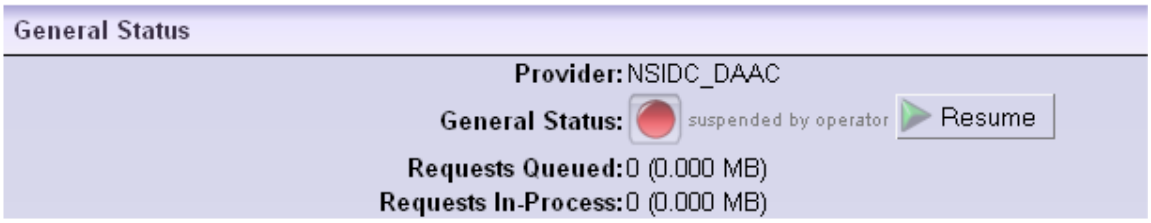


Figure 4.6.1-52. General Status for a Provider

Table 4.6.1-14. Provider Status Detail Page – General Status Field Descriptions

Field Name	Description
Provider	Unique name for this external data provider
General Status	Whether the provider is active, or has been suspended either manually by the operator or automatically by the server
Requests Queued	Total number of requests waiting for activation from the provider, as well as the total size of those requests
Requests In-Process	Total number of requests that are active and not suspended from the provider, as well as the total size of those requests

4.6.1.11.2 Configured Notification Information Types

The Provider Status detail page shows the configured notification types for a provider and its notification method, as shown in Figure 4.6.1-53, Figure 4.6.1-54, and Figure 4.6.1-55. The operator cannot suspend or resume these for an individual provider.

Figure 4.6.1-53. Notification Information

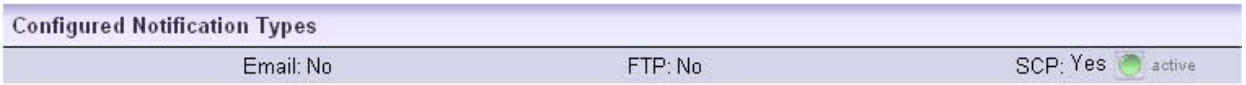


Figure 4.6.1-54. Notification Information w/ SCP active

Configured Notification Types		
Email: Yes	FTP: Yes active	SCP: No

Figure 4.6.1-55. Notification Information w/ FTP active

A Data Provider may have SCP, FTP, email, or a combination of these methods of notification. There is no status for an email notification method or for a notification method that is not enabled. If any of the methods are not used, then "No" will appear next to the notification method name.

Note that operators or the Ingest Service can suspend all traffic to and from an SCP or FTP Host (e.g., if the host or the connection to the host will be taken down or is experiencing problems). In that case, notifications for a provider that use that host will be shown as suspended. Operators can suspend email notifications as a whole via the Ingest Status page (e.g., when the local e-mail service needs to be shut down for maintenance), in which case all email notifications for all providers will be shown as suspended. For more information on that functionality, see Section 4.6.1.2.2.

The overall status of SCP and FTP Hosts is shown on the Transfer Host Status Page (see Section 4.6.1.13). The status of email notifications is shown on the Ingest Status Page (Section 4.6.1.2).

4.6.1.11.3 Polling Location List

Each Data Provider has a list of associated Polling Locations, which are directories on SCP, FTP, or local Hosts that can be suspended or resumed. These can be suspended or resumed in order to halt or resume data to be sent through (Ingested from) these providers, without impacting the status of the Host on which that polling location resides (see Figure 4.6.1-56). To suspend or resume a polling location, check the boxes of the desired locations in the list and click the action button at the bottom of the list. You will be prompted for confirmation before the action is carried out. Table 4.6.1-15 contains the polling locations column descriptions for the provider status detail page.

Polling Locations

☐	Status	Source Polling Path	Host Type	Host Name	Host Status	Address
☐	active	/home/cmshared/PDRS/eborodki/	SCP	f4ftl01	active	f4ftl01
☐	active	/usr/ecs/OPS/CUSTOM/data/dplIngest/aqua/forward/PDR	FTP	LPDAAC	active	f3drg01.hitc.com
☐	active	/usr/ecs/OPS/CUSTOM/data/INGEST/aqua/forward/PDR	SCP	f4dpl01	active	f4dpl01
☐	active	/home/cmshared/PDRS/aqua_4043	SCP	f4hel01	active	f4hel01

Suspend | Resume

Figure 4.6.1-56. Polling Location List

Table 4.6.1-15. Provider Status Detail Page – Polling Locations Column Descriptions

Field Name	Description
Status	Whether the polling location is active, suspended by server, or suspended by operator
Source Polling Path	Full path of directory being polled
Host Type	Method being used for polling – Local, FTP, or SCP
Host Name	Label assigned to the host on which the polling location is found
Host Status	Whether the host where the polling location is found is active or suspended. The polling location itself can be suspended, but this does not affect the state of the host.
Address	IP address or DNS name where the polling directory can be found

4.6.1.12 File System Status

This page displays the status of each of the Archive File Systems and Data Pool File Systems, as shown in Figure 4.6.1-57. Table 4.6.1-16 contains the file systems status page column descriptions.

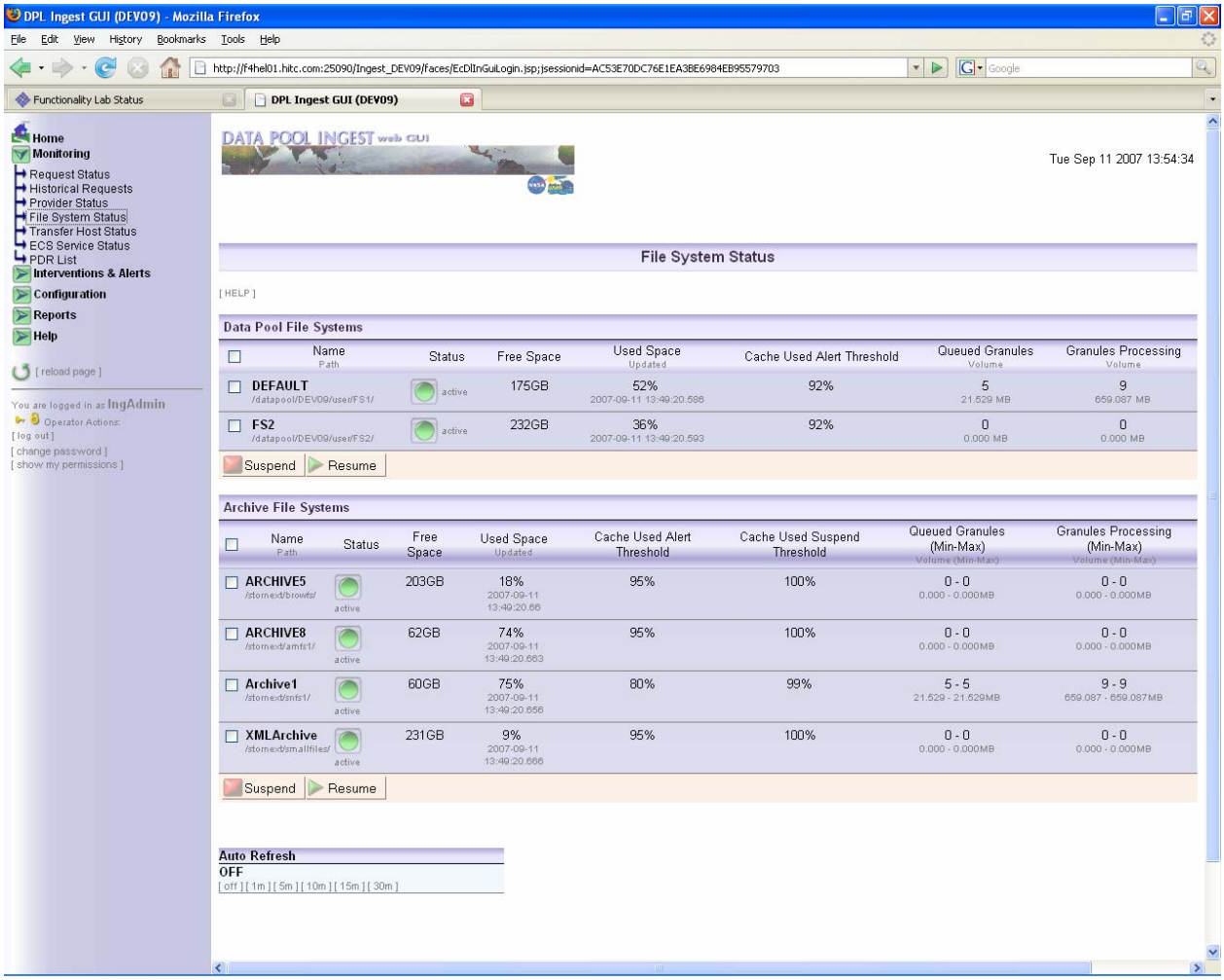


Figure 4.6.1-57. File System Status Page Screen Shot

Table 4.6.1-16. File System Status Page Column Descriptions (1 of 2)

Field Name	Description
Name	Unique name assigned to the file system and the directory where the file system is found
Status	Whether the file system is active, suspended by operator, or suspended by server
Free Space	The amount of free space (in GB) on the File System.
Used Space	Percentage of space used on the file system and the time this information was last checked
Cache Used Alert Threshold	The percentage of used space in the cache at which point an alert would be raised for the Archive or Data Pool File System. For example, if the threshold was set to 80%, an alert would be raised as soon as more than 80% of the cache was used. No requests or file systems will be suspended as a result of this threshold being reached

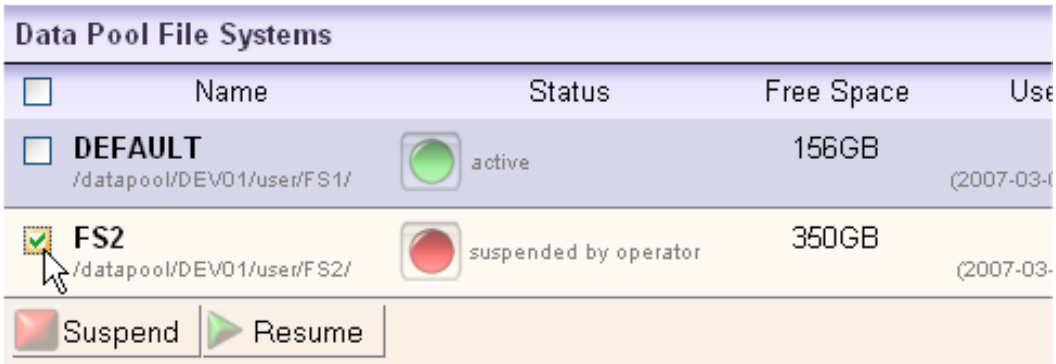
Table 4.6.1-16. File System Status Page Column Descriptions (2 of 2)

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

Actions on this page:

As with other pages that display services or providers, each of these archive file systems can also be suspended or resumed. The status column shows a green (active) or red (suspended, either by operator or server) icon. To change the status of one or more file systems, do the following:

1. Select the desired Data Pool File System or Archive File System (multiple selections may be made):



2. Click the desired action button at the bottom of the list
3. You will be prompted for confirmation. The page will reload with the status of the selected archives changed.
4. The application will not allow the same action to be taken twice on an Archive File System. For example, an already active status can not be resumed. However, an Archive File system that was suspended by the server may be manually suspended by the operator.

4.6.1.13 Transfer Host Status

The Transfer Host Status page shows the status of each configured SCP and FTP host, as well as the status of Local transfers. The read/write status of each host, as well as the read/write status of the providers using that host can be manually suspended or resumed, and may have been suspended by the Ingest Service. See Figure 4.6.1-58 for a general overview.

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

If the read/write status of a host is suspended by the Ingest Service, an Alert will also be generated and displayed on the System Alerts page (e.g., a connection could not be established with a host because it is down, or there were too many errors while trying to transfer PDR files).

If a PDR is sent through processing with a host configured in the PDR that does not show up on the GUI, a new host will automatically be added to the lists of SCP and FTP Hosts with the name UNDEFHOST_[Provider]_[RequestID] (See Figure 4.6.1-59). No provider status will be displayed until the operator manually configures a provider to use that host. Table 4.6.1-17 contains the transfer host status page column descriptions.

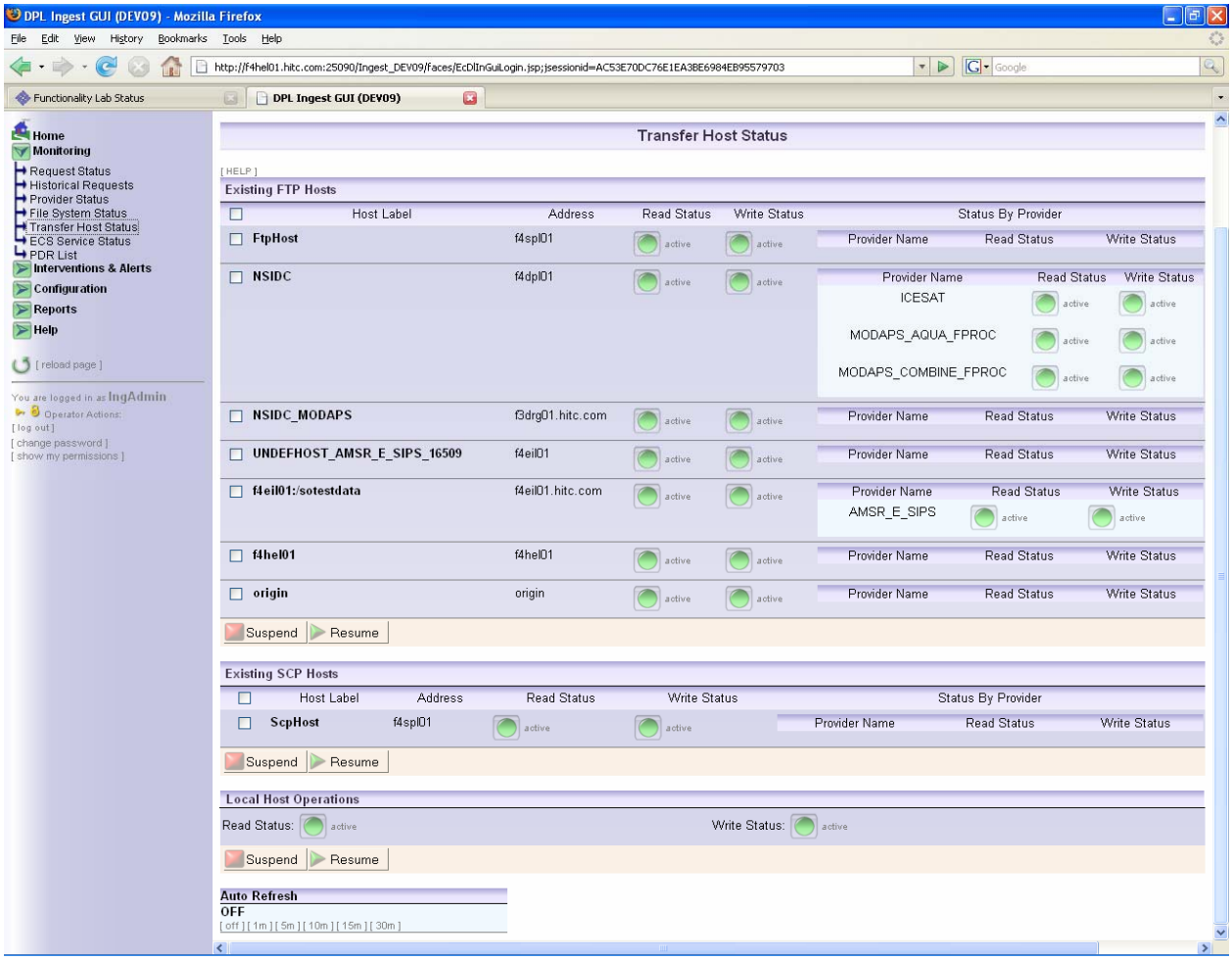


Figure 4.6.1-58. Transfer Host Status Page (General Overview)

Table 4.6.1-17. Transfer Host Status Page Column Descriptions

Field Name	Description
Host Label	Label assigned to the host on which the polling location is found
Address	The I.P. address or the canonical name and port number of the host
Read Status	Whether or not read actions (such as polling location listings) are active, suspended by operator, or suspended by server on the host
Write Status	Whether or not write actions (such as transferring notifications) are active or suspended on the host
Status by Provider: Provider Name	Name of a provider with a polling location configured on the host (can not be changed on this page)
Status by Provider: Read Status	Whether or not read actions are active or suspended for a specific provider (can not be changed on this page)
Status by Provider: Write Status	Whether or not write actions are active or suspended for a specific provider (can not be changed on this page)

Actions on this page:

Each of the SCP/FTP hosts, as well as Local Host Operations, can be suspended or resumed. The status columns show a green (active) or red (suspended by server or operator) icon and indicate which operations (read, write, or both) are suspended. The read and write status is also displayed for each provider with a polling location or notification method configured to the host.

To change the status of one or more hosts, do the following:

1. Select the desired host; multiple selections may be made
2. Click the Suspend or Resume button at the bottom of the list, as shown in Figure 4.6.1-59. You will be prompted for confirmation. The page will reload with the status of the selected hosts changed.
3. Both read and write status will be suspended as a result of suspending the host. Polling will stop on polling locations that use this host for transfers. No notifications will be sent to the host until it is resumed, at which time all notifications halted during the suspension will be sent.

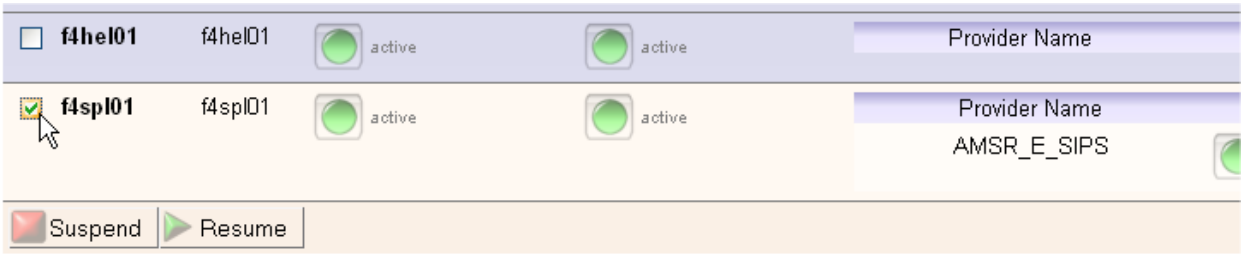


Figure 4.6.1-59. Suspending an FTP or SCP Host

4.6.1.14 ECS Services Status

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

1. The Science Data Server (SDSRV) Service – the GUI only shows that the service is up or down. See the ECS Service Configuration (0) to view the host on which this service runs.
2. Services that can run on any number of hosts that have been configured for that purpose. Examples are checksumming, archiving, and transfers. The service on each host is independent of the same type of service on the other hosts, in that its configuration and status is host specific. For example, checksumming on one host may be suspended but may be operating just fine on the other. As a result, the GUI shows the status information for that service separately for each host. These services are called *Hosts Used For ECS Services*.

Host-specific ECS Services can be individually suspended and resumed for that particular host. The SDSRV service is listed separately and can also be also be suspended or resumed. See Figure 4.6.1-60 for the general page overview.

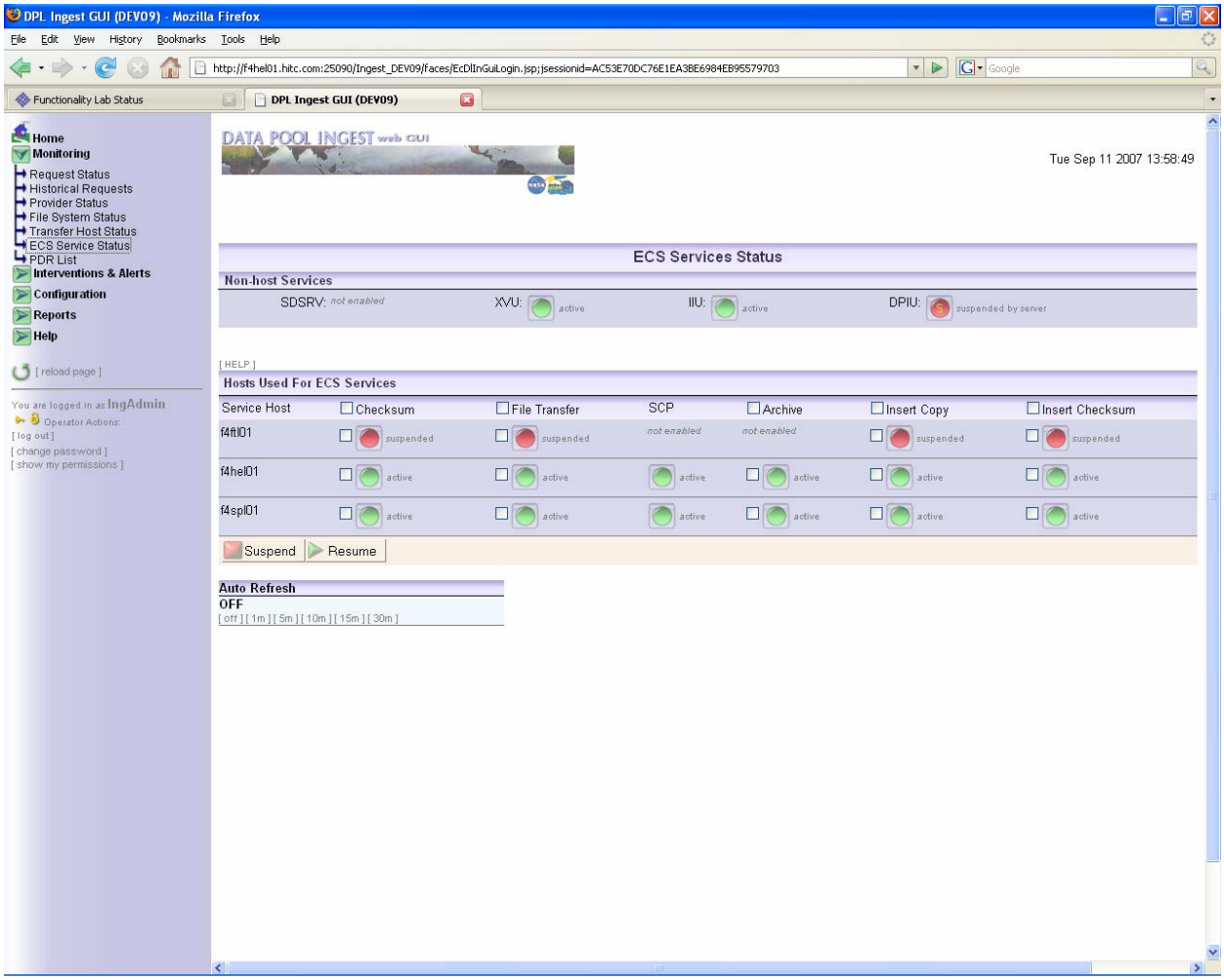


Figure 4.6.1-60. ECS Services Status Page

4.6.1.14.1 SDSRV Service

This page shows the status of the SDSRV Service, which can be suspended or resumed by simply clicking on the button next to the indicated service status. See Figure 4.6.1-61. The host used for the ECS Service is configured on the ECS Services Configuration page (see Section 4.6.1.22).

Figure 4.6.1-61. SDSRV Service

4.6.1.14.2 Hosts Used for ECS Services

These are services that are tied to a specific host. Each of the services can be suspended or resumed on that particular host. The services are:

- Checksum
- File Transfer
- Archive
- Insert Copy
- Insert Checksum

To suspend or resume a service on a host, check the box next to the status and click on the desired action button (Suspend or Resume), as shown in Figure 4.6.1-62. You will be prompted for confirmation before the action is carried out. The checkboxes at the top of each column allow the selection of *all* of that particular service for all hosts.

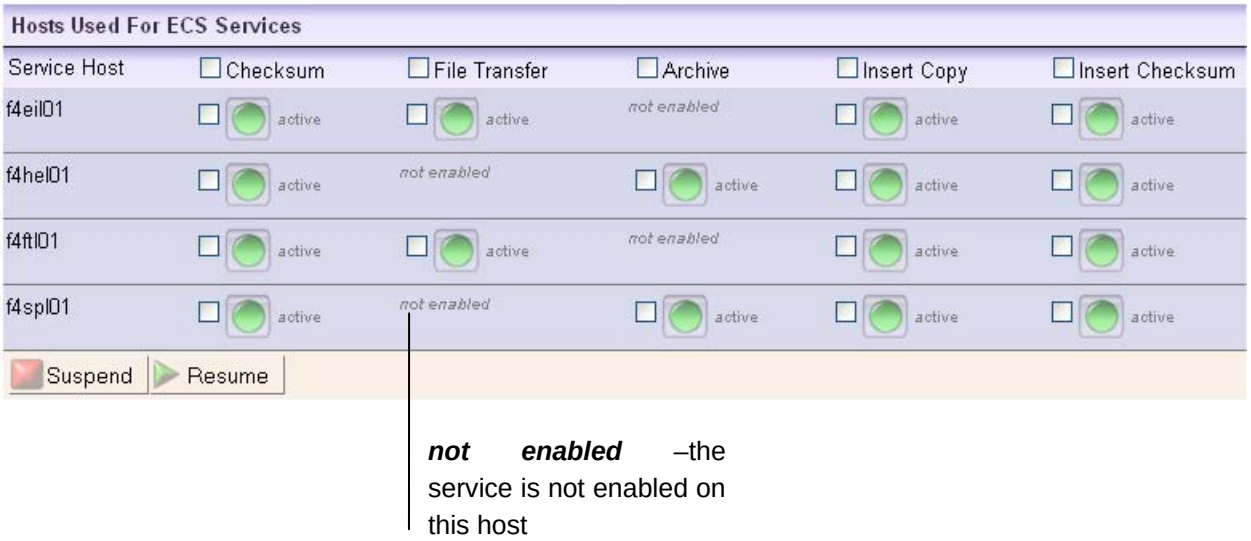


Figure 4.6.1-62. Host-Specific Services

Suspending a service on a host will let all service operations of that type that are currently executing on that host complete on that host, but no new requests for that service will be dispatched to that host. For example, if the Checksum service is suspended for HOST_A, ongoing check summing operations will complete, but then no more check summing operations will be dispatched on that host (regardless of the type of checksum involved). Checksum on other active hosts will continue. Table 4.6.1-18 contains the field descriptions for hosts used for ECS services.

As a rule, checksum operations must take place on a different host that the one on which a granule was transferred. If all but one checksum host is suspended, all granules transferred on that same host will go into a suspended state until another checksum host is activated.

Table 4.6.1-18. Field Descriptions for Hosts Used for ECS Services

Field Name	Description
Service Host	The label of the host used for the ECS Services
Checksum	The status of the Checksum Service
File Transfer	The status of the File Transfer Service
Archive	The status of the Archive Service
Insert Copy	The status of the Insert Copy Service
Insert Checksum	The status of the Insert Checksum Service

Note that for all of these services, *not enabled* may appear as the status; this indicates that the service has not been enabled for that host in the ECS Services Configuration page, therefore no real status exists for that service.

4.6.1.15 PDR List

The PDR List page shows the PDR information retrieved from the Ingest database. The PDR information is shown in Figure 4.6.1.63) with the first column listing the polling location for the PDR and the second column listing the PDR file name.

There is a check box displayed for each of the PDRs listed in the table. By checking the box and applying the Ingest Selected PDRS Again button at the bottom, the corresponding PDR will be re-ingested.

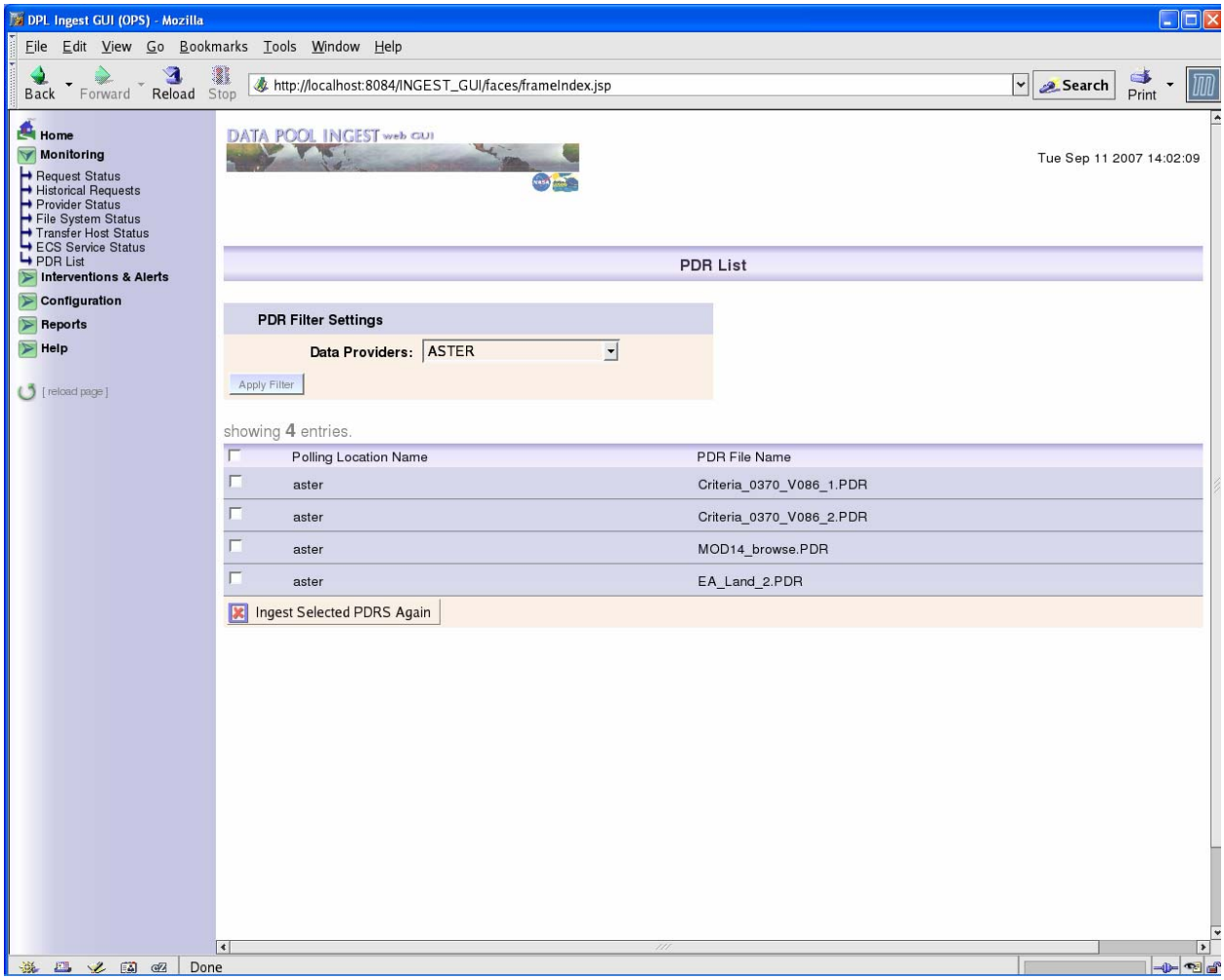


Figure 4.6.1-63 PDR Listing

4.6.1.15 Open Interventions

This page displays the list of Ingest Requests with open interventions, as shown in Figure 4.6.1-64. The operator may select any eligible request and perform one of two actions:

- Cancel Active Ingest Request(s) – *This is an irreversible action. There is no way to 'un-cancel' a request.* Processing for this ingest request will be terminated and any granules that did not yet complete processing will be cancelled. If cancelled prior to the "Inserted" state, the granule will be removed from data base entries and files will be removed from temporary locations and the data pool database. A PAN will be sent to the provider that will report failed or cancelled granules and the failure reasons (the specifics depend on the Interface Control Document that covers this interface).
- Resume Active Ingest Request(s) – *only if the selected requests are suspended. Cancelled Requests can not be resumed.* Resuming a request will resume processing for all granules

that are currently suspended, restarting each from the last known good state. To disposition individual granules differently, the operator needs to access the intervention detail page. Table 4.6.1-19 contains the descriptions of the open interventions listing page column.

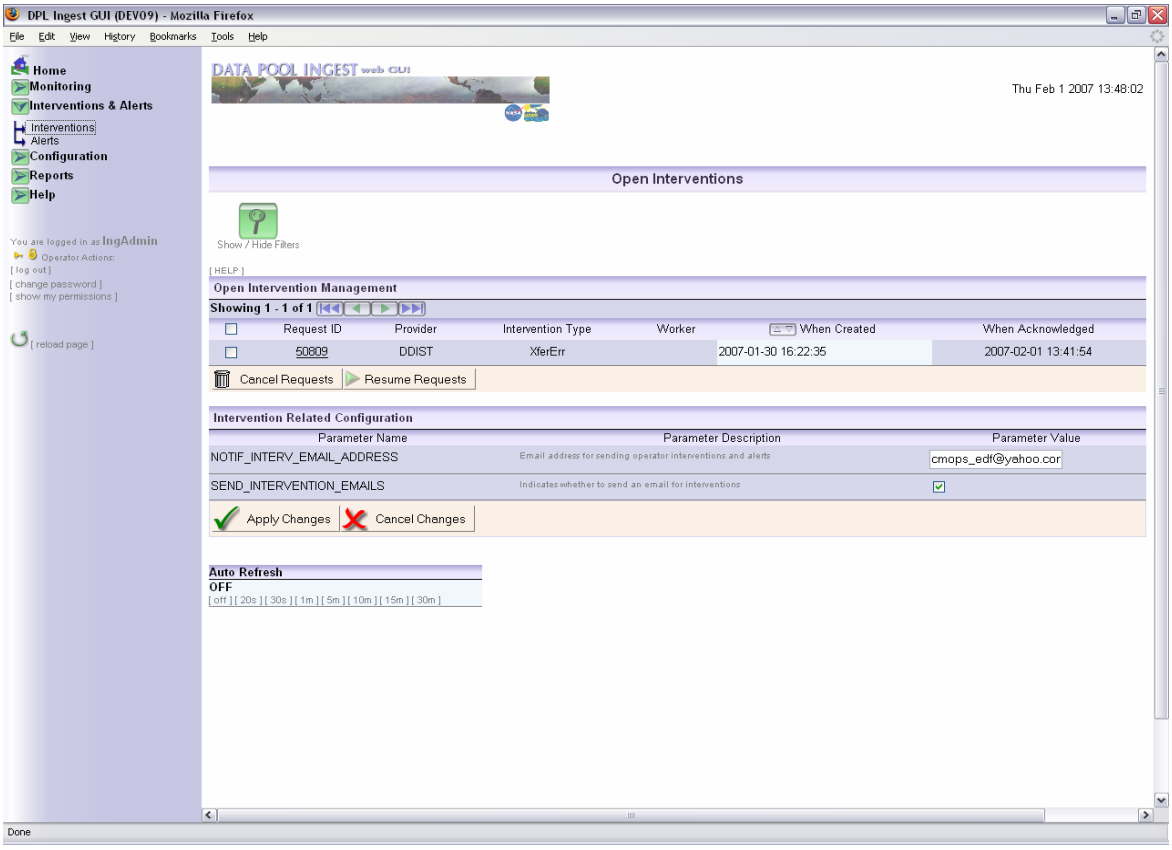


Figure 4.6.1-64. Open Interventions Listing (General Overview)

Table 4.6.1-19. Open Interventions Listing Page Column Descriptions

Field Name	Description
Request ID	Unique Data Pool Ingest identifier assigned to the request in intervention
Provider	Name of the provider from which the request was obtained
Intervention Type	Type of error encountered during processing of at least one of the request granules (if there are multiple error types encountered in a single request, the type will be “MULTIPLE”)
Worker	Name of a worker assigned to address the intervention
When Created	Time the intervention was generated (which may have been after several retries after the error was first encountered)
When Acknowledged	Time the intervention was first viewed by an operator

The information on this page is similar to the Request Status page (see Section 4.6.1.6). To view intervention details, click on the Request ID link to open the intervention detail page.

4.6.1.15 Request Actions

Changing Request Statuses

A request is suspended and goes into Operator Intervention Status when at the completion of its processing; at least one of its granules is suspended because it ran into some error. Note that operators can disposition suspended granules before the request goes into intervention, as explained in Section 4.6.1.7.5. As a result, when a request goes into intervention, some granules may already be in a failed state (if they have been failed by the operator before).

From this page, one can resume suspended requests regardless of the failures. Otherwise, the operator can view the suspended granules of the request and disposition them individually. See the Intervention Detail section below (4.6.1.16) for more details on how Interventions are processed.

To perform a request action, select the desired requests by checking the boxes on the left side of the request list. You can also select or deselect all the requests by checking the box at the very top of the list. See Figure 4.6.1-65.

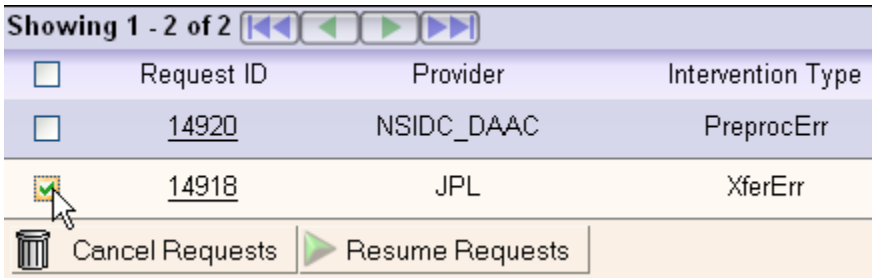


Figure 4.6.1-65. Selecting a Request for Action

Then click on the button of the desired action at the bottom of the list. A box will appear below to enter a reason for the status change. See Figure 4.6.1-66.

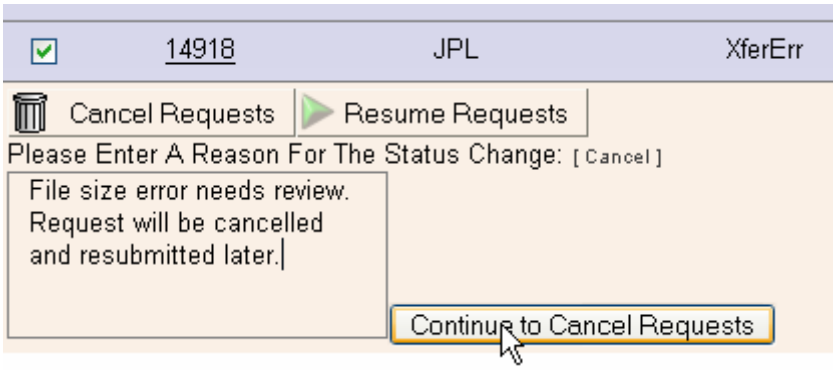


Figure 4.6.1-66. Explanation Field for Changing Request Status

Once you have entered the reason, click on the button next to the text box to continue the action. You will be prompted for confirmation before the action is carried out.

If you do not wish to process this action, click on the [cancel] link to close the box.

4.6.1.15.2 Filters

The Intervention list on this page can be filtered using the filter panel that appears on the same page. This is opened by clicking on the green filter button at the top of the page, as shown in Figure 4.6.1-67. Filter settings are associated with an operator profile and are always remembered, even when logging out of the session. They are never lost unless the operator profile is completely removed or authentication is disabled.

The operator has the option of saving a set of default settings by selecting the "Save As Default Settings" box prior to clicking "Apply Filter." Thereafter, the operator can click "Load Default Settings" to restore these saved defaults. If no default is stored, all Interventions will be shown by default.

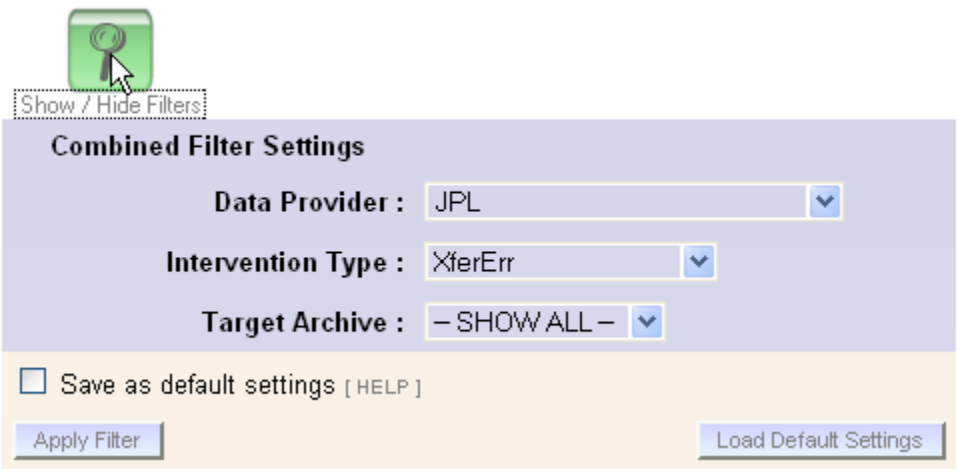


Figure 4.6.1-67. Intervention List Filter Panel

This panel shows the current filter settings and allows the operator to change them. Each of the filters shown in the figure has a SHOW ALL option that effectively does not filter by that field.

Multiple filter settings can be applied at the same time (i.e., the filters are ANDed), thus the operator could opt to see only requests from JPL with a XferErr intervention type, or he could just filter to only see interventions from a single provider.

4.6.1.15.3 Sorting

The Intervention list on this page can only be sorted by the creation date (i.e. the date and time the intervention was created) in ascending or descending order, as shown in Figure 4.6.1-68.

Unlike filter settings, sort settings are remembered for the session only, and are lost when the operator logs out or the application is closed.

Figure 4.6.1-68. Intervention List Sorts

4.6.1.15.4 Intervention Related Configuration Panel

In addition to being displayed on the Data Pool Ingest GUI, interventions can also be sent as email to a specified operator email address.

To set the email address and permit email notification of Interventions, enter an address next to the "NOTIF_INTERV_EMAIL_ADDRESS" parameter, check the box next to the "SEND_INTERVENTION_EMAILS" parameter, and click the "Apply Changes" button, displayed at the bottom of the "Intervention Related Configuration" section, as shown in Figure 4.6.1-69.

Figure 4.6.1-69. Intervention Related Configuration Panel

The configured email address will receive notifications for all interventions as they are opened.

4.6.1.16 Open Intervention Detail Page

This page displays all of the information as in the general open intervention listing, as well as the granule list. In addition, actions may be taken for the intervention on this page. This page is shown in Figure 4.6.1-70.

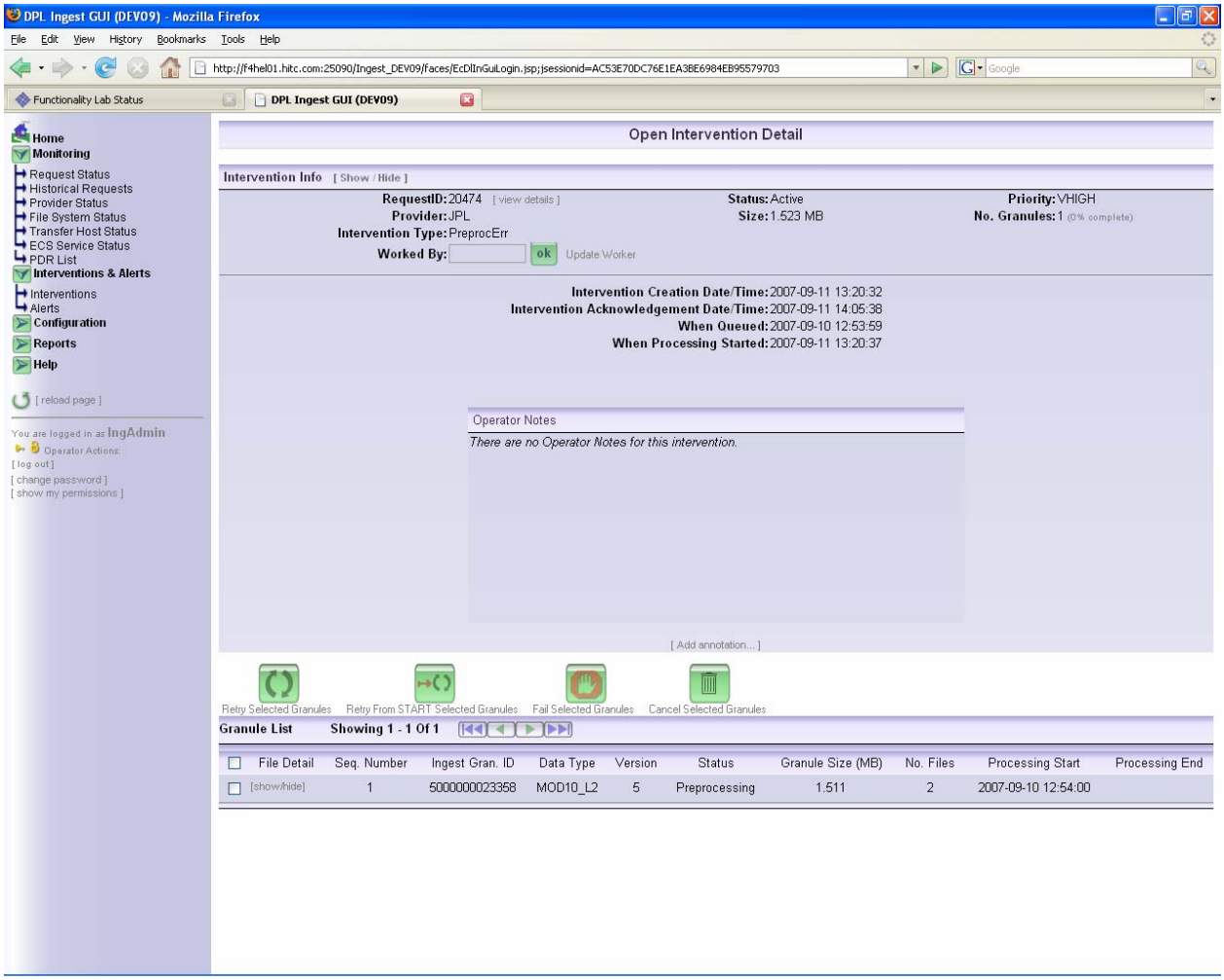


Figure 4.6.1-70. Open Intervention Detail (general overview)

How Interventions are processed:

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

- **Retry selected granules:** This applies only to granules that are currently suspended and retries them from the last known good state of processing. Every time a granule is retried, an annotation is added identifying the time, operator, and action (see Figure 4.6.1-70) .

- **Retry from START selected granules:** This applies only to granules that are currently suspended and retries them from the beginning of processing. Every time a granule is retried, an annotation is added identifying the time, operator, and action.

- **Fail selected granules:** This applies only to granules that are currently suspended and transitions the granule into a failed state, with the status indicating the type of error that originally caused the suspensions.

  Error types are determined by what state the granule is in when it is failed. These states are: XferErr (transferring), ChecksumErr (Checksumming), PreprocErr (Preprocessing), ArchErr (Archiving), InsertErr (Inserting), and PubErr (Publishing).

  NOTE: After a granule is failed, an annotation is added identifying the time, operator, and action.

  To perform a granule action, select one or more granules and click on the desired action button at the top of the granule list. The operator will be asked for confirmation before the action is carried out.

- **Cancel selected granules:** This applies only to granules that are not yet in a terminal state. It manually cancels the granules. After a granule is cancelled it is expected that the granule will be re-ingested by the operator

Working on an Intervention

The operator must have Ingest Control permission to perform any actions on this page. A worker name is not explicitly required on this page because the logged-in operator name will be used by default. However, an operator may override this by entering a different name into the "worked by" text box. This is allowed because more than one operator may be using the same login during a session, though this practice is not recommended if authentication is enabled.

Closing the Intervention

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

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

Viewing Request Details:

The operator can navigate to the details for a request by pressing the "[view details]" link next to the Request ID in the upper left-hand corner of the page, as shown in Figure 4.6.1-71. More information on the Request Details page can be found in Section 4.6.1.7.

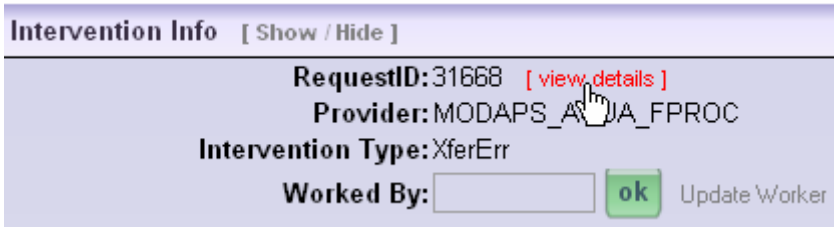


Figure 4.6.1-71. Viewing Request Details from Intervention Details

Information on this page:

Figure 4.6.1-72 explains the various features and information available on this page. The second part of the page, the granule panel, is described in the subsection 4.6.1.16.2.

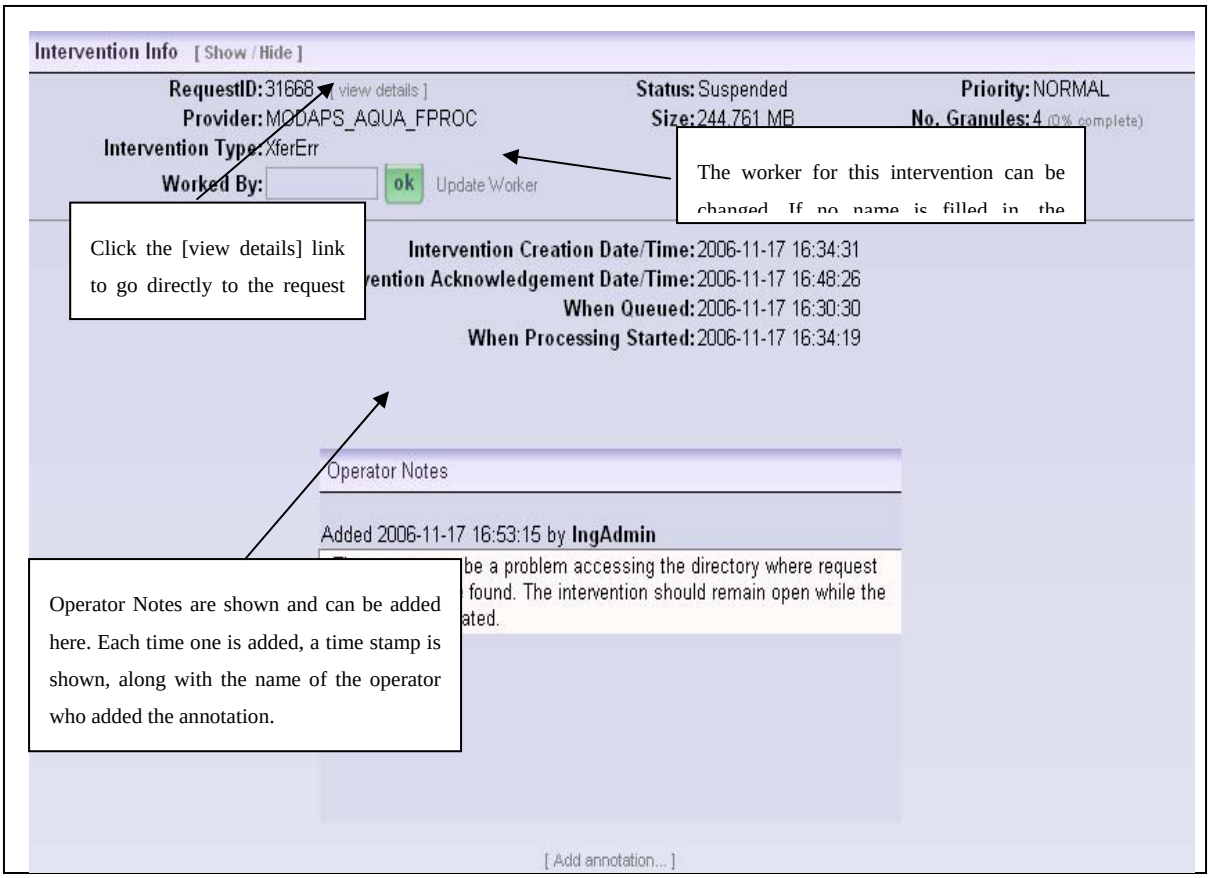


Figure 4.6.1-72. Intervention Detail: Request Information Panel Diagram

4.6.1.16.1 Operator Notes

This section shows operator notes added by the operator. Operator notes are annotations that can be useful in tracking changes to the request or recording information affecting the intervention. The operator notes are kept separately from the request notes (see Section 4.6.1.7.4), though they will be appended to request notes after the intervention is closed.

An operator note can be added, but not edited or deleted. To add an operator note, click [Add annotation…] at the bottom of the annotation list, as shown in Figure 4.6.1-73.

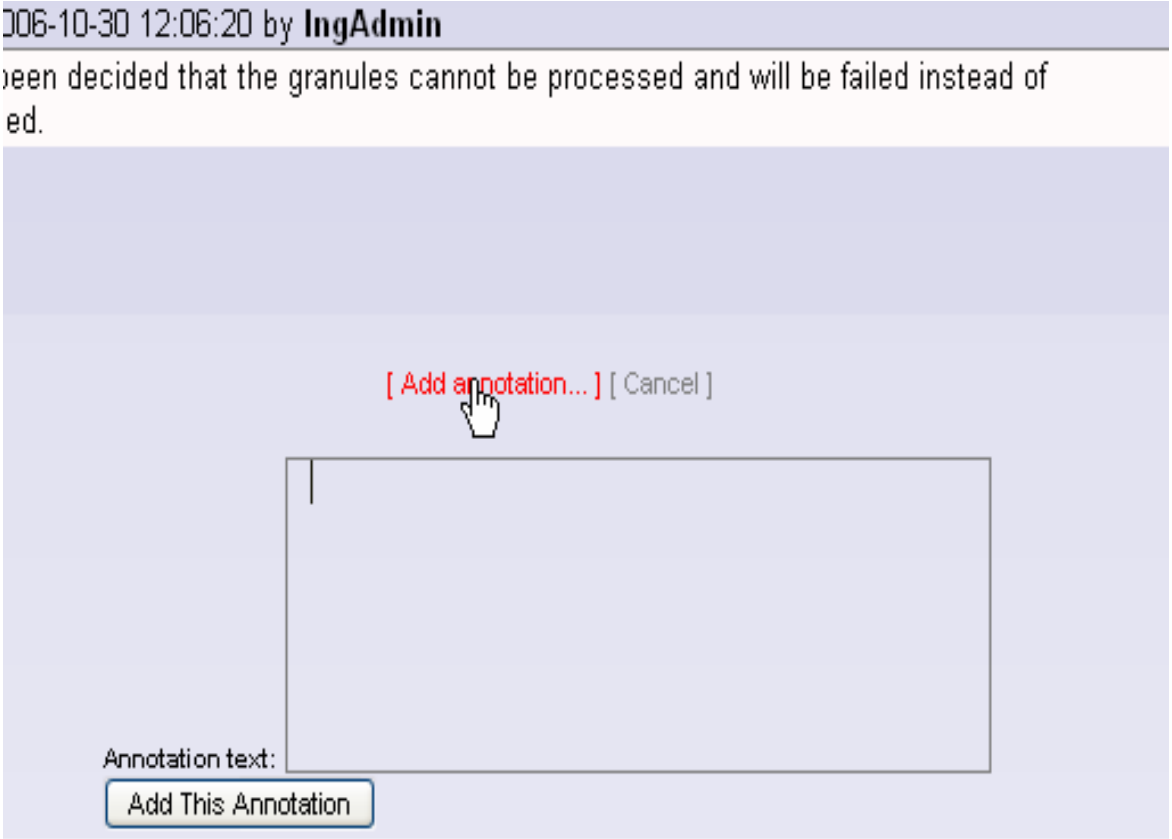


Figure 4.6.1-73. Adding an Annotation

4.6.1.16.2 Granule List Panel

The Granule List Panel is shown immediately below the Intervention Information panel. By default, the list is sorted by suspended granules first. Detailed error information for all suspended and failed granules will be displayed in the granule status, along with the associated error type.

The diagram in Figure 4.6.1-74 below explains the various features and information available on this panel. For more details about the fields in the granule list and file details, see Section 4.6.1.7.5.

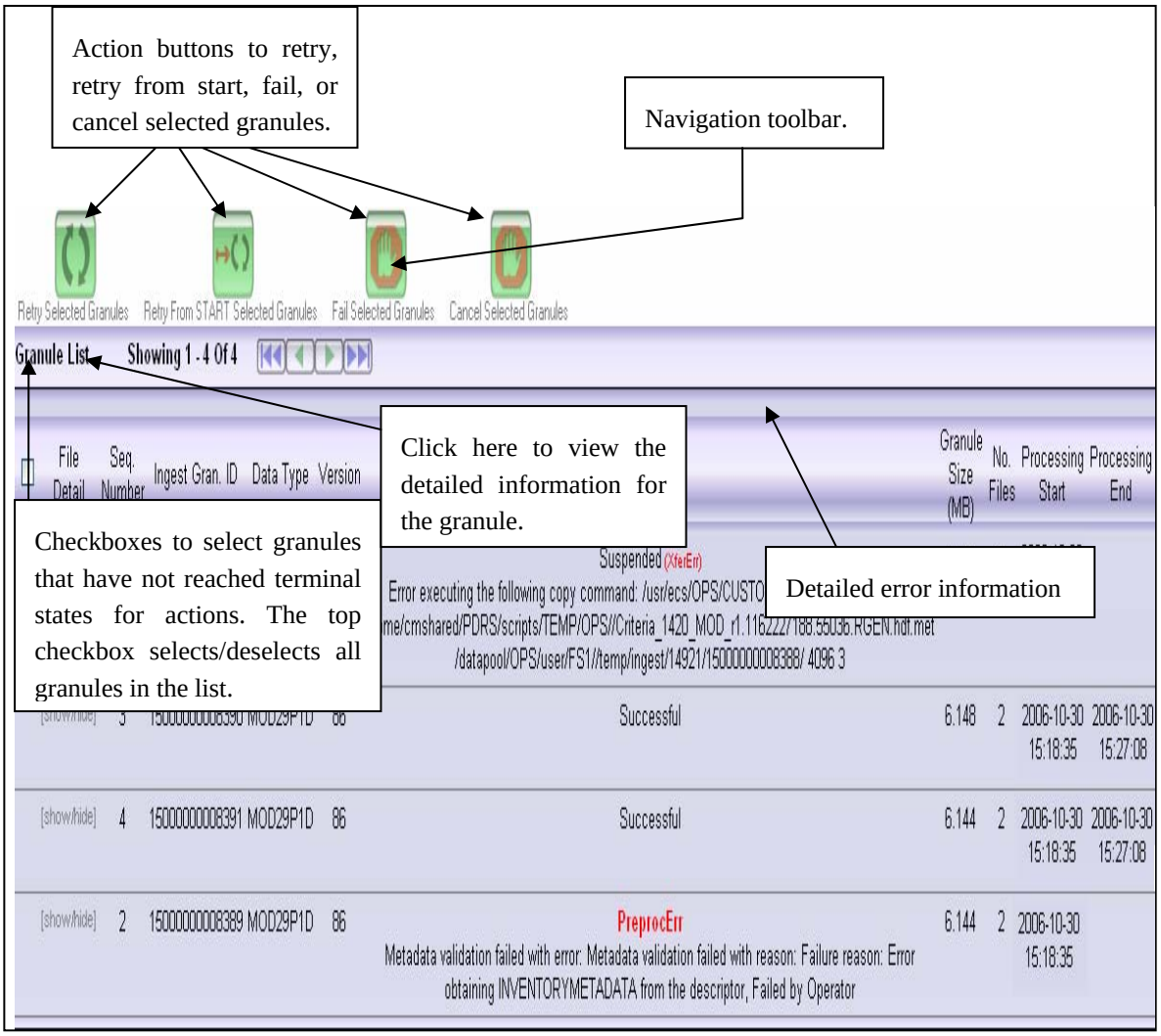
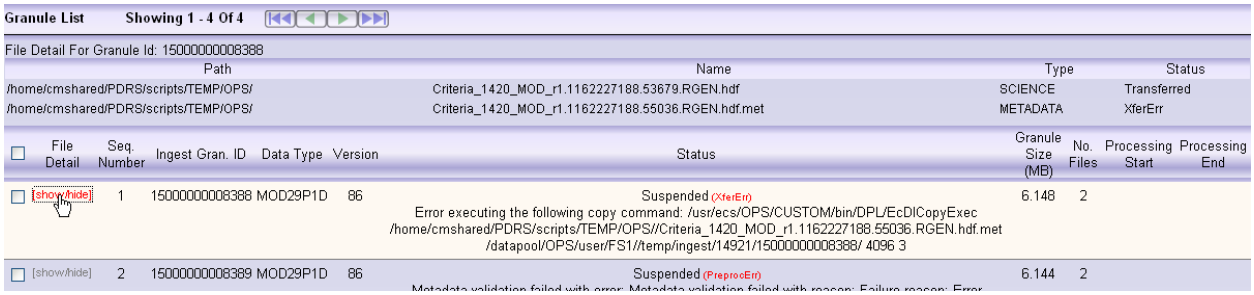


Figure 4.6.1-74. Intervention Detail: Granule List Diagram

4.6.1.16.2.1 Granule Details

Each granule has detailed file information that can be viewed directly on this screen by clicking the [show / hide] button next to a granule. The information will appear above the granule list in sections identified by the Granule Id. The information includes for each file, the full path, file name, file type associated with the granule, and the file status, as shown in Figure 4.6.1-75.



Granule List Showing 1 - 4 Of 4

File Detail For Granule Id: 15000000008388

Path	Name	Type	Status
/home/cmshared/PDRS/scripts/TEMP/OPS/	Criteria_1420_MOD_r1.1162227188.53679.RGEN.hdf	SCIENCE	Transferred
/home/cmshared/PDRS/scripts/TEMP/OPS/	Criteria_1420_MOD_r1.1162227188.55036.RGEN.hdf.met	METADATA	XferErr

File Detail	Seq. Number	Ingest Gran. ID	Data Type	Version	Status	Granule Size (MB)	No. Files	Processing Start	Processing End
[show/hide]	1	15000000008388	MOD29P1D	86	Suspended (XferErr) Error executing the following copy command: /usr/ecs/OPS/CUSTOM/bin/DPL/EcDlCopyExec /home/cmshared/PDRS/scripts/TEMP/OPS//Criteria_1420_MOD_r1.1162227188.55036.RGEN.hdf.met /datapool/OPS/user/FS1//temp/ingest/14921/15000000008388/ 4096 3	6.148	2		
[show/hide]	2	15000000008389	MOD29P1D	86	Suspended (PreprocErr) Metadata validation failed with error: Metadata validation failed with reason: Failure reason: Error	6.144	2		

Figure 4.6.1-75. Granule Details

The information can be hid by clicking [show / hide] beside the granule.

4.6.1.17 Alerts

This page (Figure 4.6.1-76) displays the Ingest alerts as they are raised in the Ingest database. These warn the operator when the Ingest Service runs into a problem that is with a resource or service it is using.

Alerts will usually only be generated after a configured number of retries on the failed action, or after a configured number of occurrences of a particular error. After raising an alert, the Ingest Service will check at regular intervals whether the problem has been resolved and clear the alert if that is the case. Table 4.6.1-20 contains the alerts page column descriptions.

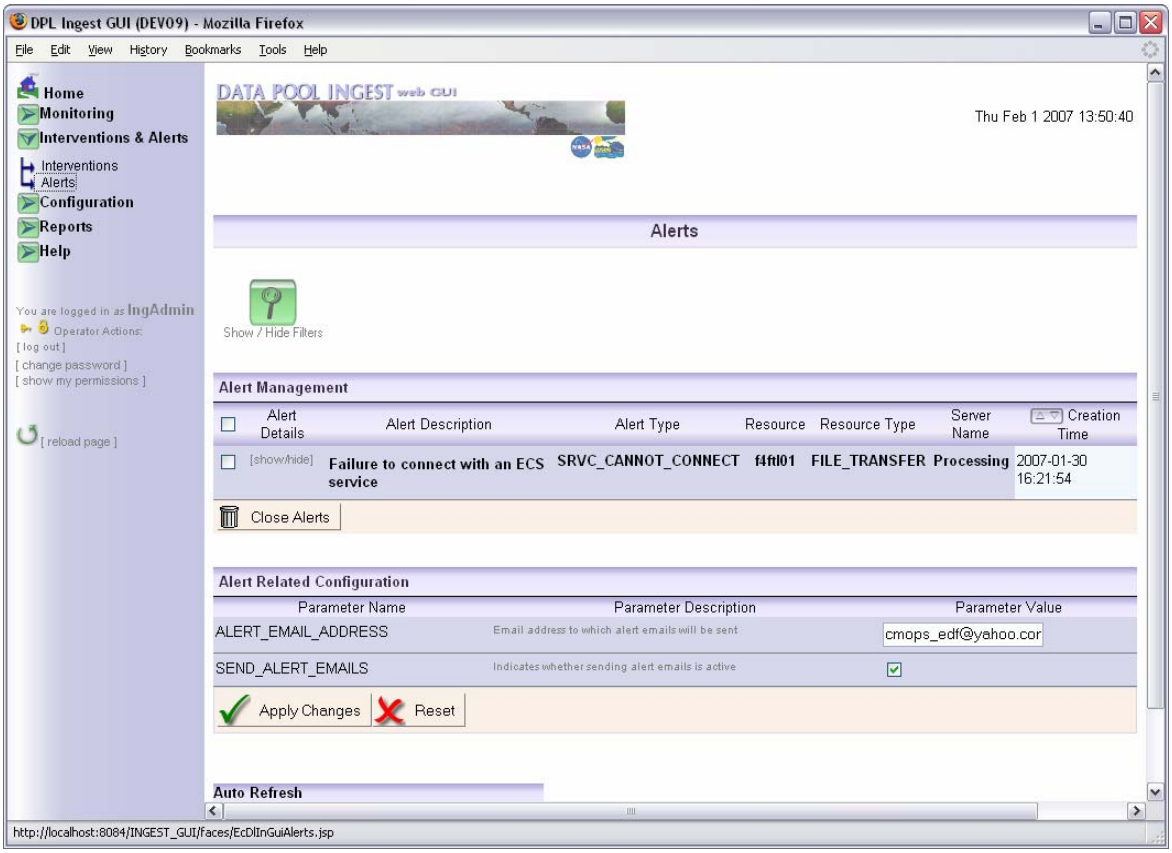


Figure 4.6.1-76. Alerts Page (General Overview)

Table 4.6.1-20. Alerts Page Column Descriptions

Field Name	Description
Alert Details	Buttons for displaying detailed alert information
Alert Description	Basic description of the error that generated the alert
Alert Type	Unique name for the type of error that was encountered
Resource	The name of the resource affected by the alert
Resource Type	The type of resource affected by the alert, such as SCP/FTP Host, Polling Location, or Archive
Creation Time	Time the alert was generated (which may have been after several retries after the error was first encountered)

Alert-Related Configuration

In addition to being displayed on this page, alerts can also be sent as email to a specified address.

To set the email address and permit email notification, enter an address next to the "ALERT_EMAIL_ADDRESS" parameter, check the box next to the

"SEND_ALERT_EMAILS" parameter, and click the "Apply Changes" button, displayed at the bottom of the "Alert Related Configuration" section. See Figure 4.6.1-77.

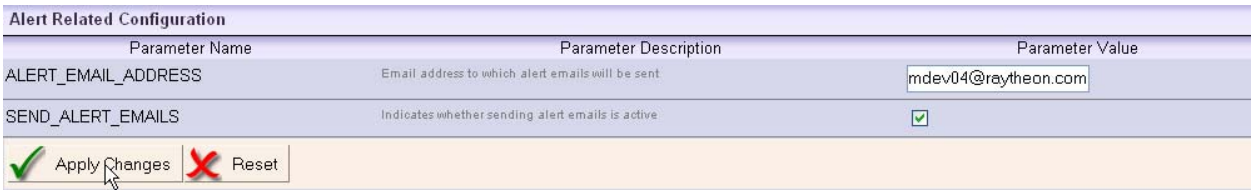


Figure 4.6.1-77. Alert-Related Configuration

4.6.1.17.1 Filters and Sorts

Alerts are sorted in descending order (most recent first) by creation time. To sort in the opposite direction, click on the sort icon under the "Creation Time" column. See Figure 4.6.1-78.

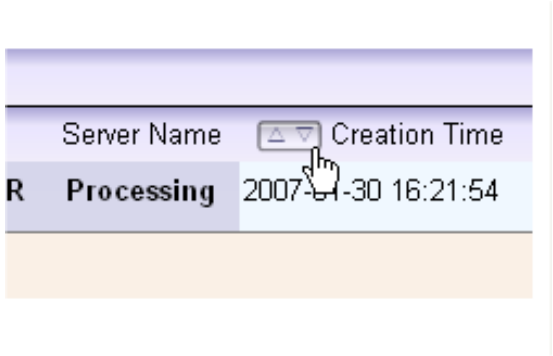
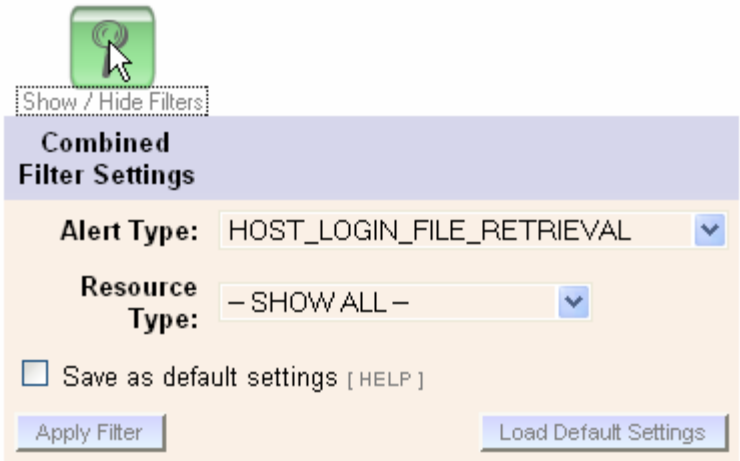


Figure 4.6.1-78. Sorting the Alert List

This page shows all alerts by default. If you want to see only specific types of alerts, you can set a filter:

1. Click [Show / Hide Filters] at the top of the alert listing:

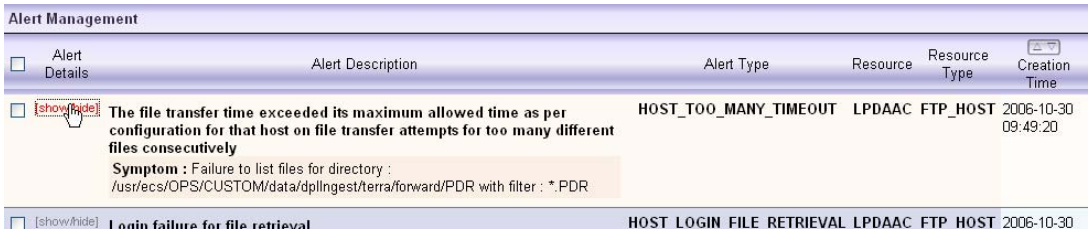


2. Click “Apply Filter” to apply the filter:
3. The page will reload; only alerts matching the filter criteria will be shown.

Note that these filters combined (ANDed). Also, each of the drop down lists has a SHOW ALL option, allowing all Alerts for that particular field to be shown.

4.6.1.17.2 Alert Details

The details of the alert will appear under the alert description (a new page will not be loaded). To view this detailed information, click [show / hide] under the Alert Details column to expand the detail area:



Click [show / hide] again to hide the details.

If the Resource Type for the Alert is an archive or file system, the alert details will show the Data Providers affected by the alert condition, as well as the number of PDRs, ingest granules, total queued data, and total in-process data affected. See Table 4.6.1-21.

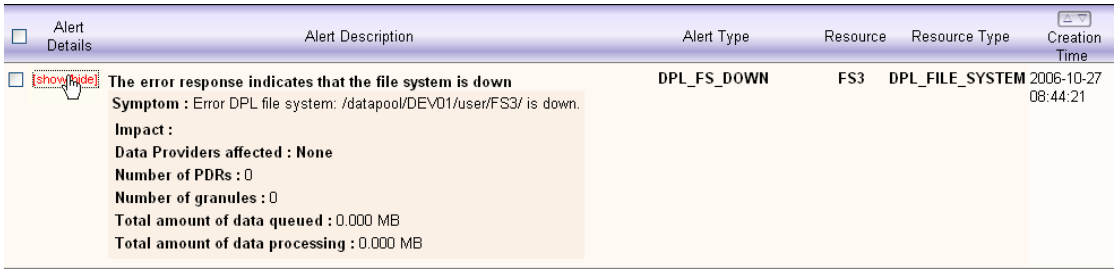


Table 4.6.1-21. Alert Description Details Field Descriptions

Row Name	Description
Symptom	Information about the specific action or item that caused the alert
Impact	The resource affected by the Alert (if applicable). An example of an impacted resource would be an SCp or FTP Transfer Host. This field is only shown if the Alert could potentially impact a Resource. Otherwise, for Alerts like "**Email Notification is down**" or "**Login failure for PAN/PDRD transfers**", this field is not shown.
Data Providers affected	List of providers that will be suspended as a result of the alert. This is only shown if Data Providers could potentially be affected, for example if connection to a Transfer Host could not be established.
Number of PDRs	Total number of PDRs active or queued on a provider affected by the suspended resource. This is only shown if the Alert affects Ingest Requests.
Number of granules	Total number of granules active or queued on a provider affected by the suspended resource. This is only shown if the Alert affects Ingest Requests.
Total amount of data queued	Sum of the size of the files in the granules that require the file system and will not be activated while it is suspended. This is only shown if the Alert affects Ingest Requests.
Total amount of data processing	Sum of the size of the files in the granules that require the file system, but will get "stuck" in an active state as a result of the alert. This is only shown if the Alert affects Ingest Requests.

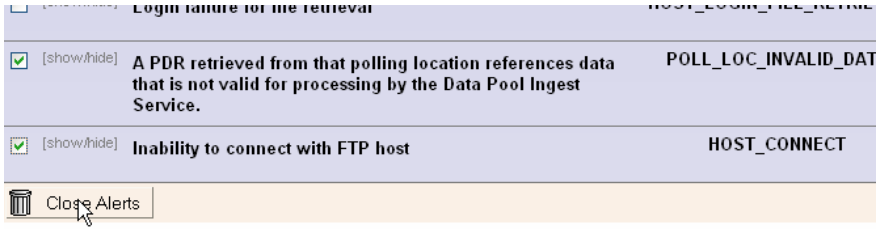
4.6.1.17.3 Clearing an Alert

An alert may be cleared manually at any time, though this should only be done once the operator is certain the problem has been resolved. In response, the Ingest Service will resume using that resource and all the associated resources, for example, the FTP Host to which it could not connect and all the polling locations on that host. The Ingest Service may find that it is still unable to use the resource (e.g., still cannot connect), in which case the alert will be raised again.

It is not necessary for an operator to clear an alert manually. Normally, the Ingest Service will test in regular intervals whether the error situation has been resolved and if so, clear the alert automatically. However, it may be appropriate to clear an alert manually, for example, if the operator took some manual steps to resolve the reported problem (such as restarting an ECS Host) and then wants the Ingest Service to try using that resource immediately.

To clear an alert from the list manually, do the following:

1. Select the desired alerts from the list by checking the boxes on the line for the Alerts; multiple selections may be made:



2. Click the “close alerts” icon at the bottom of the alert list. You will be prompted to confirm the clearing of the alert(s):
3. The page will be reloaded with the selected alerts no longer appearing on the list.

4.6.1.18 Provider Configuration Page

This page lists all of the Data Providers for the DPL Ingest System, along with selected attributes of each to get a general overview of each provider. From this list, the operator may also add or remove a Data Provider. By clicking on the provider name, the operator may also view the Provider details. This page is shown in Figure 4.6.1-79. Explanations of the fields on this page are found in Table 4.6.1-22.

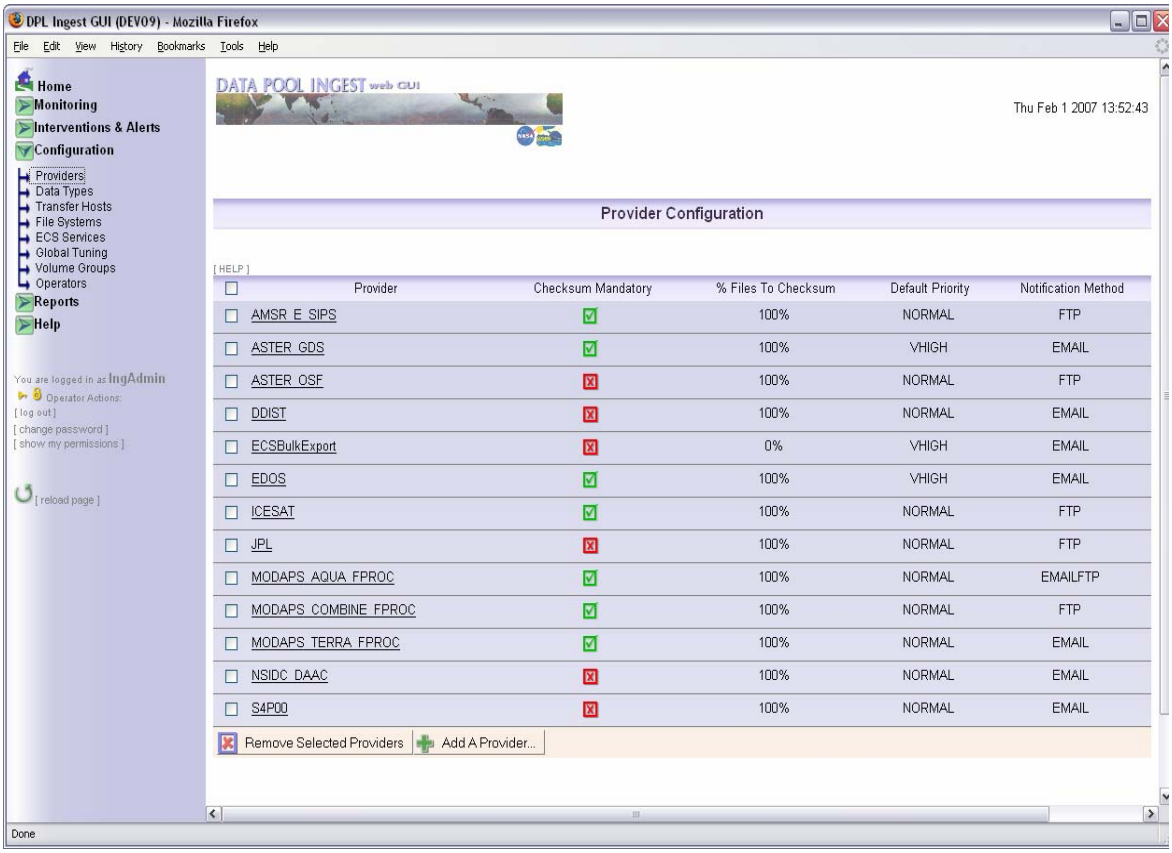


Figure 4.6.1-79. Provider Configuration Page (General Overview)

4.6.1.18.1 Edit a Provider Page

The "Edit a Provider" page shows all of the settings for a data provider, including the notification method and the polling locations, as shown in Figure 4.6.1-80. This page is displayed when the operator clicks the provider name on the Provider Configuration List page (previous section).

Note: Trailing and leading white space will be removed from values entered into any text fields on this page, or any of the sub pages under it.

Table 4.6.1-22 contains the provider configuration detail field descriptions.

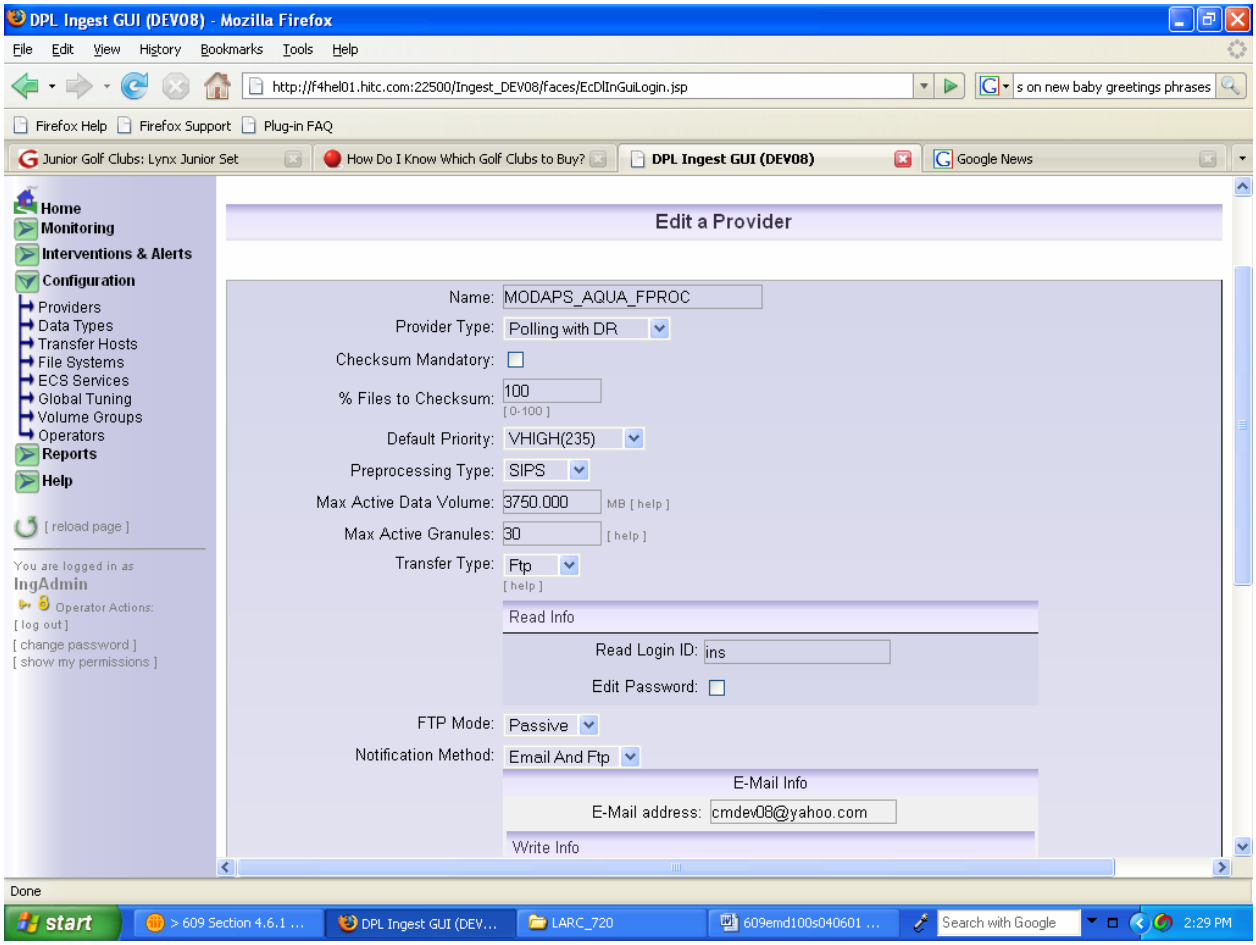


Figure 4.6.1-80. Provider Configuration Detail (General Overview)

Table 4.6.1-22. Provider Configuration Detail Field Descriptions (1 of 2)

Field Name	Entry	Description
Name	Required	Name for an external data provider
ProviderType	Required	Indicates the type of the provider (such as Polling with DR, Polling without DR, EDOS)
Checksum Mandatory	Optional	Indicates that the Data Provider *must* provide checksum information in the PDR.
% Files to Checksum	Required	Percent of requests to checksum for this provider
Default Priority	Required	Default priority for ingest requests for this provider
Preprocessing Type	Required	Type of ingest processing to occur (such as SIPS or DDIST)
Max Active Data Volume	Required	Maximum total volume that will be active on a provider if requests for other providers are pending
Max Active Granules	Required	Maximum total granules that will be active on a provider if requests for other providers are pending

Table 4.6.1-22. Provider Configuration Detail Field Descriptions (2 of 2)

Field Name	Entry	Description
Transfer Type	Required	Method used for obtaining files from the external data provider (local, FTP, or SCP with various cipher types)
Notification Method	Required	Method for providing notifications to the provider (email, SCP, FTP, or combination of SCP/FTP and email)
Email Address	Required if email is the notification method	Address to which to send notifications after a granule on the provider completes ingest
Write Login User ID	Required if FTP or SCP is the notification method	User Id for getting write permissions on the provider's notification directory
Write Info: Password	Required if FTP or SCP is the notification method	Checkbox displays a password and verify password field that are used to provide access to the provider's notification directory
Path	Required if FTP or SCP is the notification method	Directory where notifications will be sent on the provider
Choose Host	Required if FTP or SCP is the notification method	Host where the notification path can be found (list is generated from hosts configured on the Host Configuration page)
Read Login Id	Required if a polling location uses FTP or SCP	User Id for getting read permissions on the provider's polling directories
Read Info: Edit Password	Required if a polling location uses FTP or SCP	Checkbox displays a password and verify password field that are used to provide access to the provider's polling directories

Existing Polling Locations

A list of pre-existing polling locations is displayed at the bottom of the page. You can add or delete polling locations on this list. For instructions on how to add a Polling Location (when adding a Data Provider), see Section 4.6.1.18.3, steps 12-19.

To edit a polling location, select the location name (see Figure 4.6.1-81).

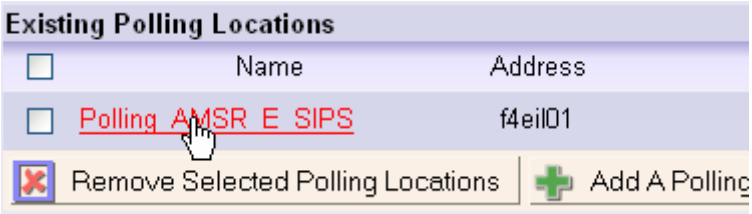


Figure 4.6.1-81. Editing a Polling Location

A page will appear much like the "Add a Polling Location page," except all the fields will be populated, as shown in Figure 4.6.1-82. Table 4.6.1-23 contains the polling location detail page field descriptions.

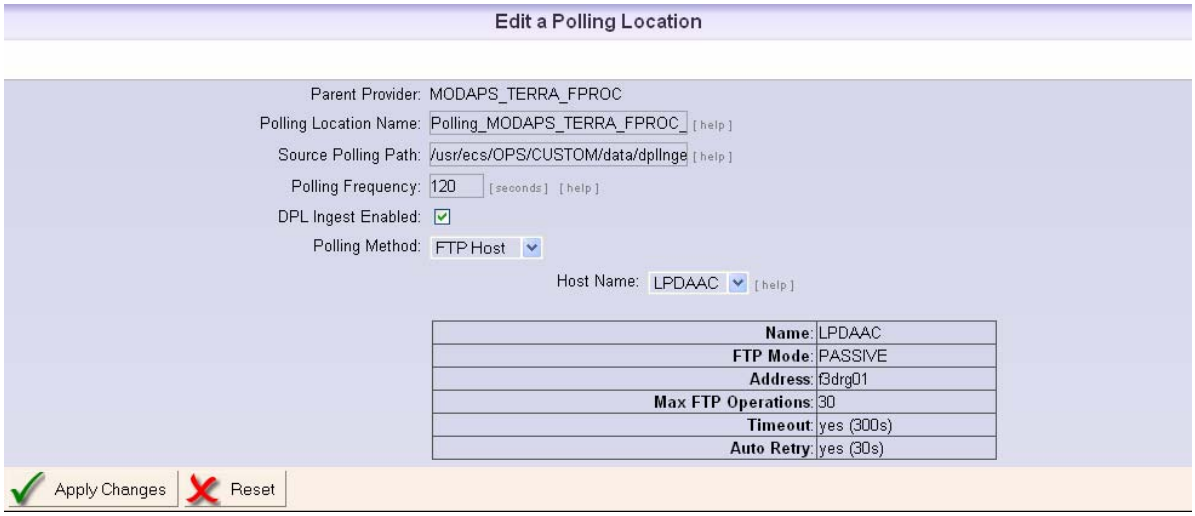


Figure 4.6.1-82. Polling Location Detail

Table 4.6.1-23. Polling Location Detail Page Field Descriptions

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

Enter the desired modifications and click "Apply Changes."

Deleting Polling Locations

To remove a polling location, click the check the box next to the location's name; multiple selections may be made. Click "Remove Selected Polling Locations"; you will be prompted to confirm the deletion. See Figure 4.6.1-83.

Under some circumstances, a Polling Location may not be able to be removed. For example, if there are pending requests with PDRs that use the Polling Location, you will see a database error if you try to remove it. In order to successfully remove a Polling Location, ensure that no requests using this Polling Location are pending and that the Processing Service has been shut down.

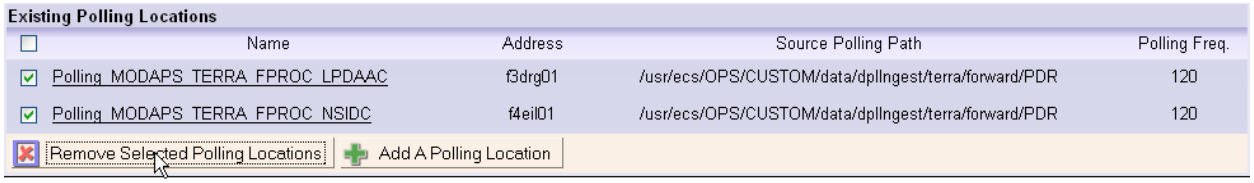


Figure 4.6.1-83. Polling Location List

Adding a Polling Location

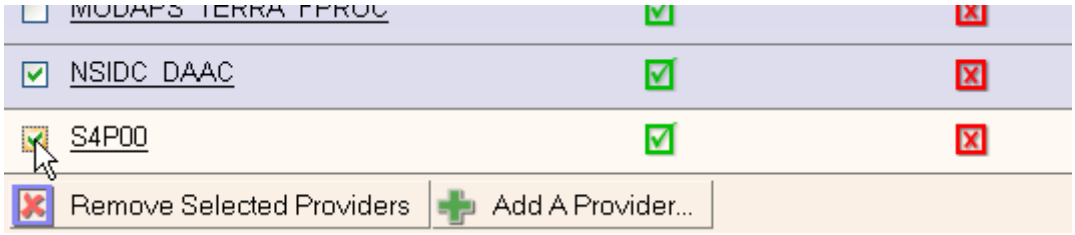
See Section 4.6.1.18.3 for complete details on how to add a Polling Location for a Provider.

4.6.1.18.2 Removing a Data Provider

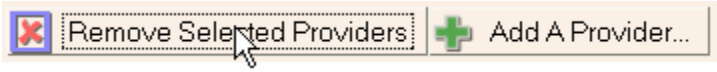
You can only remove an existing Data Provider if all of its Polling Locations have been removed.

To remove a provider:

1. Select a provider by checking the box next the provider name; multiple selections may be made:



2. Click the remove button at the bottom of the list:



3. You will be prompted for confirmation. The page will reload and the selected providers will no longer be displayed.

4.6.1.18.3 Add a Provider Page

This page enables an authorized operator to add a Data Provider and associated Polling Location. Adding a data provider involves several complex steps. Below is a step-by-step guide to the process involved in adding a provider.

Note that EDOS providers have some special rules:

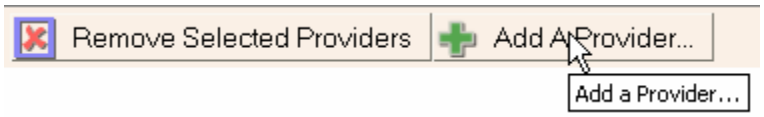
- A Processing Type is not allowed (it is automatically set to NONE in the GUI and is enforced when adding the Provider)
- An EDOS Provide can only use an FTP Transfer Type and an FTP Notification method. This selection is also enforced in the GUI.

The general steps are:

1. Setting the provider's name and its configuration parameters. If you are not authorized to change configuration parameters, you cannot add a provider.
2. Selecting the notification method and configuring the attributes of each method (if more than one applies). Again, if you are not authorized to change configuration parameters, you cannot configure the notification methods. A provider may have one of the following notification methods:
   a. Email only
   b. SCP only
   c. FTP only
   d. Local only (i.e., locally transferred via NFS)
   e. Email and FTP
   f. Email and SCP
   g. Email and Local
3. Adding a Polling Location (this involves several sub-steps – see the detailed instructions below).

Detailed illustrated instructions for adding a provider:

1. On the Provider Configuration page, Press "Add Provider" at the bottom of the existing provider list:



2. A new page will be loaded, which will guide you through configuring the provider; it contains a blank form to add your parameters (see Figure 4.6.1-84). Explanations of the fields on this page may be found in Table 4.6.1-22.

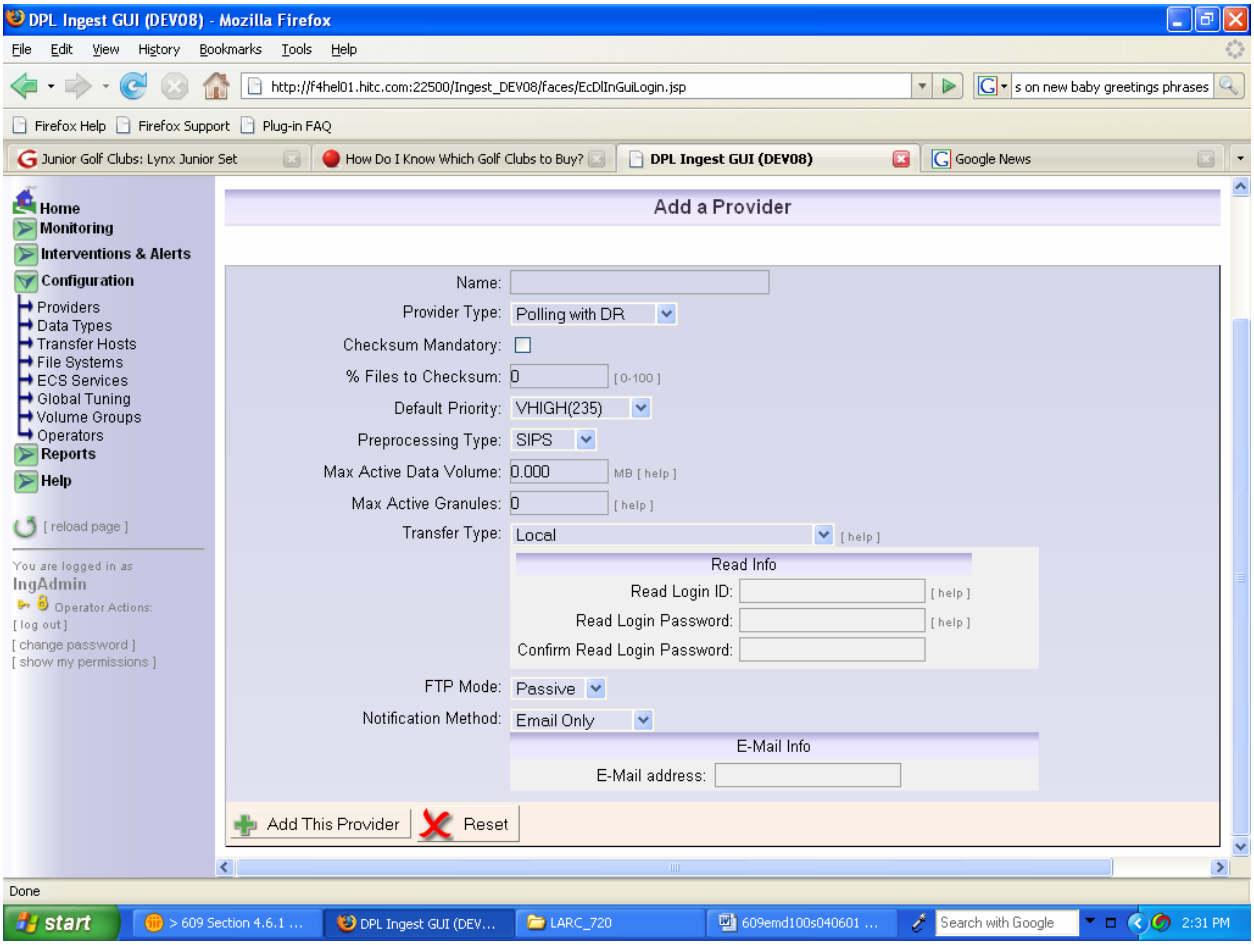


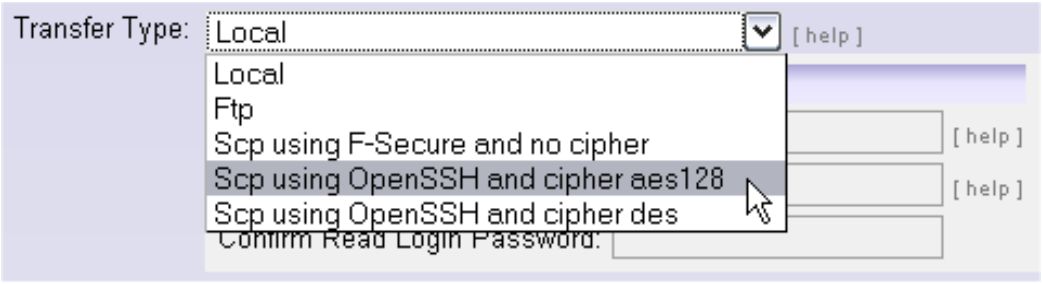
Figure 4.6.1-84. Add Provider Page

3. Provide a unique name for this provider. Already existing names will be rejected by the database.
4. Select the correct type of the provider which is one of “Polling with DR”, “EDOS” or “Polling without DR”. If you select EDOS, Preprocessing Type will become NONE, Transfer Type will become FTP and Notification method will become FTP Only. These options cannot be changed. If you select “Polling without DR”, a VersionedDataType drop-down list will appear on the page for operator to select the ESDT this provider will ingest from a predefined list of polling without DR ESDTs, the “Checksum Mandatory” checkbox will be unchecked and disabled, the “% Files to Checksum” will be set to 0 and disabled, the Preprocessing Type will become NONE and Notification Method will become NONE.
5. If applicable, check the box for “Checksum Mandatory”; if this box is checked, this indicates that the Data Provider *must* provide checksum information in the PDR.
6. If “Checksum Mandatory” is checked, you may specify the percentage of files to be checksummed in the “% Files to Checksum” text box.

7. Select a default priority from the following options: LOW (60), NORMAL (150), HIGH (220), VHIGH (235), XPRESS (255).
8. Enter the maximum data volume (in MB) that can be processed at the same time on this provider
9. Enter the maximum number of granules that can be processed at the same time for this Provider. The Ingest Service uses the maximum data volume and number of granules to limit the amount of the work which it will activate for a provider. Ingest will activate a new granule for an active ingest request only until the amount of work for the provider that is currently in progress reaches one of the configured limits. New granules will be activated as granules complete and slots are opened up.

   Only active granules are counted as work in progress and will count against provider limits; granules that completed ingest, failed, were cancelled, or are suspended are not considered 'in progress'. Note that, in addition, there are overall limits on the total amount of work in progress, across all providers, which may further limit how much work is activated.

   Ingest will ignore the provider limits if there is insufficient work queued for the other providers. In this case, granules will be activated until system limits, instead of the provider's limits, are reached.
10. Select the transfer type.

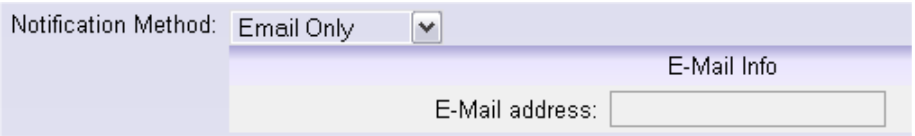


If data transfer will be FTP or SCP, the operator must enter the Read Info parameters, as shown in Figure 4.6.1-85. If this information is not filled out, when a polling location is added, the operator will not be able to select ftp as the transfer method.

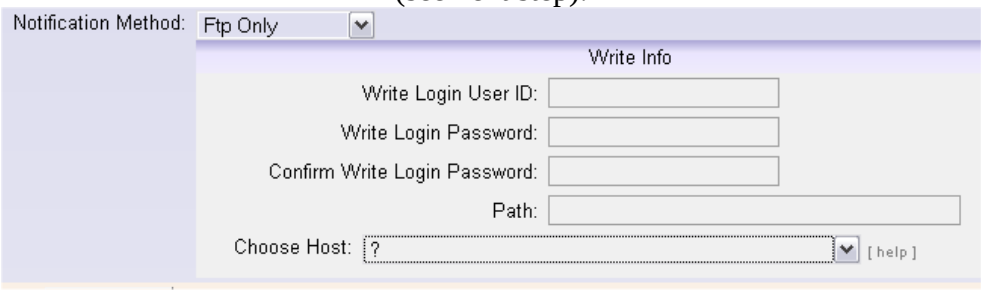
Figure 4.6.1-85. Read Info

11. Select the notification method. Depending on your selection, the appropriate boxes for the related parameters will appear below the drop-down list:

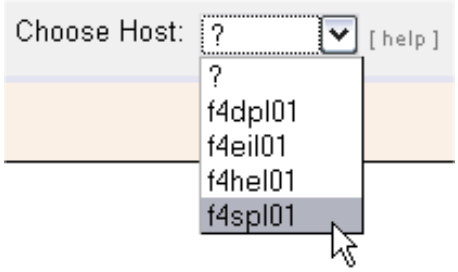
a. Email only: enter a valid Email address



b. FTP only or SCP only (the same form shows up for either): enter the FTP or SCP Write login information, the path, and select a host from the dropdown list (see next step).

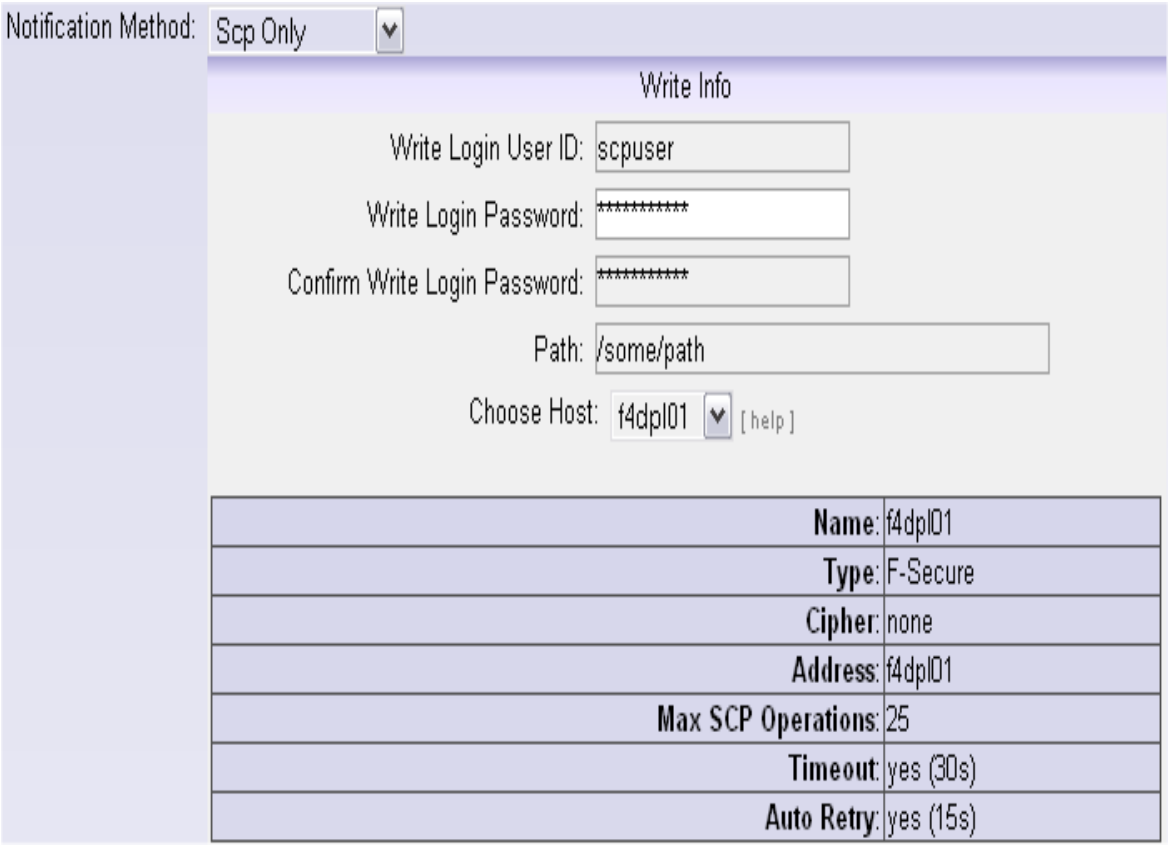


c. Pick an existing, pre-configured FTP host as defined in the FTP Host Configuration page; a drop-down list will appear with the available configured hosts:

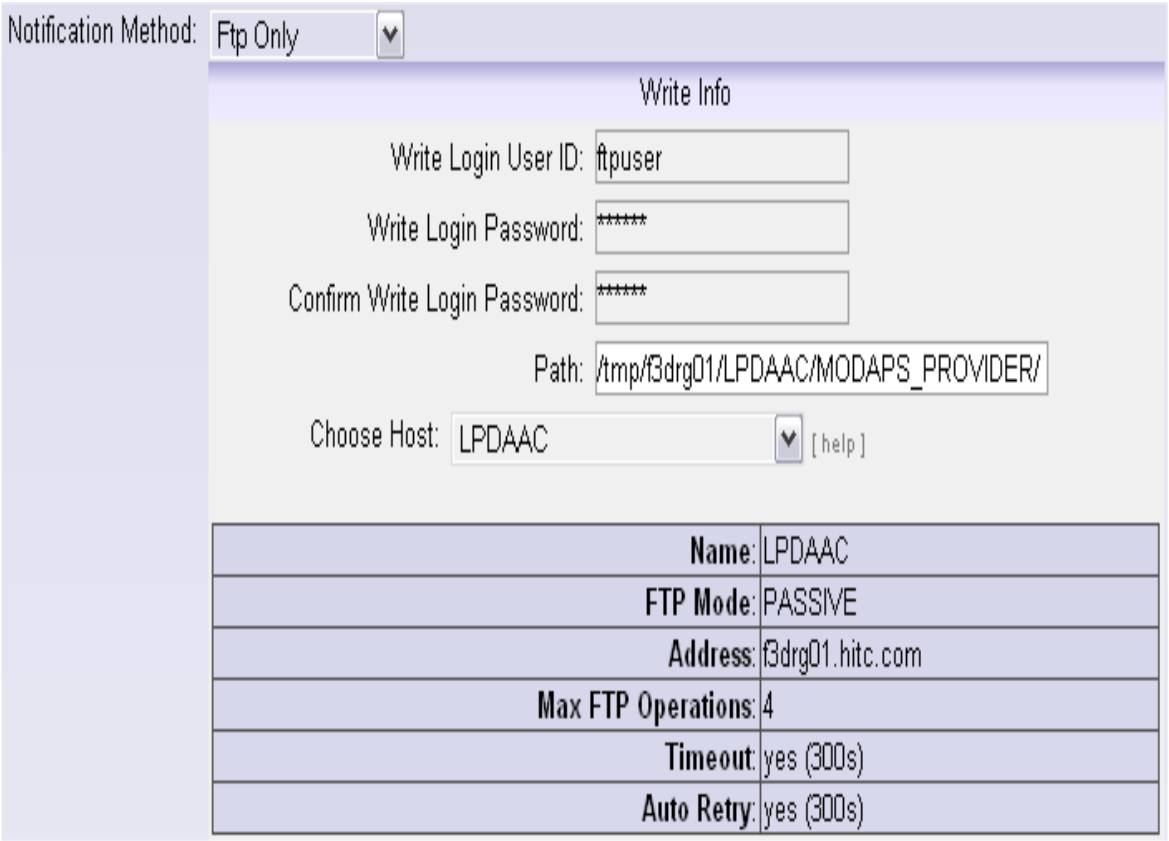


When you select the desired host, an information box is displayed, showing the host's name, IP address, and other details, as applicable to the type of host (FTP or SCP – see the figures below):

An example of an SCP host:



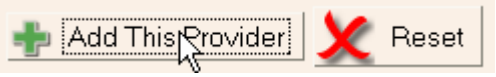
An example of an FTP host:



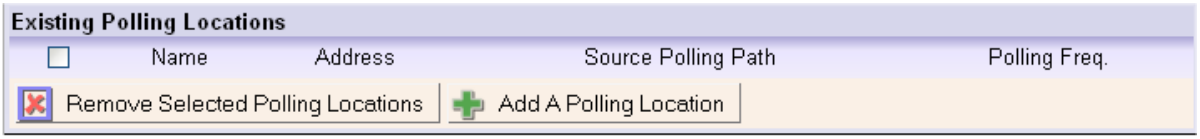
d. If you are configuring a Polling Location with Transfer Type of “local”, no path or Read Info entry is required.

e. Email and FTP, or Email and SCP: If you select this option, you *must* enter parameters for both the Read and the Write Info.

12. Now add this provider by clicking the “Add This Provider” button at the bottom of the screen. Note that polling locations can not be added until the provider has been added. You will be prompted to confirm the addition of a new provider.

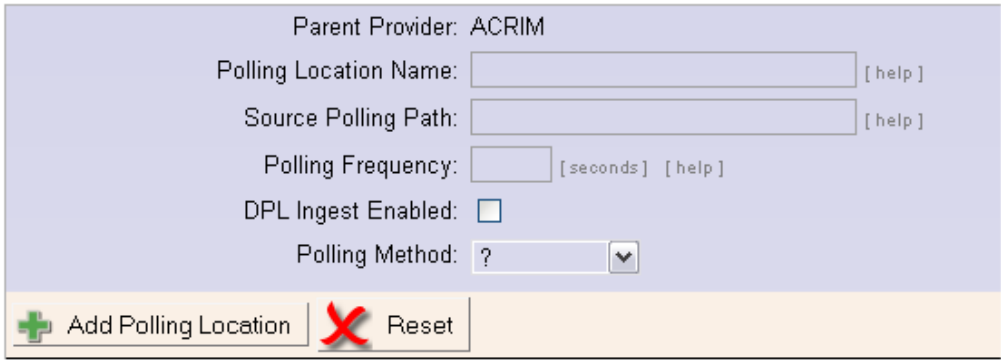


13. You will be taken back to the Provider Configuration page. Select the new provider to view its details. At the bottom of the Provider Detail page, click “Add a Polling Location”:

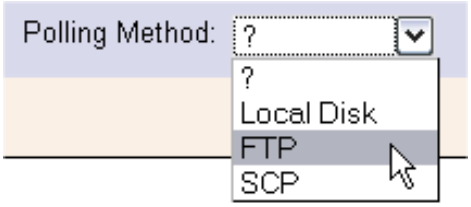


Note: This step is not necessary to complete the provider configuration; the operator may come back and edit this provider and add or remove polling locations at any time. The Data Provider, however, will not become active (i.e., polling will not begin) until at least one polling location is added.

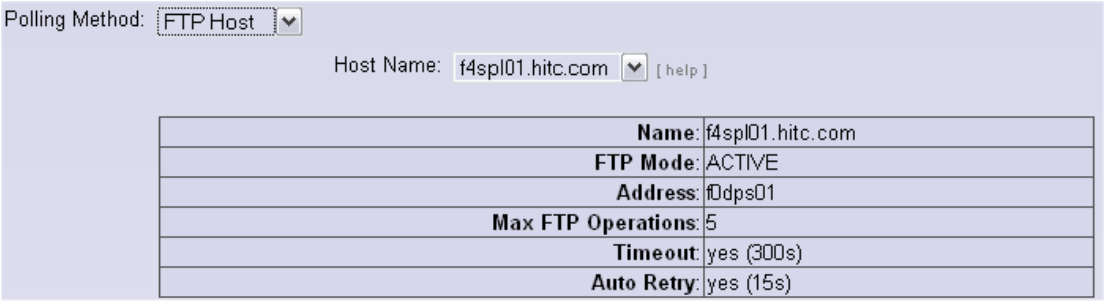
14. A new screen will be displayed that will guide you through configuring the parameters of the polling location:



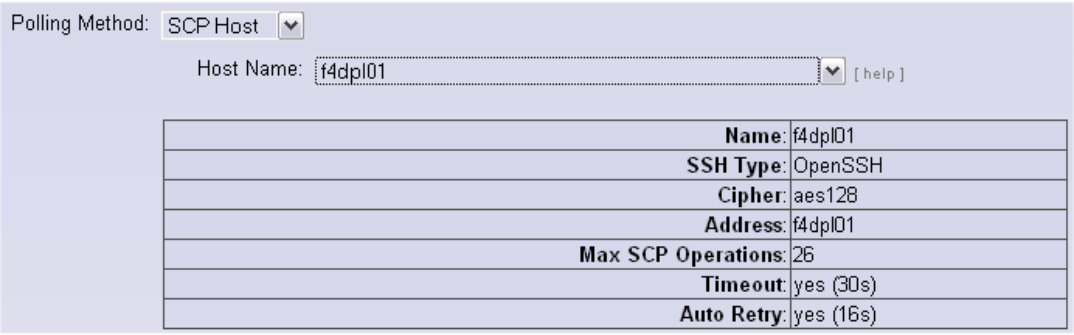
15. Enter a unique name for the location; names that already exist will be rejected.
16. Enter the Source Polling Path- this is the pathname from which to transfer the PDR files.
17. Enter the polling frequency in seconds – the minimum value is 120 seconds.
18. Select whether or not this Polling Location is DPL Ingest Enabled
19. Choose the type of host on which this polling location resides:
    a. Pick pre-configured SCP or FTP host as defined in the Host Configuration page; a drop-down list will appear with the available configured hosts:



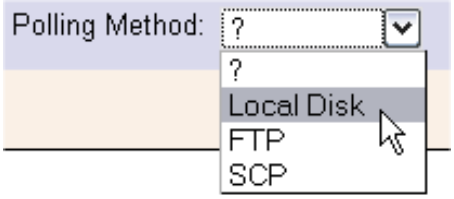
When you select the desired host, an information box is displayed, showing the host's login information, IP address, and other details. The following is an example of what is displayed for an FTP host:



The following is an example of what is displayed for an SCP host:



b. Or…configure as a local disk directory; No further information is required (the path is already provided at the top of the page).



20. When you're done, click the "Add Polling Location" button at the bottom of the screen. Now you're done adding the polling location! Repeat the steps above to add more polling locations.

4.6.1.19 Data Type Configuration

Any ECS Collection is eligible for DPL Ingest. ECS collections are added via the DataPool Maintenance GUI. These configuration screens allow DAAC users to override some assumptions about these Data Types. The default assumptions are:

- By default, ECS collections are archived but not inserted into the public Data Pool upon ingest. The operator can change this so all granules associated with an ECS Collection are inserted into the public Data Pool as soon as they complete normal ingest processing for each data type. This would take the place of an unqualified subscription for Data Pool insert and is more efficient.
- The operator can configure a default public and hidden retention time for all Versioned Data Types. Adding a public retention period will guarantee that they remain in the Data Pool for ordering purposes after ingest for the specified time. Otherwise, they will be removed immediately after archiving completes. The operator can override the default retention for individual collections.

This page displays the data types whose configuration has been altered to support non-default options. To change options for these data types, check the box next to each Data Type short name you wish to modify, and set the options in the Modify Selected Data Toes panel at the bottom of the list. To set non-default options for other Data Pool data types, select 'View /

Configure Additional Data Types' at the top of the list and select the additional data types from the resulting list.

See Figure 4.6.1-86 for a general overview of this page. Explanations of the fields on this page may be found in Table 4.6.1-24.

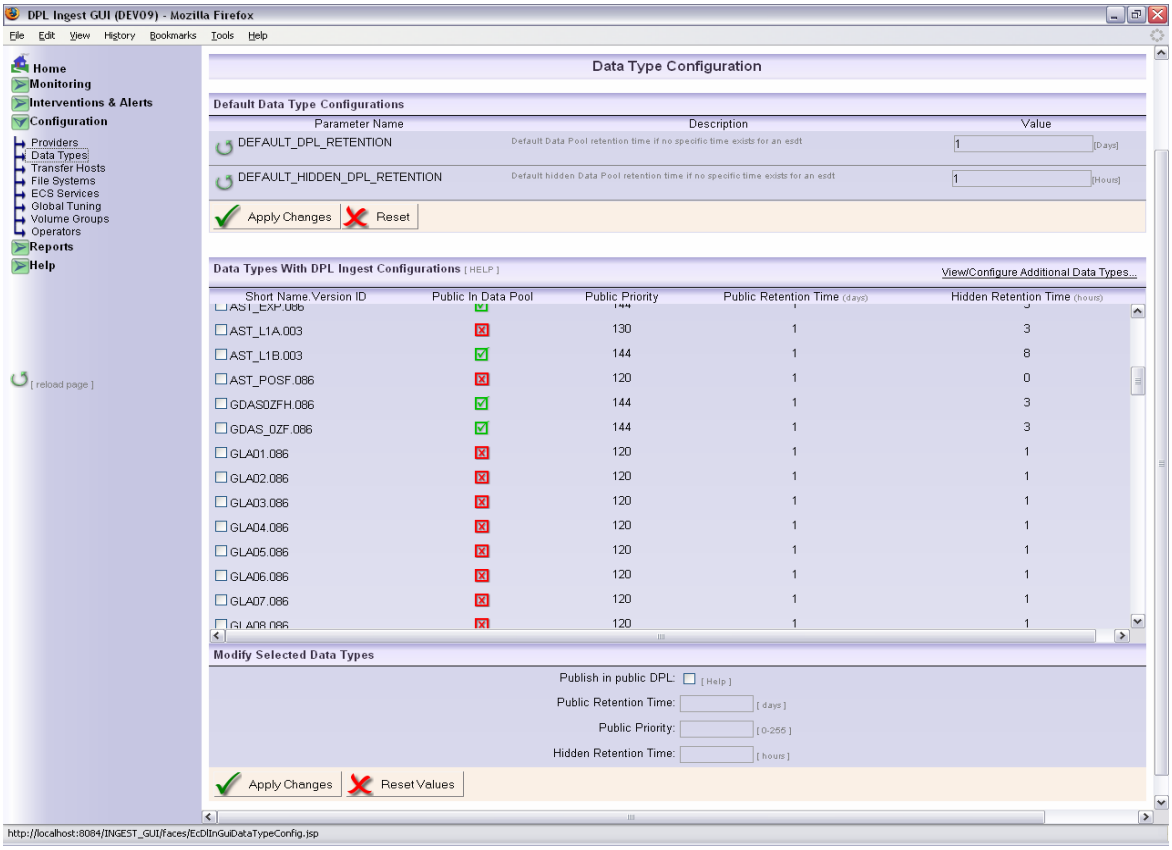


Figure 4.6.1-86. Data Type Configuration (General Overview)

Editing Data Types

To configure the attributes of any of the listed data types here, check the box next to the desired data types (multiple selections may be made) and enter the new parameters in the form below labeled **Modify Selected Data Types** and click on **Apply Changes**, as indicated by the red arrows in Figure 4.6.1-87.

Note: Trailing and leading white space will be removed from values entered into any text fields on this page, or any of the sub pages under it.

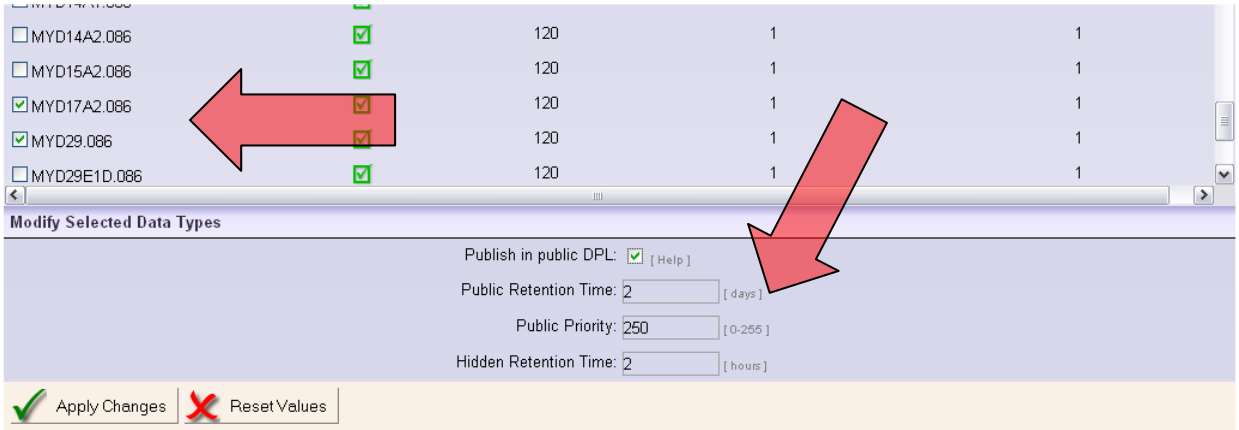


Figure 4.6.1-87. Data Type Configuration Edit Page

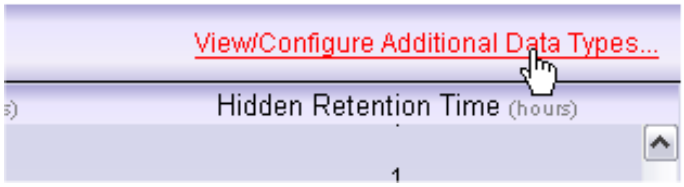
Table 4.6.1-24. Data Type Configuration Page Field Descriptions

Field Name	Entry	Description
Short Name	Not Editable	Data Type identifier
Version ID	Not Editable	Version number of the data type
Public in Data Pool	Optional	Indicates whether or not to publish data for this data type in the public Data Pool following successful Ingest.
Public Priority	Required if set for publication	The precedence which a data type will have for publication in the data pool. If no value is entered, a default value will be used.
Public Retention Time	Required if set for publication	Days to keep granules of this data type in the public data pool. If no value is entered, a default value will be used.
Hidden Retention Time	Required	Hours to keep granules of this data type in the hidden data pool

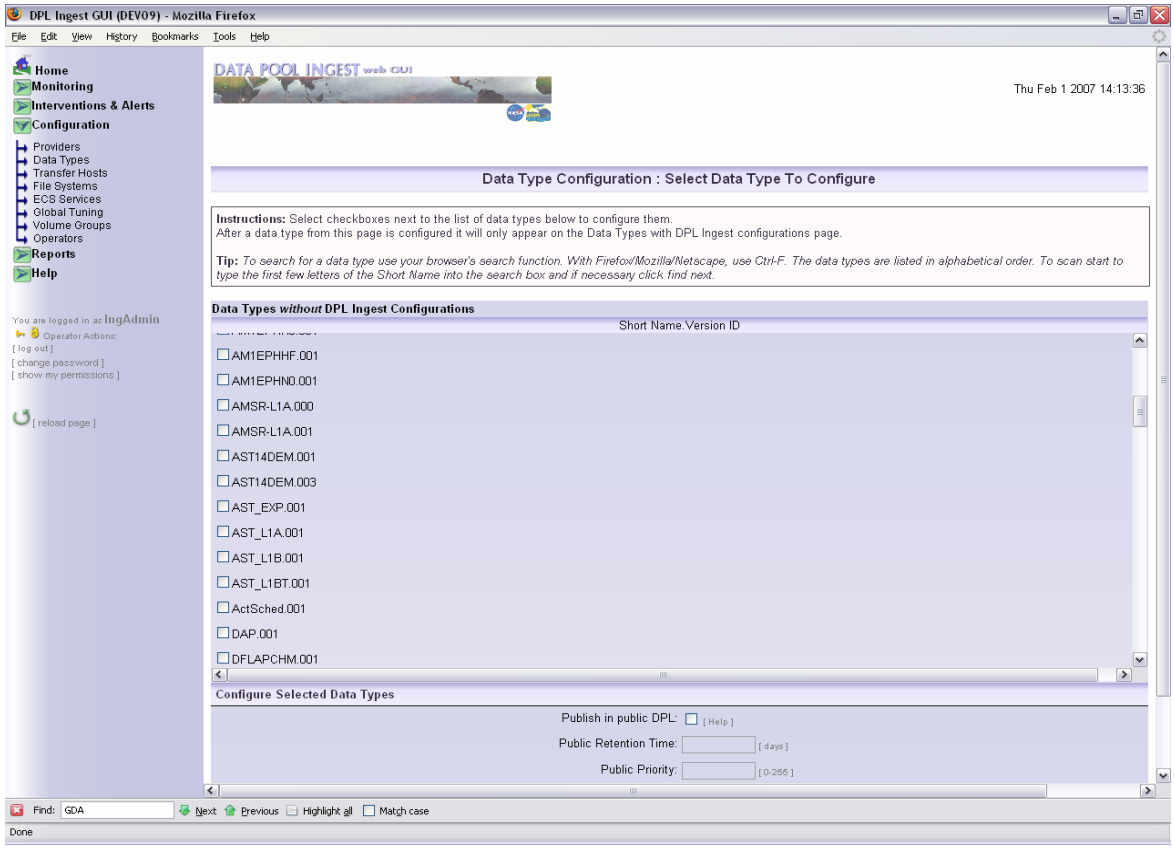
Configuring **a Data Type for DPL Ingest:**

To configure and add a data type to the list, take the following steps:

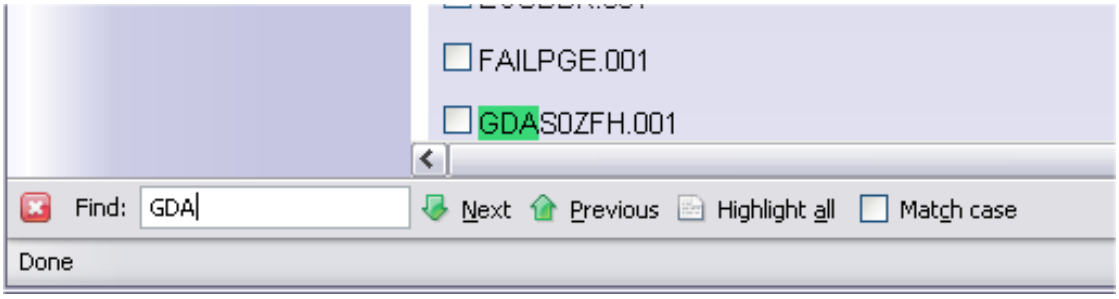
1. Click “View/Configure Additional Data Types…” at the top of the Data Type Configuration list:



2. A new screen will be displayed. A potentially long list of data types will be displayed in a scrollable box. These are *all* the available ECS data types that are not yet configured for Data Pool Ingest:

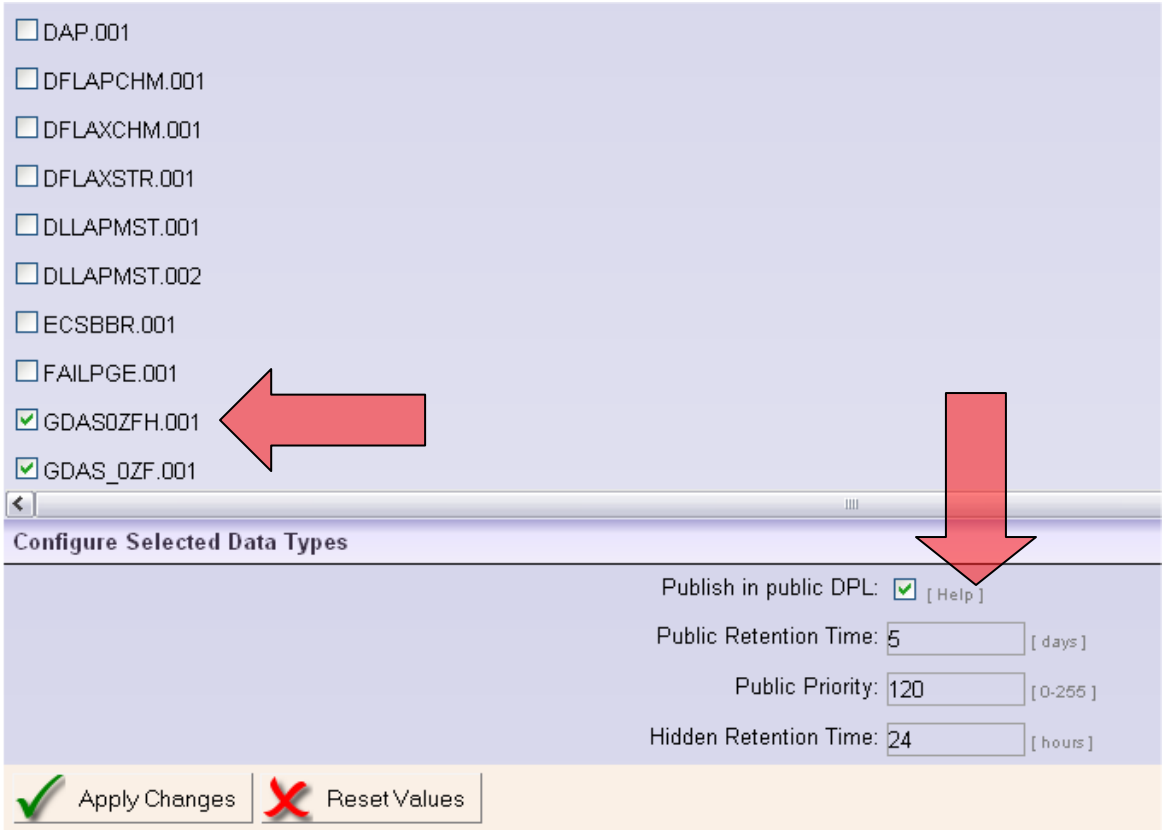


3. If you know the name of data type you're looking for, type "Ctrl-F" and then begin typing the first few letters of it when you click inside the list. For example, if you're looking for "GDASOZF.001", you can type "GDA" inside the Firefox search box, which will go to any entries with the letters "GDA".



4. Click the checkbox next to name of the desired data types (multiple selections may be made).

5. Enter the parameters in the form at the bottom of the page labeled **Configure Selected Data Types** and click "Apply Changes" at the bottom, as indicated by the red arrows.



6. You will be prompted to confirm that you wish to add these data type(s) to the list of Public Data Pool Data Types. Once the data type is added, it will appear in the list of configured data types on the Data Type Configuration page.

4.6.1.20 Transfer Host Configuration

This page allows the operator to manage SCP, FTP, and local hosts for general use in the Data Pool Ingest system. These hosts can be referenced when defining polling locations or notification hosts.

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

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

On the Transfer Host Configuration page, you can add named SCP or FTP hosts and configure them to suit their purpose. You can also edit and remove existing hosts, and change the default parameters for all SCP or FTP hosts and for the LOCAL host.

This page is shown in Figure 4.6.1-88. Explanations of the fields on this page may be found in Table 4.6.1-25 and throughout this section.

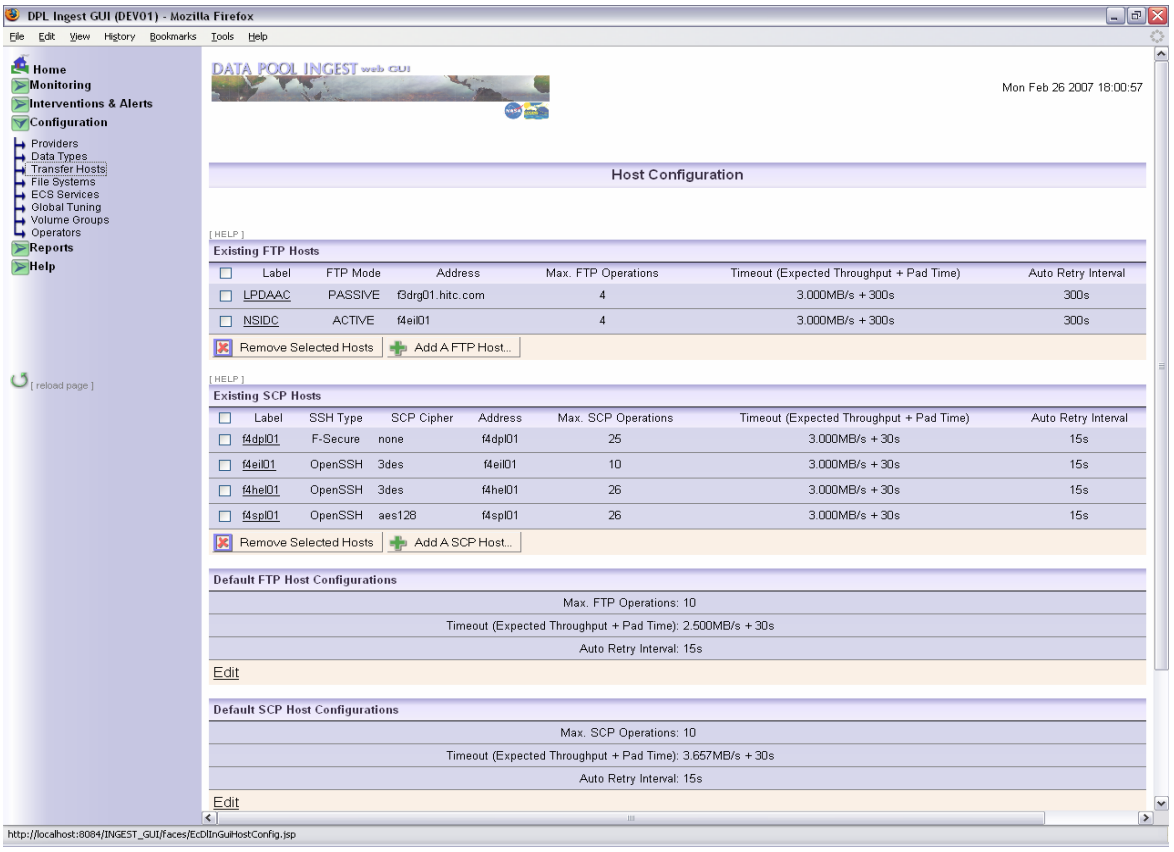


Figure 4.6.1-88. FTP Host Configuration (General Overview)

Viewing and Configuring Host Details

To view or configure the details for a host, click on the name of the desired host. The SCP and FTP Host Detail pages are explained in Section 4.6.1.20.3.

4.6.1.20.1 Removing an SCP or FTP Transfer Host

To remove a reference to a host, check the box next to the host name; multiple selections may be made. Then click “Remove Selected Hosts” at the bottom of the list – you will be prompted for confirmation before the host is removed. See Figure 4.6.1-89.

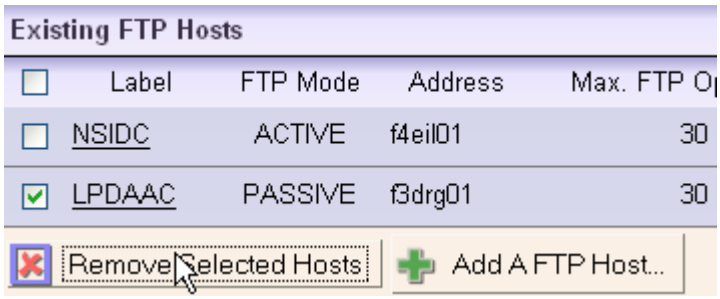
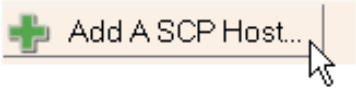


Figure 4.6.1-89. Removing SCP/FTP Host

4.6.1.20.2 Adding an SCP or FTP Host

To add a named reference to a new host, take the following steps:

1. Click on "Add a *[SCP, FTP]* Host…" at the bottom of the host list:



2. A new screen will be displayed with blank fields to add the host label (a unique name YOU give this host), IP address/DNS Name, and configuration parameters, as shown in Figure 4.6.1-90 and Figure 4.6.1-91.

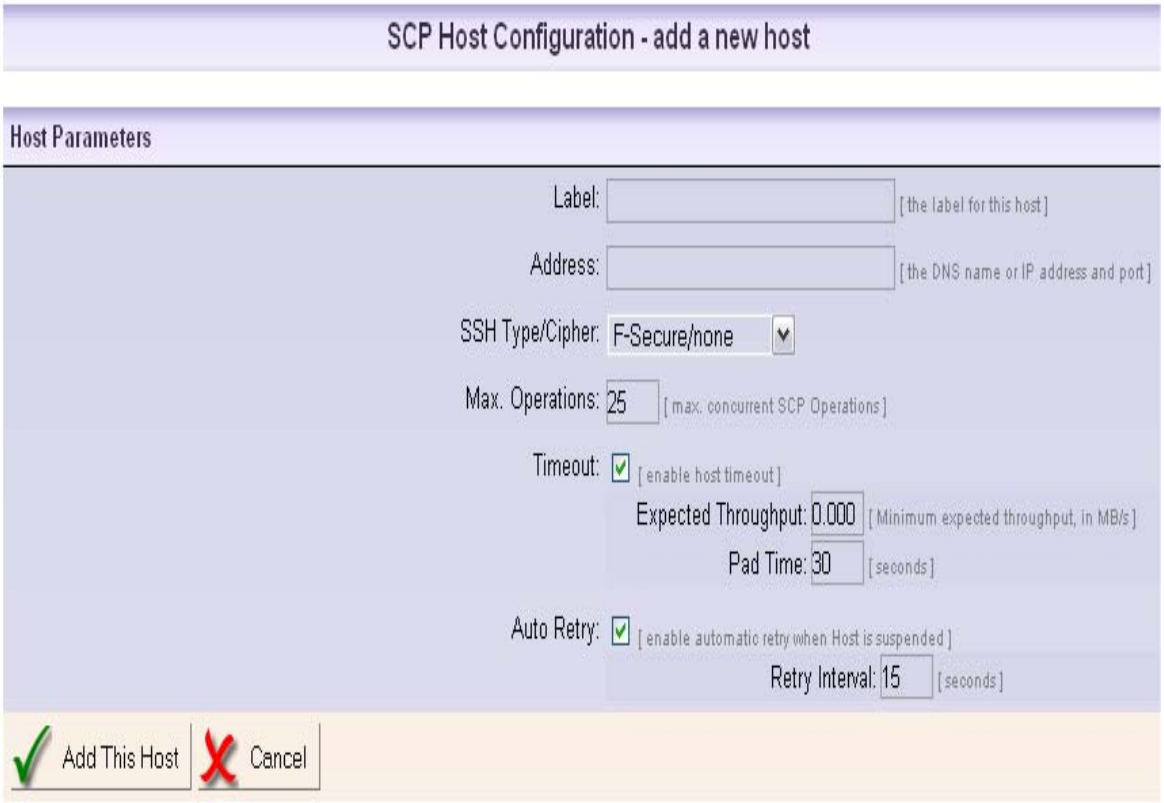


Figure 4.6.1-90. Adding a New SCP Host

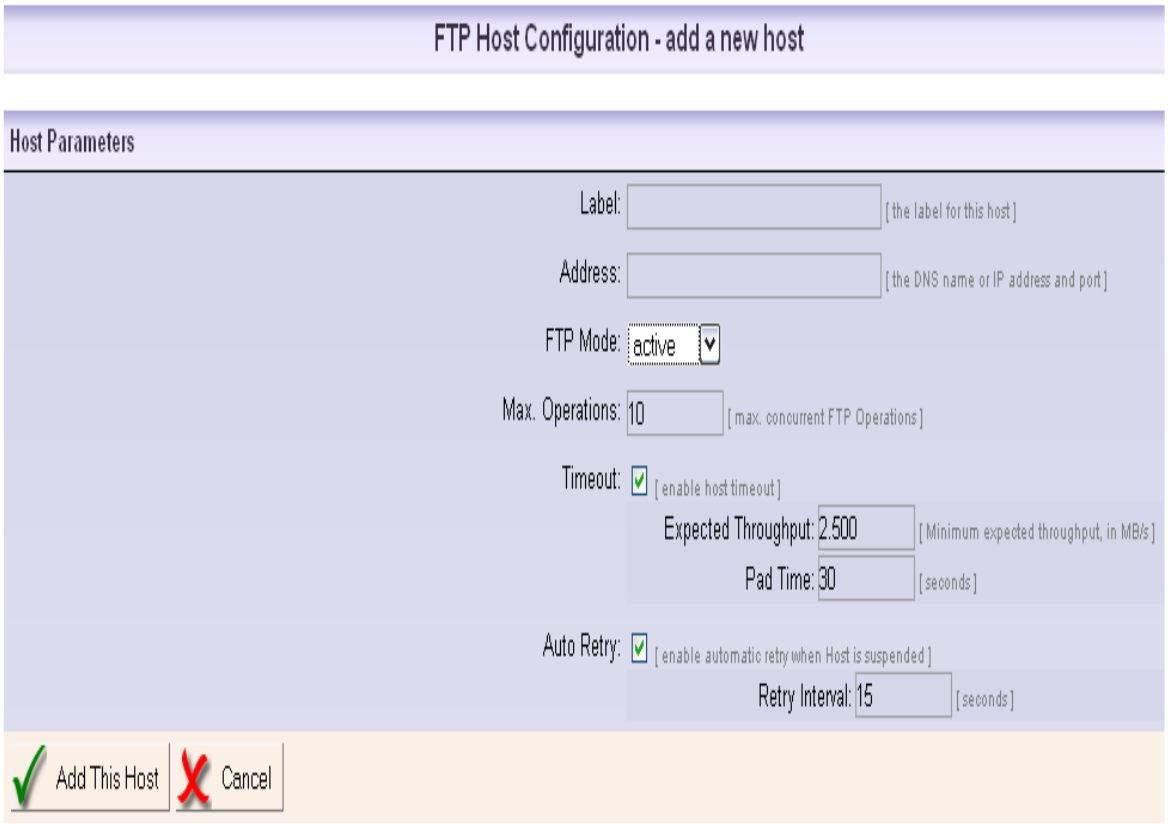


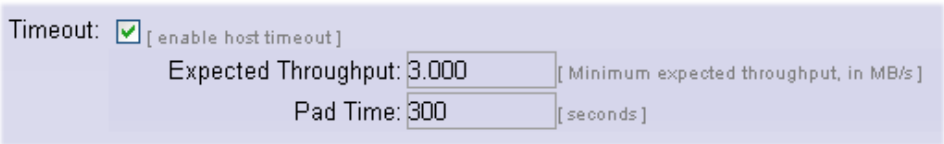
Figure 4.6.1-91. Adding a new FTP Host

FTP and SCP Hosts have similar but slightly different fields. Table 4.6.1-25 explains these fields.

Table 4.6.1-25. Add a SCP/FTP Host Page Field Descriptions

Field Name	Entry	Description
Label	Required	A unique identifier for the host
Address	Required	The IP address (e.g., 192.168.2.1:23) or DNS name (e.g., f4eil01.hitc.com:22) and port of the FTP or SCP host. The port is not required, but if none is supplied, the default ports of 21 for FTP and 22 for SCP will be used.
FTP Mode	Required *For FTP only*	Whether the FTP host will be considered active or passive. This item does not appear on the form to add a SCP host.
SSH Type/Cipher	Required *For SCP only*	The cryptographic cipher this host will use when connecting. This item does not appear on the form to add a FTP host.
Max Operations	Required	Total number of operations that can occur simultaneously on the host. If this field is left empty a default value will be supplied.
Timeout	Optional	Whether or not to allow a host to timeout if operations of a particular size take too much time to complete
Expected Throughput	Required if timeout is flagged	Expected amount of data in MBs of a granule to be processed during the configured pad time. If this field is left empty a default value will be supplied.
Pad Time	Required if timeout is flagged	Time (in seconds) a configured chunk of data should be processed before raising a timeout alert. If this field is left empty a default value will be supplied.
Auto Retry	Optional	Whether or not to retry an action that failed or generated an error on the host
Retry Interval	Required if Auto Retry is flagged	Time in between retries on the host. If this field is left empty a default value will be supplied.

3. Enter a unique label for the host – existing labels will be rejected.
4. Enter the I.P. (e.g., 192.168.2.1) address or the DNS name (e.g., f4eil01.hitc.com) and port number on the same line, separated by a colon. If no port is provided, the default ports of 21 for FTP and 22 for SCP will be used.
5. If you're configuring an FTP host, select active or passive mode
6. If you're configuring an SCP host, select the SSH Type/Cipher
7. Set "Max. Operations" - the maximum number of concurrent FTP or SCP operations this host may initiate.
8. Set the timeout flag. If this box is checked, text boxes will be displayed for the Expected Throughput (in MB/s) and Pad Time values:



9. Set the Auto Retry flag. If this box checked, a textbox will be displayed to set the Retry Interval value - the number of minutes to wait between retries of this host if it becomes suspended by the server:

10. Click "Add This Host" at the bottom of the screen to add this host. It will now appear as a new entry in the Transfer Host Configuration page.

4.6.1.20.3 SCP and FTP Host Configuration Detail

To view and edit an existing FTP or SCP Transfer Host, click on the name of the desired host on the Host Configuration page. A new page will be displayed, allowing the operator to view and edit (if authorized) the parameters of the host, as shown in Figure 4.6.1-92. Explanations of the fields on this page may be found in Table 4.6.1-26.

Note: Trailing and leading white space will be removed from values entered into any text fields on this page, or any of the sub pages under it.

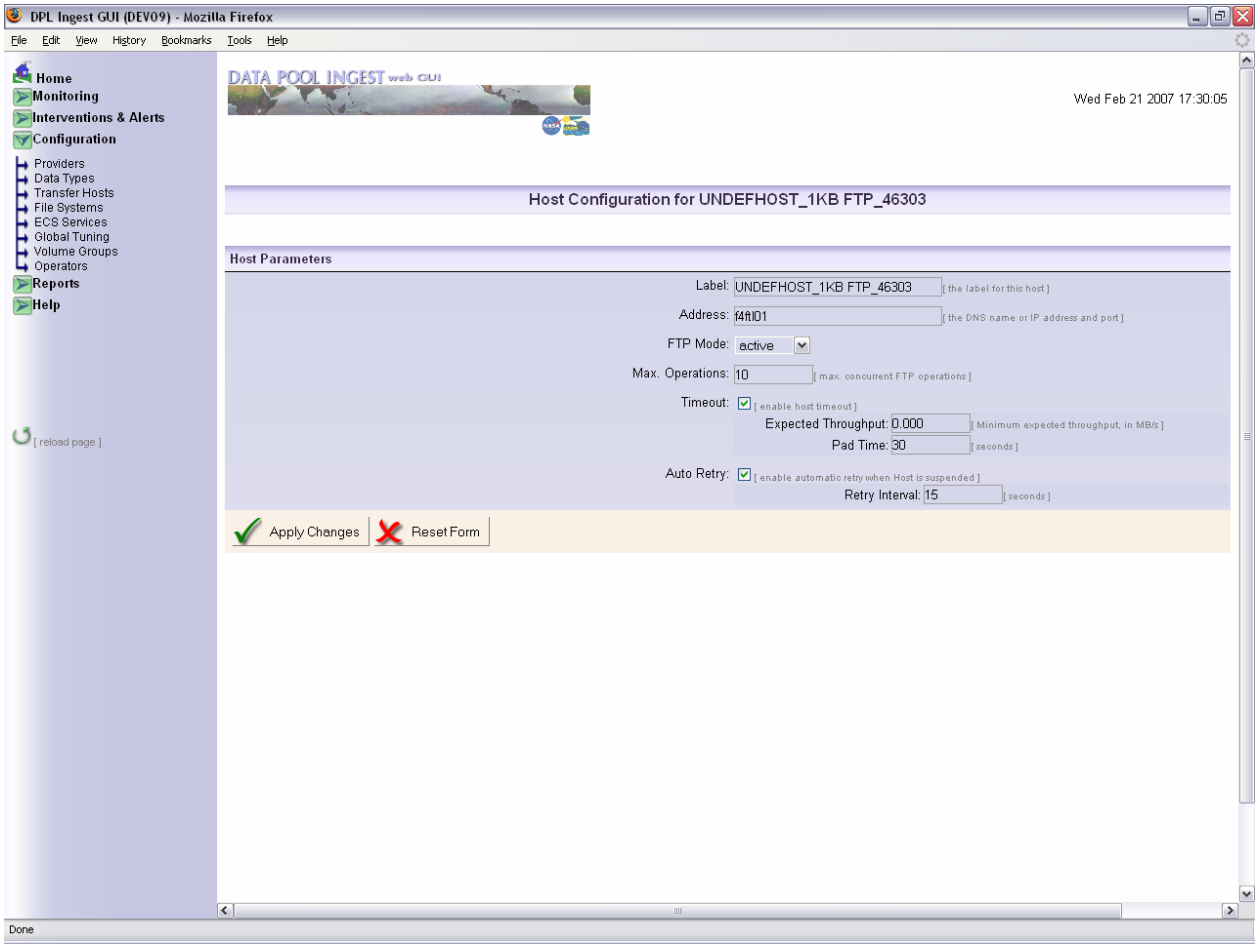


Figure 4.6.1-92. FTP Host Configuration Detail

Table 4.6.1-26. SCP/FTP Host Configuration Detail Field Descriptions (1 of 2)

Field Name	Entry	Description
Label	Required	A unique identifier for the host
Address	Required	An IP address or the canonical name and port (if needed) of an FTP host
FTP Mode	Required *For FTP only*	Whether the FTP host will be considered active or passive. This item does not appear on the form to add a SCP host.
SSH Type/Cipher	Required *For SCP only*	The cryptographic cipher this host will use when connecting. This item does not appear on the form to add a FTP host.
Max Operations	Required	Total number of operations that can occur simultaneously on the host. If this field is left empty a default value will be supplied.
Timeout	Optional	Whether or not to allow a host to timeout if operations of a particular size take too much time to complete

Table 4.6.1-26. SCP/FTP Host Configuration Detail Field Descriptions (2 of 2)

Field Name	Entry	Description
Expected Throughput	Required if timeout is flagged	Expected amount of MBs of a granule to be processed during the configured pad time. If this field is left empty a default value will be supplied.
Pad Time	Required if timeout is flagged	Time an configured chunk of data should be processed before raising a timeout alert. If this field is left empty a default value will be supplied.
Auto Retry	Optional	Whether or not to retry an action that failed or generated an error on the host
Retry Interval	Required if Auto Retry is flagged	Time in between retries on the host. If this field is left empty a default value will be supplied.

4.6.1.20.4 Local and Default Host Configuration

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

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

To edit local host or default SCP or FTP Host configuration, click “Edit” beneath the “Local Host Configuration” or “Default SCP and FTP Host Configuration” sections of the Transfer Host Configuration page. See Figure 4.6.1-93.

Default FTP Host Configurations
Max. FTP Operations: 10
Timeout (Expected Throughput + Pad Time): 2.500MB/s + 30s
Auto Retry Interval: 15s
Edit

Default SCP Host Configurations
Max. SCP Operations: 10
Timeout (Expected Throughput + Pad Time): 3.657MB/s + 30s
Auto Retry Interval: 15s
Edit

Local Host Configurations
Max. Local Operations: 10
Timeout (Expected Throughput + Pad Time): 3.000MB/s + 31s
Auto Retry Interval: 25s
Edit

Figure 4.6.1-93. Default and Local Host Configuration

A configuration page will appear exactly like the SCP or FTP Host Configuration Detail page, except the Label will not be an editable field (as shown in Figure 4.6.1-94). Explanations of the fields on this page may be found in Table 4.6.1-26.

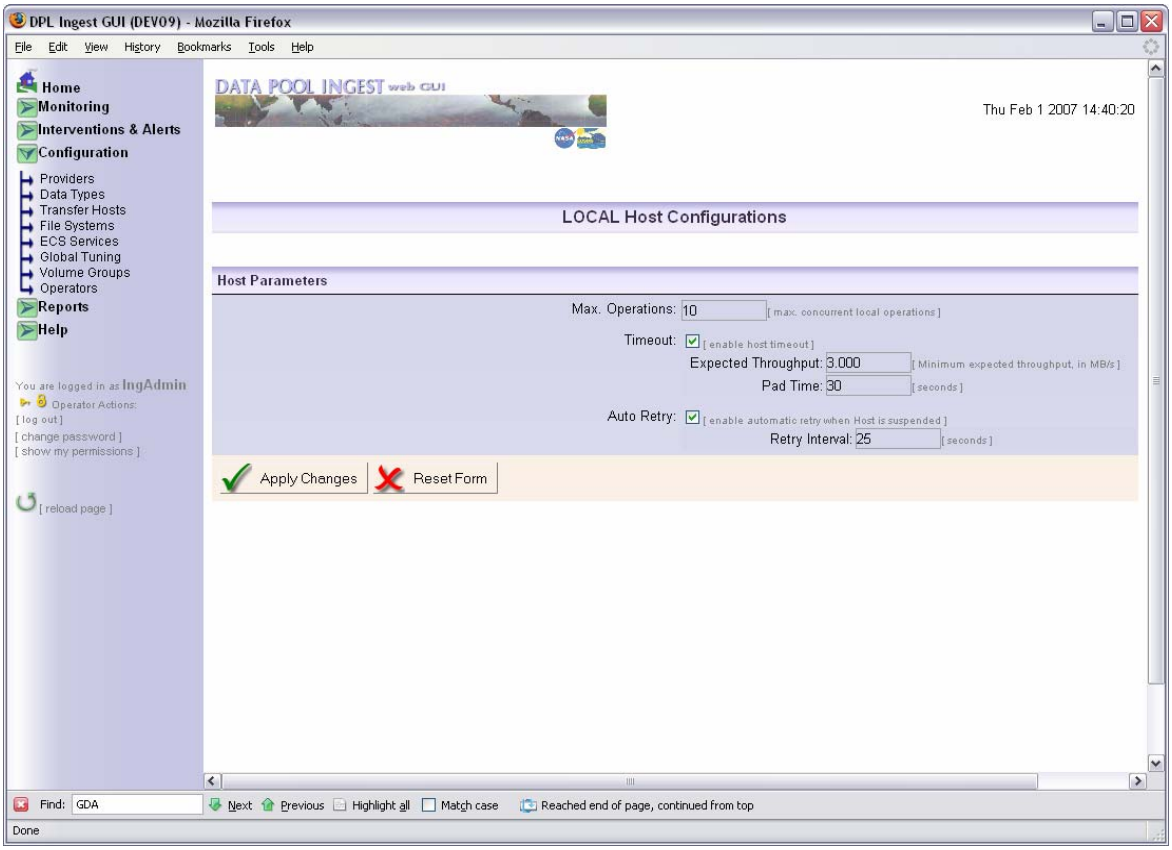


Figure 4.6.1-94. Local Host Configuration

Enter your configuration changes and then press "Apply Changes."

4.6.1.21.1 File System Configuration

The File System Configuration page allows the operator to configure warning and suspension thresholds for any configured Archive or Data Pool File Systems, as shown in Figures 4.6.1-95 and 4.6.1-96. This page shows both types, starting with the Archive File Systems at the top and Data Pool File Systems at the bottom. Table 4.6.1-27 contains the archive file system configuration page field descriptions and Table 4.6.1-28 contains Data Pool file systems configuration page field descriptions.

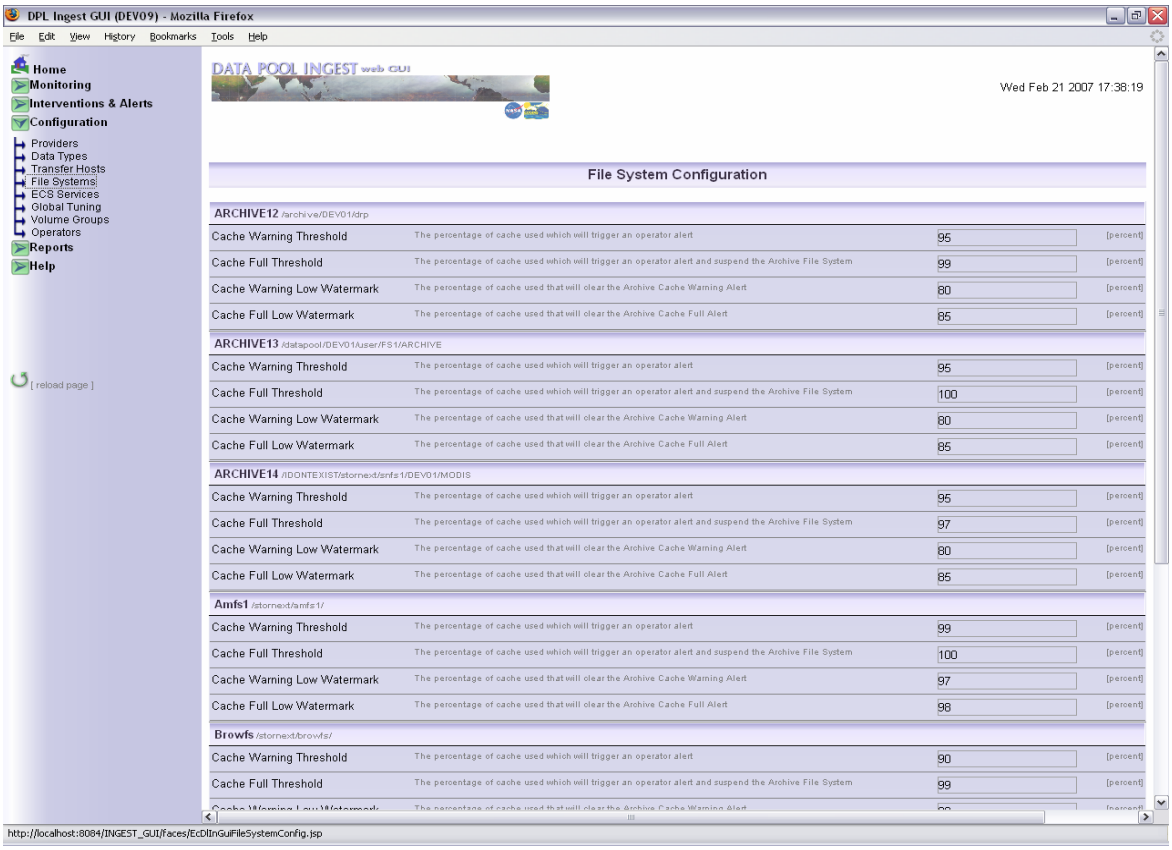


Figure 4.6.1-95. File System Configuration (Archive File Systems only)

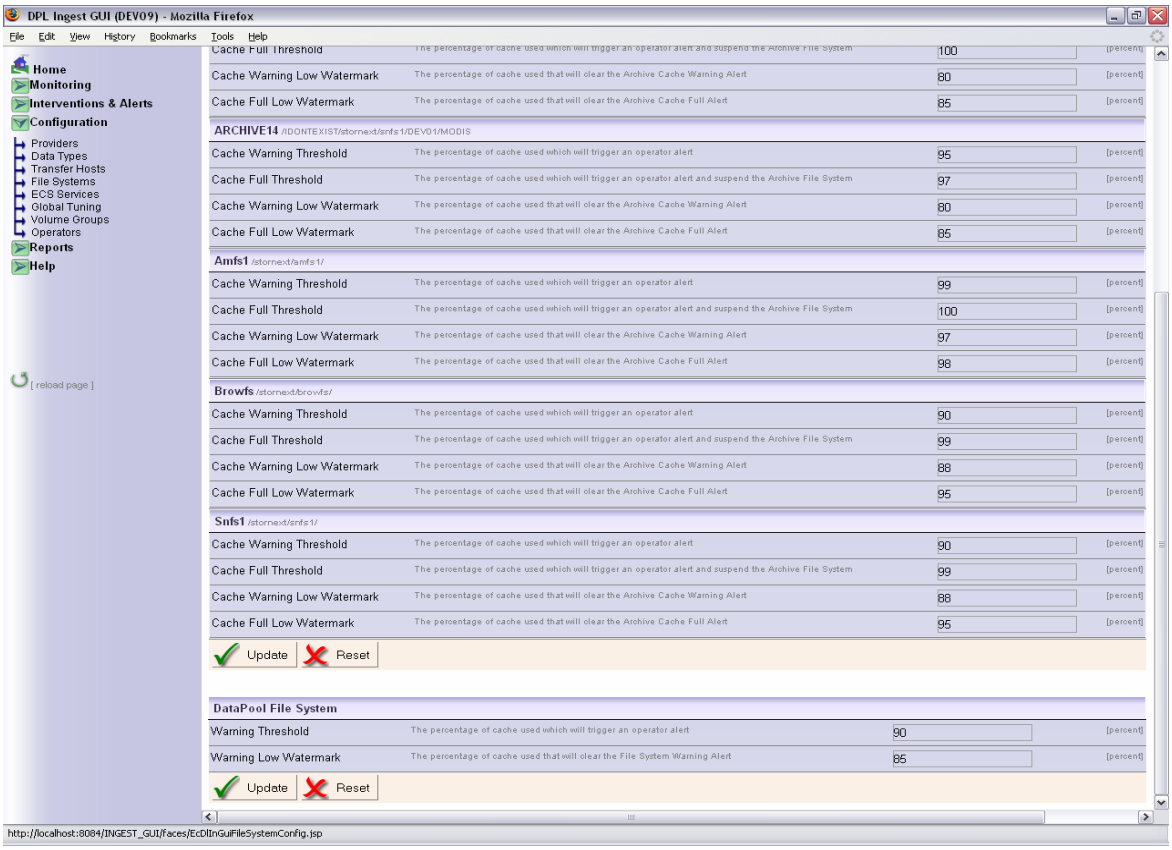


Figure 4.6.1-96. File System Configuration (DataPool File Systems at the Bottom)

Table 4.6.1-27. Archive File Systems Configuration Page Field Descriptions

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

Table 4.6.1-28. DataPool File Systems Configuration Page Field Descriptions

Field Name	Description
Warning Threshold	Warning Threshold The percentage of cache used which will trigger an operator alert
Warning Low Watermark	The percentage of cache used that will clear the File System Warning Alert

To modify File System parameters, enter the desired changes in the configurable fields and click "Update" – these buttons are located at the bottom of each of the DataPool and Archive File Systems sections.

4.6.1.22 ECS Service Configuration

This page (see Figure 4.6.1-97) allows the operator to configure the parameters of ECS services on a host-specific basis. A default checksum type and algorithm can also be set for use by the checksumming service hosts. Further, this page also allows the operator to select the host from which Science Data Server will be run. This must be configured to ensure proper functionality of the DPL Ingest system.

An authorized operator can change any of the fields (they would otherwise be disabled for unauthorized or view-only operators).

Note that you cannot suspend or resume these services from this page – you must do this from the ECS Services Status Page (see Section 4.6.1.14). The initial page is a listing page only on which modifications cannot be made. The list shows which services are enabled for each host.

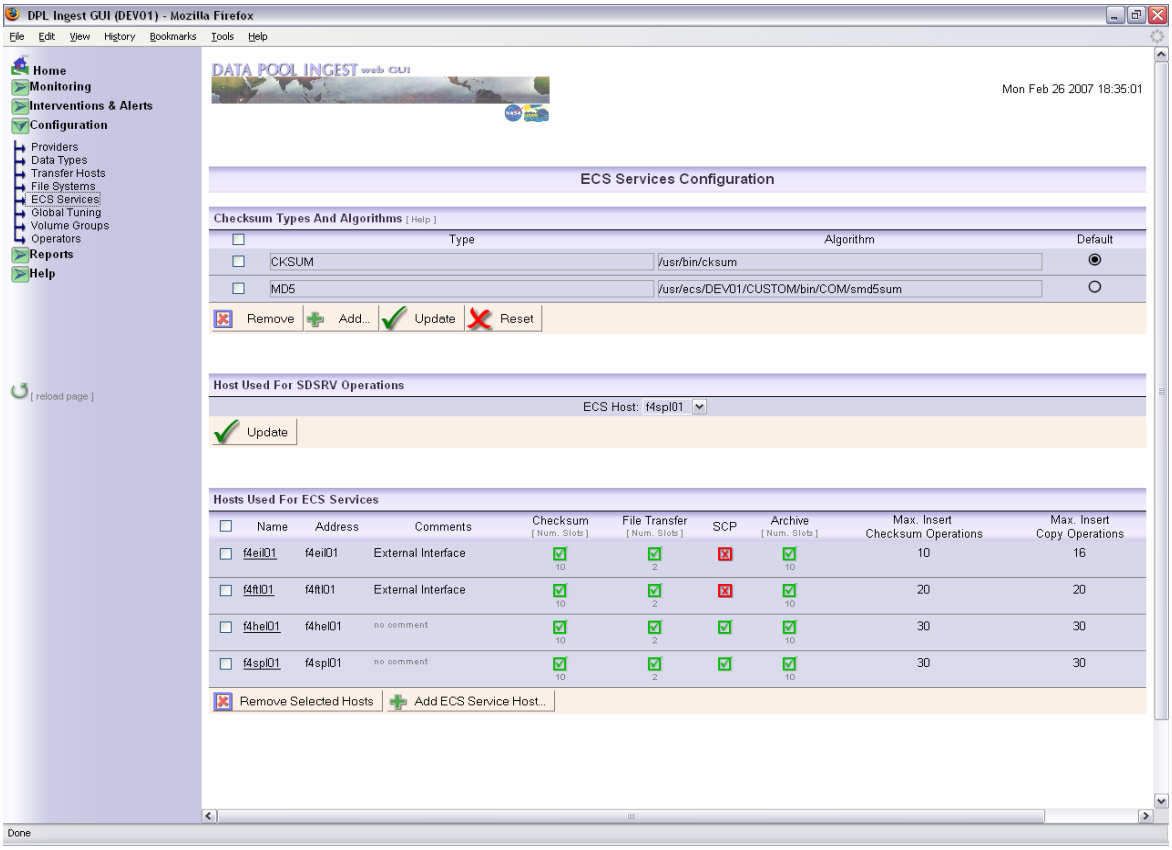


Figure 4.6.1-97. ECS Service Configuration (General Overview)

This page contains three sections:

- Checksum Type and Algorithm Configuration – *The operator can add, edit, and delete checksum types and their specific algorithms, and specify if the checksum type will be used as the default type.*
- Host Used For SDSRV Operations – *The operator can select a host on which Science Data Server operations will take place (such as metadata validation and SDSRV insert).*
- Hosts used for ECS Services – *The operator can view, add, and edit the attributes of the ECS Service host and can configure each of the services that run on that host (see Table 4.6.1-29).*

Table 4.6.1-29. ECS Services Configuration Field Description

Field Name	Description
Name	The unique name given for this ECS Service Host
Address	The IP address or DNS Name and port of the host
Comments	Any descriptive comment text given for this host.
Max. Insert Checksum Operations	The maximum number of Insert Checksum Operations that will be performed by this host (checksum performed before archiving)
Max. Insert Copy Operations	The maximum Insert Copy operations that will be performed by this host.
Checksum	Each of these ECS Services are indicated as enabled (green checkmark) or disabled (red x) for each host. The numbers under each of the indicators are the number of available slots for this service.
File Transfer	
Archive	
SCP	

4.6.1.22.1 Adding an ECS Service Host

Authorized operators can add new ECS Service Hosts and configure each of their associated services from this page. To add a Service Host, do the following:

- On the ECS Services page, click "Add an ECS Service Host" at the bottom of the list:

- A new page will load with a blank form, as shown in Figure 4.6.1-98.

Table 4.6.1-30 contains the ECS services configuration field.

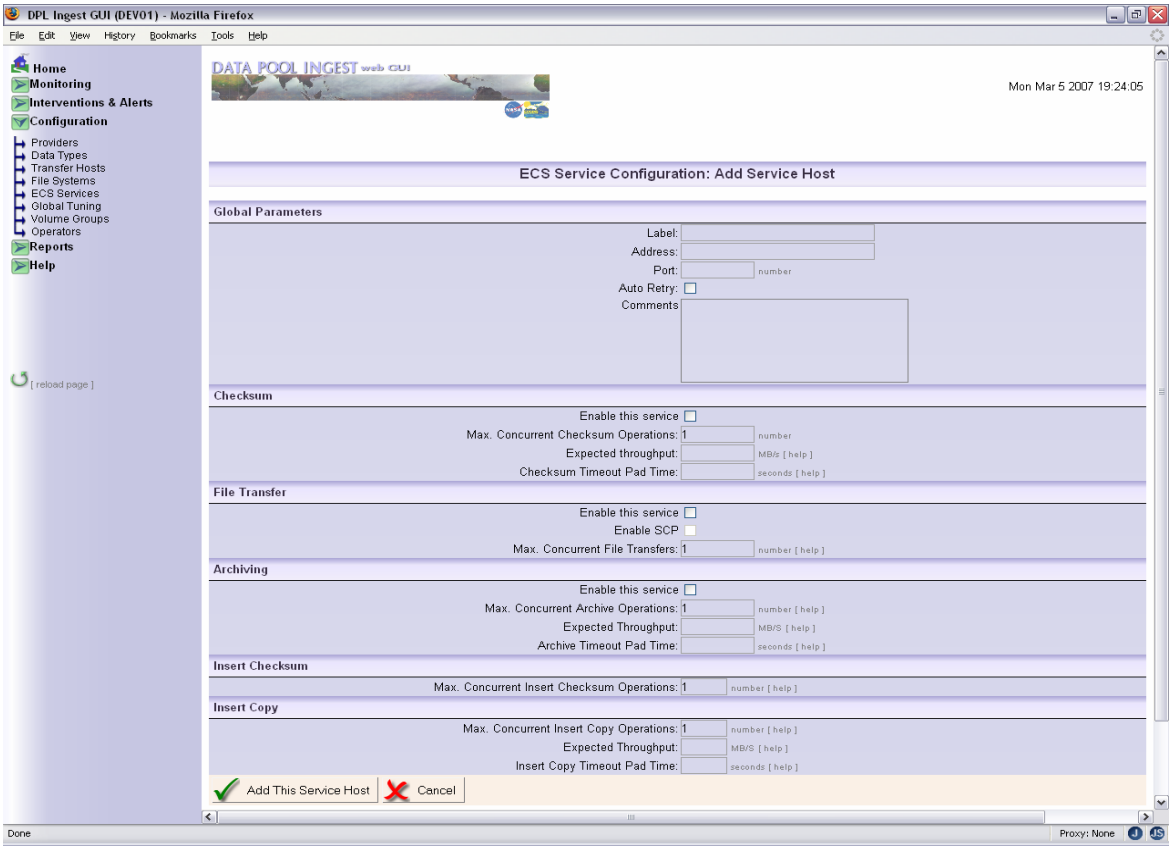


Figure 4.6.1-98. Adding a New ECS Service Host

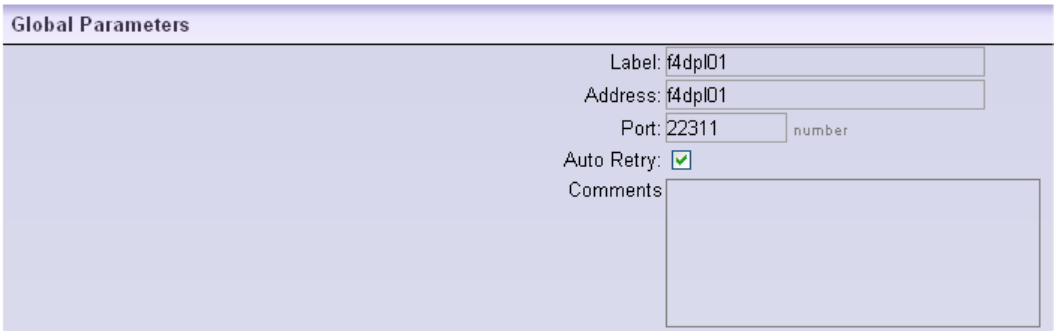
Table 4.6.1-30. ECS Services Configuration Field Descriptions (1 of 2)

Field Name	Entry	Description
Global parameters:		
Label	Required	A unique name for the ECS Service host, preferably based on the actual host name.
Address	Required	The IP address (e.g., 127.5.2.88) or canonical name (e.g., f4eil01.hitc.com) of the host.
Port	Required	The port number associated with this service. Hint: the port can be determined by looking at the Quickserver's configuration file.
Auto Retry	Optional	Whether or not to automatically retry processing of actions for all services enabled on this host.
Comment	Optional	The description of the host and its services.
Checksum:		
Enable this service	Optional	Whether or not to use this service.
Max. Concurrent Checksum Operations	Required if enabled	The maximum number of concurrent checksum operations that may be performed on this host at any one time.

Table 4.6.1-30. ECS Services Configuration Field Descriptions (2 of 2)

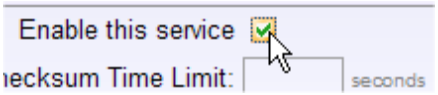
Field Name	Entry	Description
Checksum (continued):		
Expected Throughput	Required if enabled	The expected data throughput for checksum operations. This is to identify stuck operations,
Checksum Timeout Pad Time	Required if enabled	The additional delay for a checksum operation before it is considered timed-out.
File Transfer:		
Enable this service	Optional	Whether or not to use this service.
Enable SCP	Optional	Whether or not to use SCP as the file transfer method. This will only take effect if “Enable this service” is checked.
Max. Concurrent File Transfers	Required if enabled	The maximum number of concurrent file transfers that may be executed on this host.
Archiving:		
Enable this service	Optional	Whether or not to use this service.
Max. Concurrent Archive Operations	Required if enabled	The maximum number of concurrent archive operations that may be executed on this host.
Expected Throughput	Required if enabled	The expected data throughput for archive operations. This is to identify stuck operations.
Archive Timeout Pad Time	Required if enabled	The additional delay for an archive operation before it is considered timed-out.
Insert Checksum:		
Max. Concurrent Insert Checksum Operations:	Optional	The maximum number of concurrent Insert Checksum operations that may be executed on this host.
Insert Copy		
Max. Concurrent Insert Copy Operations	Required	The maximum number of concurrent Insert Copy operations that may be executed on this host.
Expected Throughput	Required	The expected data throughput for Insert Copy operations. This is to identify stuck operations.
Insert Copy Timeout Pad Time	Required	The additional delay for an Insert Copy operation before it is considered timed-out.

- Under the Global Parameters section, enter the parameter values for that server:



You can also add comments here to describe the server's purpose.

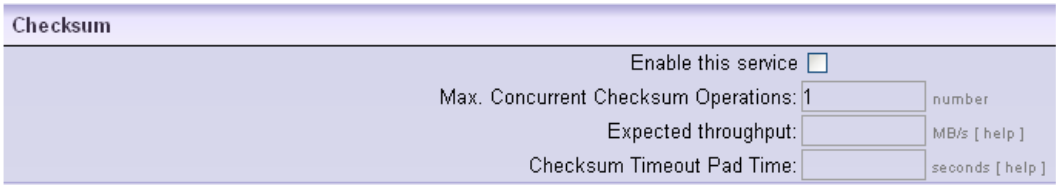
- Configure the parameters for each of the available services on this server. Some services can be enabled or disabled (e.g., Checksum and File Transfer). By default, services are *not* enabled unless you specifically enabled them by checking "Enable this service" above the parameter boxes:



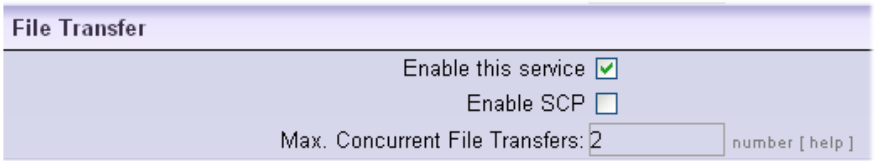
- Configure the settings for the Checksum service. Note that these are parameters for *all* types of checksum operations that run on this host. To add and configure checksum types, go to the main ECS Service Configuration page.

  Here and for all other services, there are two time-out parameters that the Ingest Service uses to determine when an operation should be considered overdue (i.e., timed-out) and cancels it. The two parameters are: (1) the expected throughput; (2) the time out pad time.

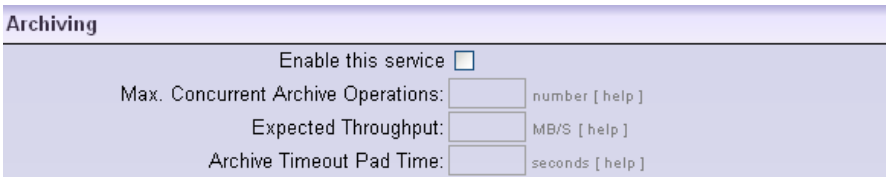
  The Ingest Service will calculate the expected time of the operation for a granule by dividing the granule size by the expected throughput, and then add the time out padding. These parameters are only used to determine when an operation should be considered hung, so both the expected throughput and the time-out padding should be chosen pessimistically to avoid canceling operations that are just slow because of concurrent heavy workload.



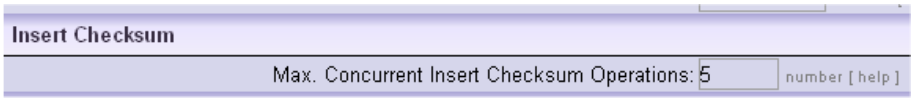
- Configure the settings for the File Transfer service. If this service is enabled, then configure the maximum number of concurrent file transfers. The timeout parameters are configured separately for each of the FTP hosts. If you wan to enable SCP as a transfer service in addition to FTP, check "Enable SCP":



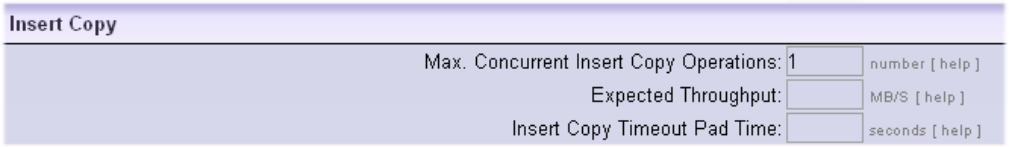
- Configure the Archive Service:



- Configure the Insert Checksum Service:



- Configure the Insert Copy Service:



- Click "Add This Service Host" at the bottom. The host will be added and the listing page will be displayed:

4.6.1.22.2 Editing an ECS Service Host

To edit an ECS Service Host and its associated services, click on the name of the host (as shown in Figure 4.6.1-99) and the detail page for that host will be displayed. This page is similar to the "Add ECS Service Host" page and contains all of the same fields. See Section 4.6.1.22 for details on how to configure an ECS Service Host.

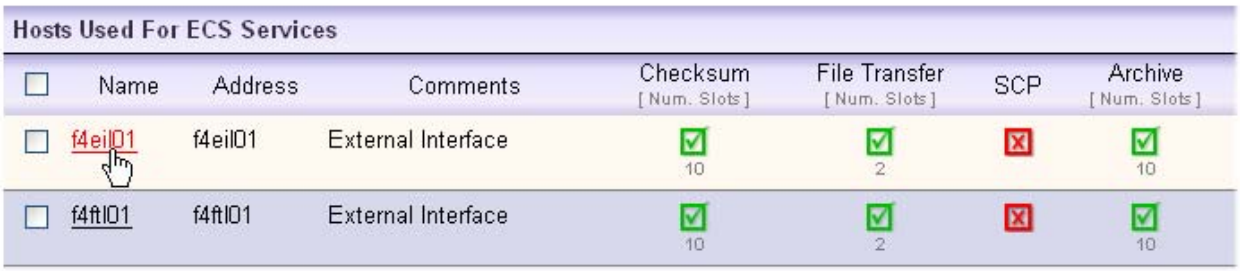


Figure 4.6.1-99. Selecting an ECS Service Host to Edit

4.6.1.22.3 Removing an ECS Service Host

To remove an ECS Service Host, check the box next to the host name (as shown in Figure 4.6.1-100) and click "Remove Selected Hosts" at the bottom of the list. A warning will pop up stating that the Server (the Processing Server) must be first shut down, as shown in Figure 4.6.1-101.

Figure 4.6.1-100. Selecting an ECS Service Host for Removal

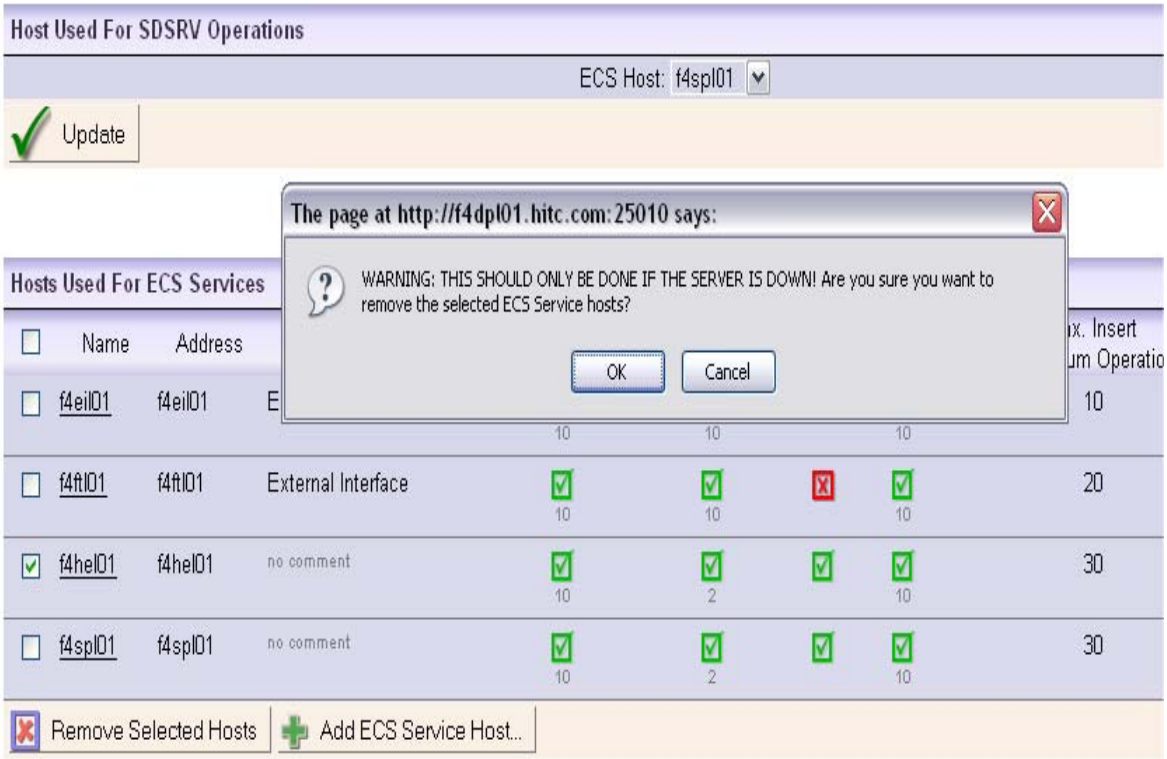


Figure 4.6.1-101. Warning for Removing ECS Service Host

4.6.1.23 Volume Group Configuration

The Volume Group configuration in the DPL Ingest GUI is meant to duplicate the functionality in the decommissioned STMGT GUI tab with some refinements and enhancements. This configuration page is shown in Figure 4.6.1-102. Table 4.6.1-31 contains the volume groups configuration page field descriptions.

4.6.1.23.1 Volume Group Configuration Page

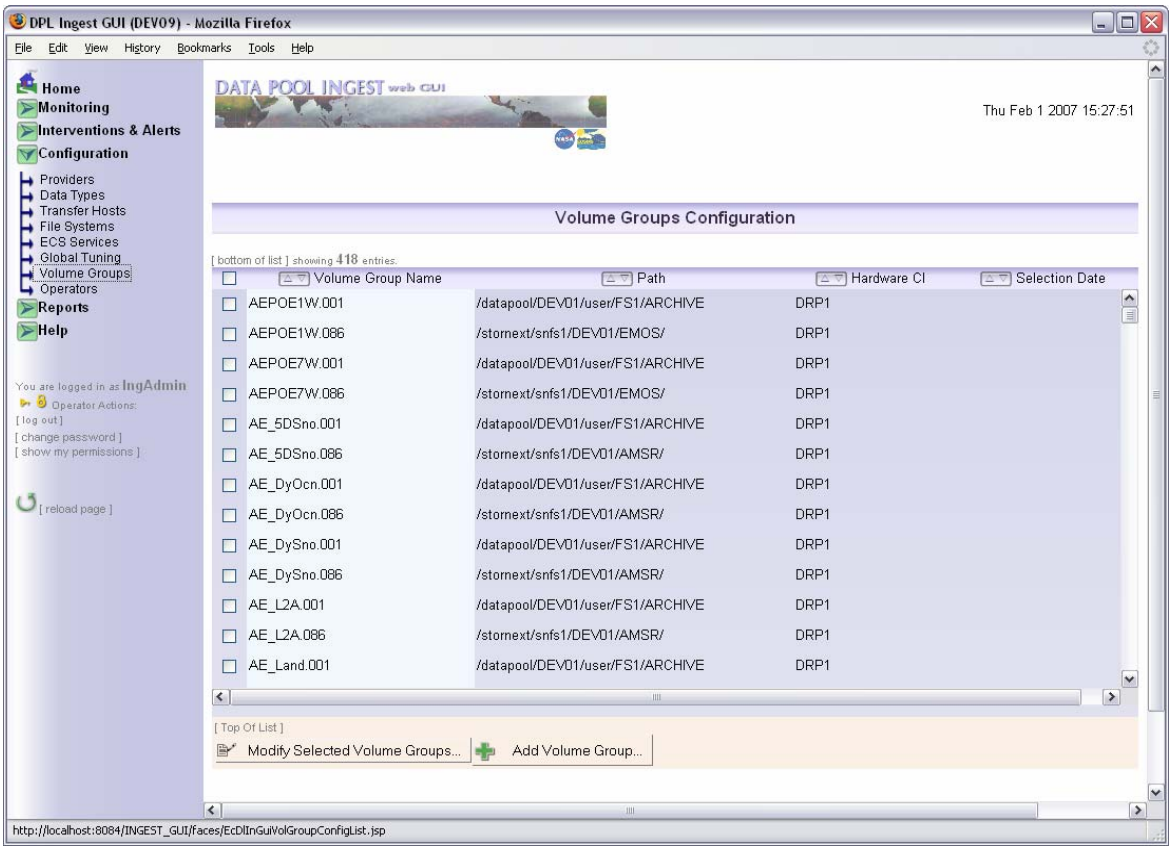


Figure 4.6.1-102. Volume Groups Configuration (Listing Page)

Table 4.6.1-31. Volume Groups Configuration Page Field Descriptions

Field Name	Data Type	Size	Entry	Description
Volume Group Name	Character	255	System Generated	The name of the Volume Group based on a Data Type shortname with version identifier.
Path	Character	255	System Generated	The fully qualified Unix path to where data is stored for the specified data type.
Hardware CI	Character	16	System Generated	The label of the Archive silo group instance currently responsible for storing data of the specified data type.
Selection Date	Character	32	System Generated	A selection date (if applicable) defined for the Data Type version of which there are two volume group history sets: one defined for forward processing and the other for reprocessing data.
New Volume Group Path	Text	255	Operator	A hidden field that is displayed when the operator clicks “Modify Selected Volume Groups”.

This page displays the list of currently configured volume groups. This list is displayed all on one page and not broken into chunks. By default, the entries are listed alphabetically by Data Type name. You can search for a desired data type by using the browser’s built-in search function.

The bottom of the list has a buttons to add a new volume group configuration or edit multiple selections of existing volume groups. Below are more detailed screen shots that explain the features available on this page.

4.6.1.23.1.1 Column Sorting

All columns on the Volume Groups Configuration page can be sorted in ascending or descending order. To sort on a column, click on the up or down arrow at the top of the column, as shown in Figure 4.6.1-103. The sorted column will be highlighted.

Volume Group Name	Path	Hardware CI
/MOD28FD2.001	/test/path/	DRP1
/test/path/	/test/path/	DRP1
ACR3L0.001	/stornext/snfs1/DEV09/airsl1	DRP1
ACR3L2DM.001	/stornext/snfs1/DEV09/airsl1	DRP1
ACR3L2SC.001	/stornext/snfs1/DEV09/airsl1	DRP1
AE_L2A.001	/test/path/	DRP1
AE_Land.086	/test/path/	DRP1

Figure 4.6.1-103. Sort-able columns

4.6.1.23.1.2 Modifying Volume Groups

Several Volume Groups may be modified at once by checking the boxes next to each Volume Group name and then clicking "Modify Selected Volume Groups…" at the bottom of the list. The checkbox at the very top of the list allows the operator to select all of the Volume Groups on the page, as shown in Figure 4.6.1-104. Operators will not be able to modify more than one volume group at a time when there are Volume Groups selected from a Data Type version that has an alternative Volume Group History Set defined.

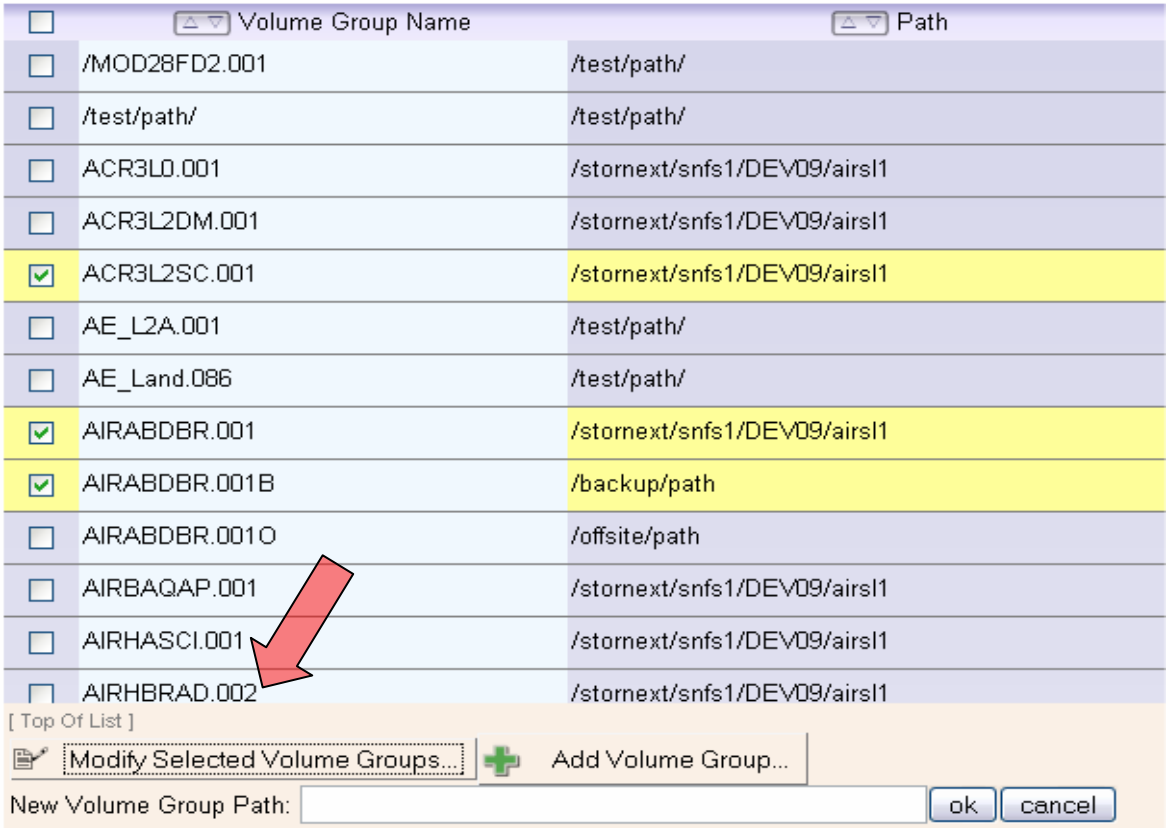


Figure 4.6.1-104. Modify Selected Volume Groups

When the desired Volume Groups are selected, they are highlighted to give a clear visual indication of which Volume Groups will be changed. When the "Modify Selected Volume Groups" button is clicked, a path input field appears below – here you can enter the new path to be applied to all selected Volume Groups. Click "ok" to apply the changes. Before any change takes place, you will be prompted for confirmation.

4.6.1.23.1.3 Adding New Volume Groups

To add a new Volume Group, click "Add Volume Group" at the bottom of the list, as shown in Figure 4.6.1-105.

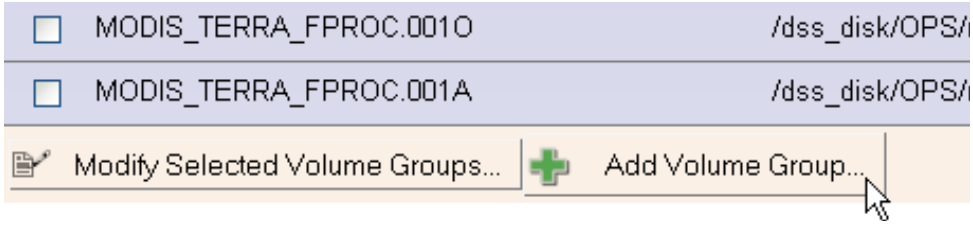


Figure 4.6.1-105. Add Volume Group Button

This will display the Add Volume Groups page.

The list of Volume Groups displayed on this page have already been entered and configured in the STMGT Database. There are two paths one can take when adding a Volume Group:

1. The operator can add volume groups, to a new a Data Type version (a Data Type version that has not already been configured)
2. The operator can add Volume Groups to an existing Data Type version (a Data Type Version that has at least one Volume Group History Set). For example, if a primary volume group exists for AST_L1B.003, the operator may add a backup Volume Group, which would create a Volume Group named AST_L1B.003B (appending a "B" to the original name). If the backup already exists, the operator would not be able to add another backup Volume Group.

See Section 4.6.1.23.1.4 for more details on how Volume Groups get named.

4.6.1.23.1.4 Volume Group Naming Conventions

When a Volume Group is added, the name will be created based on the type of Volume Group that was added. There are six types, as explained in Table 4.6.1-32. Note that "R" indicates an alternative Volume Group for reprocessing. There is no explicit suffix for forward processing.

Table 4.6.1-32. Volume Group Naming

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

4.6.1.23.2 Add Volume Group Page

The Add Volume Group page allows an authorized operator to add a volume group for a new Data Type version or to add new volume group to an existing Data Type version. See Figure 4.6.1-107. To add a Volume Group for a new Versioned Data Type, you must first type in the name of the Versioned Data Type. The sequence is as follows:

1. Click on the **Volume Groups** tab in the navigation menu
2. Click on **Add Volume Group…** at the bottom of the list
3. Follow the instructions on the next page. To add a Volume Group for a *new* Versioned Data Type, click **Add Volume Groups For A New Versioned Data Type...** at the top page, as show in Figure 4.6.1-106.
4. Manually type in the Versioned Data Type into the text box. Click ok. A new page will load (Figure 4.6.1-107), allowing you to configure the Versioned Data Type as explained below.

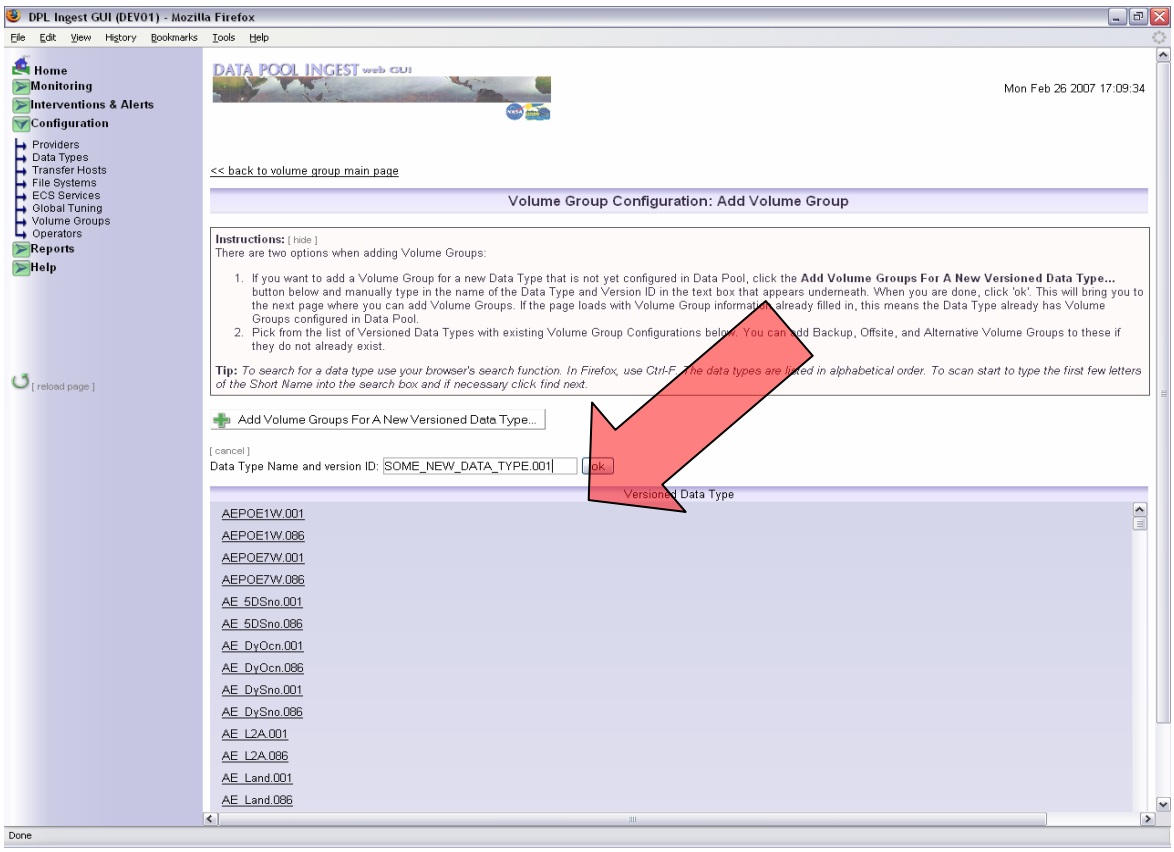


Figure 4.6.1-106. Entering a New Versioned Data Type

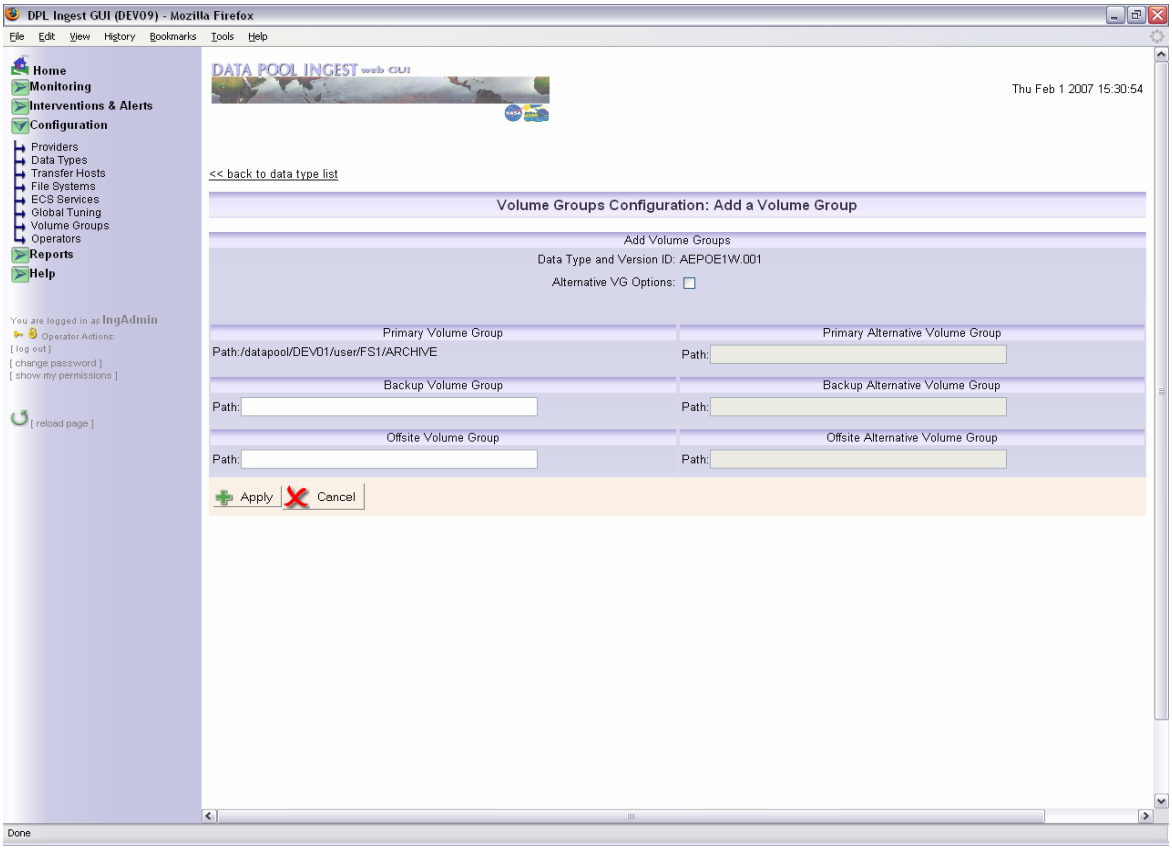


Figure 4.6.1-107. Volume Groups: Add a Volume Group Page

Adding a Volume Group for a New Data Type Version

The following rules apply when adding a volume group for a new Data Type Version:

1. The Primary path information *must* be entered.
2. The addition of Backup Volume Group, Offsite Volume Group, or Alternative Volume Group History Set, are optional and may be entered at a later time, however they can be entered all at once on this page as shown in Figure 4.6.1-108.

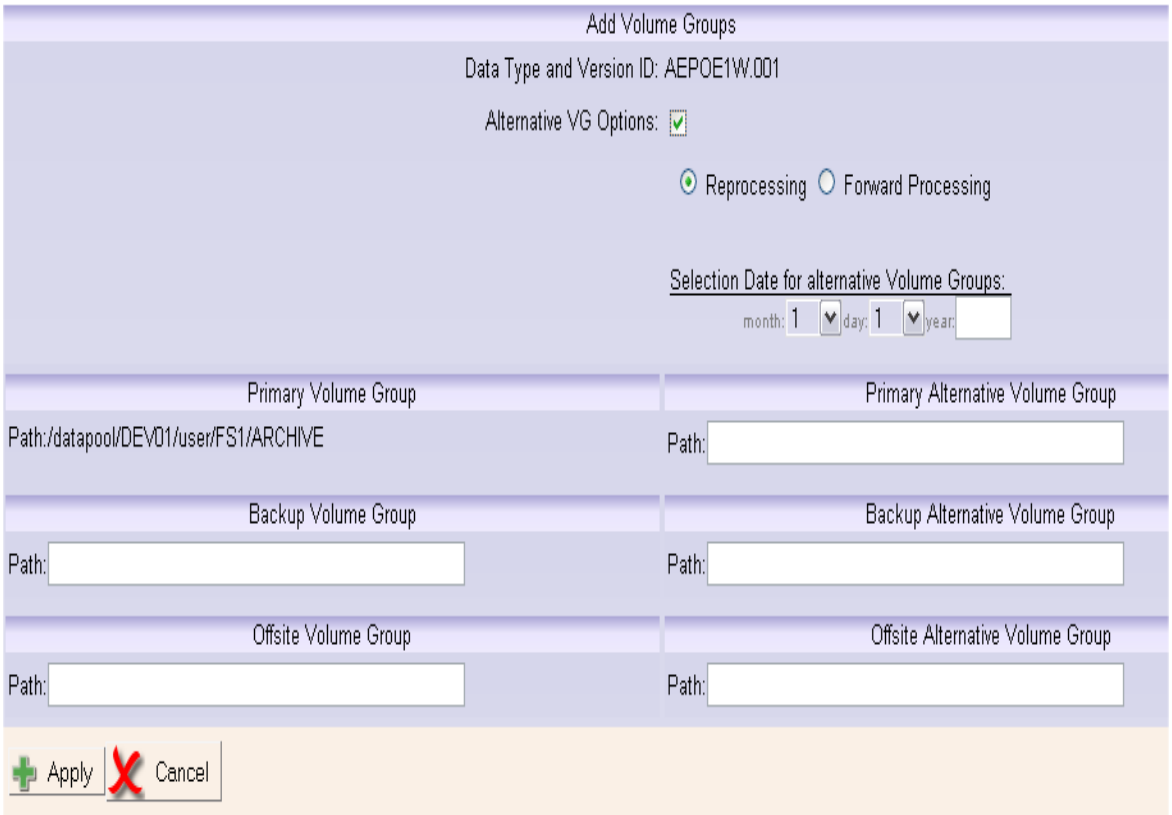


Figure 4.6.1-108. Alternative Volume Groups

Table 4.6.1-33 contains the add volume group page field descriptions.

Table 4.6.1-33. Add Volume Group Page Field Description (1 of 2)

Field Name	Entry	Description
Data Type and Version ID	Required	A Data Type short name and version identifier.
Alternative VG Options	Not Required	Allows operator to enter options for alternative Volume Groups. This can only be checked if an Alternative Volume Group was specified, otherwise, the checkbox is disabled.
Selection Date for alternative Volume Groups	Required if adding Alternative Volume Group History Set	When the alternative check box is selected, the Selection Date section is enabled and is required to be filled out by the user. Selection Date is a separate date to guide Archive Server to select an appropriate Volume Group History set for storing / retrieving data. When acquisition date is not null and less than the Selection Date, Reprocessing Volume Group history set will be used, otherwise, forward processing Volume Group history set will be used.

Table 4.6.1-33. Add Volume Group Page Field Description (2 of 2)

Field Name	Entry	Description
Reprocessing, Forward Processing	Required if adding Alternative Volume Group History Set	Alternative volume groups can be configured either for reprocessing or even for forward processing. The default is for reprocessing. Although the flexibility to add a new alternative for forward processing is supported, it should be used with caution.
Volume Group Path (For Primary)	Required	The fully-qualified Unix path to where data is currently being stored for the specified data type to the Primary Archive.
Volume Group Path (For Backup)	Required if Backup enabled	The fully-qualified Unix path to where data is currently being stored for the specified data type to the Backup Archive.
Volume Group Path (For Offsite)	Required if Offsite enabled	The fully-qualified Unix path to where data is currently being stored for the specified data type to the Offsite Archive.
Volume Group Path (For Primary Alternative)	Required if Primary Alternative enabled	The fully-qualified Unix path to where reprocessing data is currently being stored for the specified data type to the Primary Alternative Archive.
Volume Group Path (For Backup Alternative)	Required if Backup Alternative enabled	The fully-qualified Unix path to where data is currently being stored for the specified data type to the Backup Alternative Archive.
Volume Group Path (For Offsite Alternative)	Required if Offsite Alternative enabled	The fully-qualified Unix path to where data is currently being stored for the specified data type to the Offsite Alternative Archive.

Adding a Volume Group to an existing Data Type Version

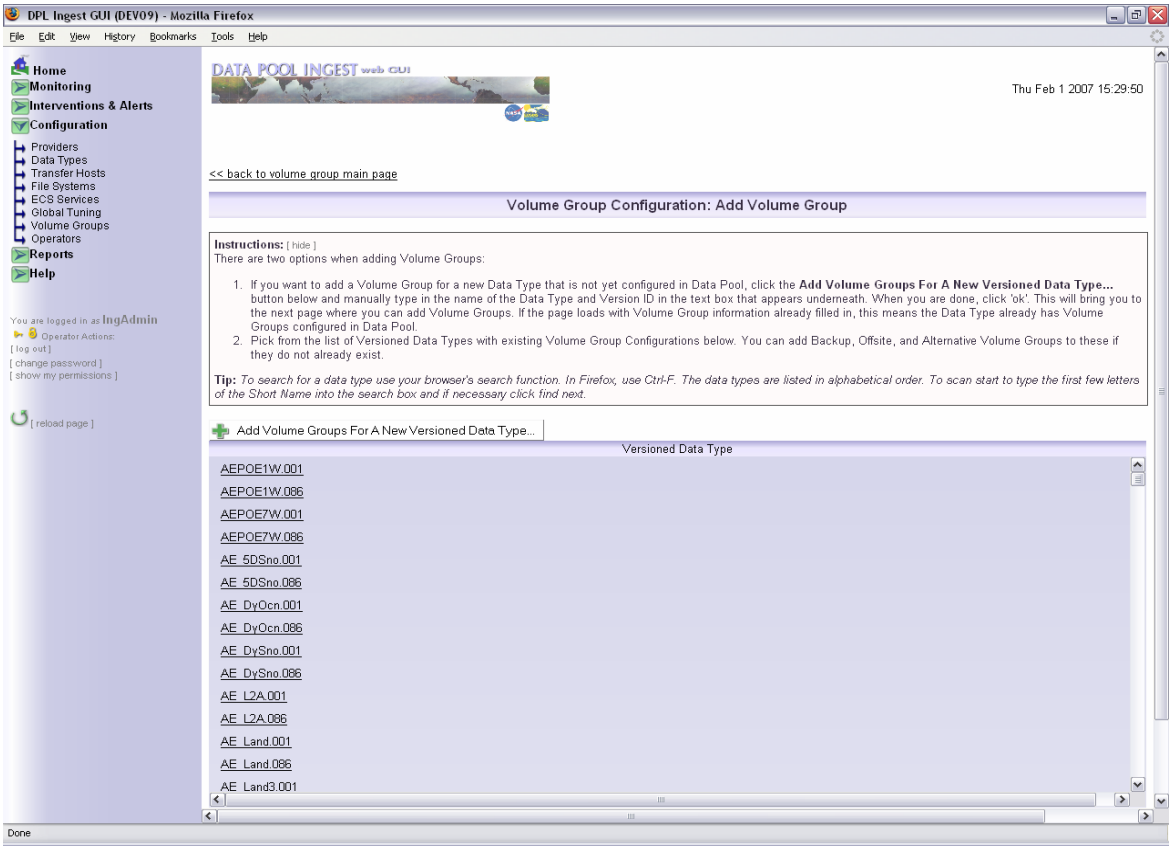


Figure 4.6.1-109. List of Versioned Data Types w/ Existing Volume Groups

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

1. The Volume Group name will be selected from the Add Volume Group page (see Figure 4.6.1-109). When the link for the desired Versioned Data Type is clicked, the Data Type is displayed at the top of the next page.
2. Any previously added Volume Group will be displayed, but will not be editable. For example, if a Backup Volume Group has already been added, the Volume Group path will be shown, but the operator will not be able to edit this path.
3. Similarly, if any Alternative Volume Groups have been specified, the Alternative VG options and Volume Groups will be displayed, but not editable.
4. If the operator is adding the Alternative Volume Group History Set for the first time, the Alternative Options must be selected and the operator may choose the processing type (Forward Processing or Reprocessing) for the Alternative Volume Group History Set, as well as a selection date to be applied to the Reprocessing Volume Groups.

Adding Volume Groups

Multiple Volume Groups for a Data Type version may be added at once on the Add Volume Group page. For each volume group you wish to specify, enter a path for that Volume Group, as show in Figure 4.6.1-110.

Figure 4.6.1-110. Adding the Primary Volume Group

4.6.1.23.3 Authorization

For DAACs that have security enabled for the DPL Ingest GUI, an operator would have to have Ingest Admin permission to add or configure volume groups as described in this document. No special permissions are needed to view current configurations or generate the Volume Groups History report page.

4.6.1.24 Global Tuning Configuration

This page allows the operator to configure the global tuning parameters in the Data Pool Ingest database. The parameters are listed along with their descriptions and a text box to change the values, as show in Figure 4.6.1-111.

There are two sections of the Global Tuning page, each editable by different permission levels. The first section, “Global Admin Tuning Parameter Configuration,” is editable with Ingest Admin or Ingest Tuning privileges. The second section, “Global Tuning Parameter Configuration,” requires Ingest Tuning privileges. If the logged in operator does not have permission to edit a section, the fields and buttons for that section will be disabled.

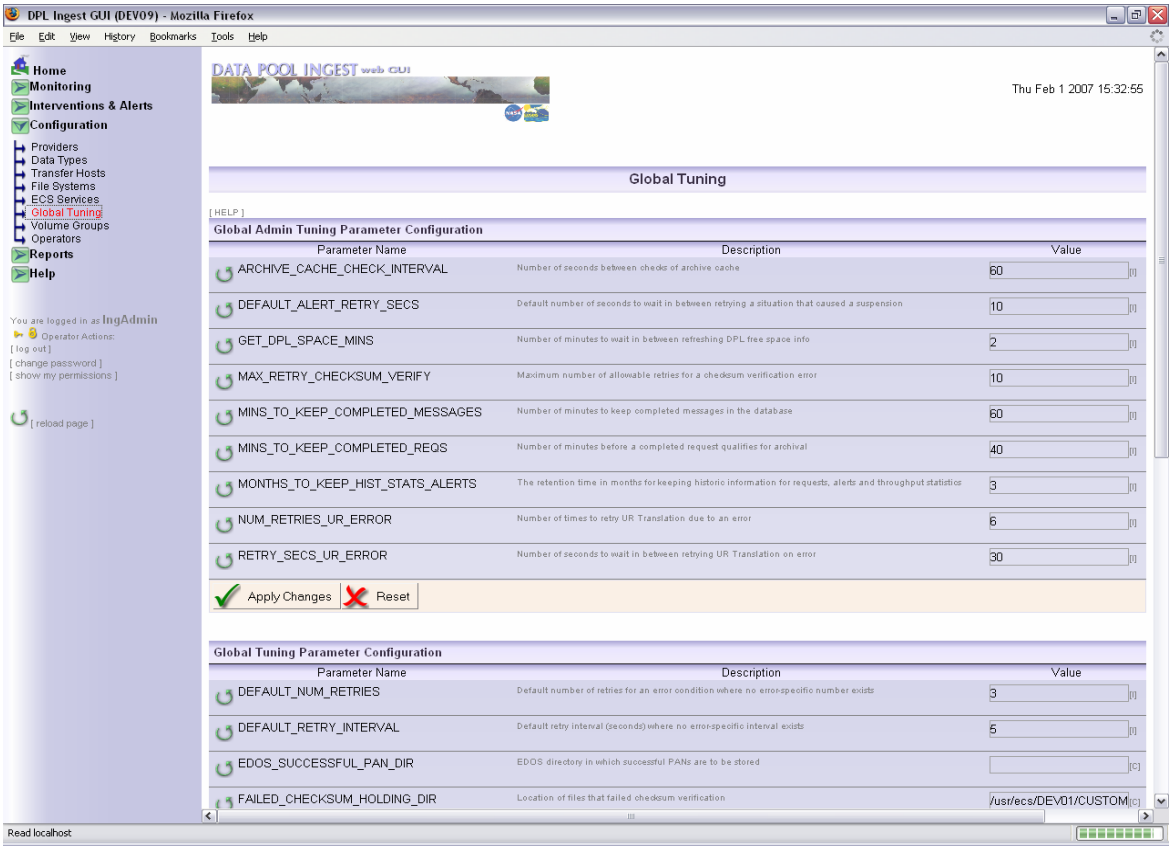


Figure 4.6.1-111. Global Tuning Configuration Page

Dynamic vs. Static Parameters

Dynamic parameters are those that are applied to the Ingest Service without having to restart it. The Ingest Service will automatically apply these parameters within 1 minute of having been set on the GUI. Static parameters are those that require the Ingest Service to be restarted before a change in the parameter value can take effect. Each parameter on this page is preceded by an icon indicating whether parameter is dynamic or static, as shown in Figure 4.6.1-112.

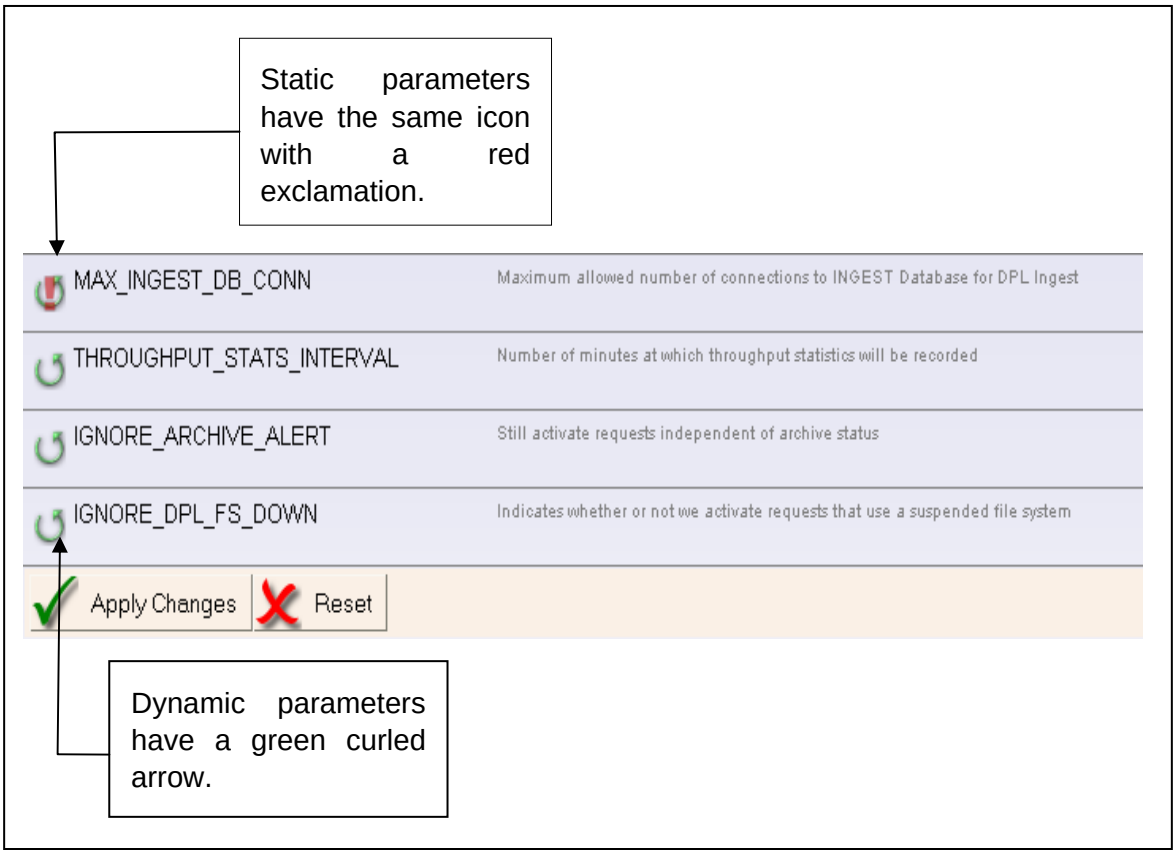


Figure 4.6.1-112. Dynamic and Static Configuration Icons

Descriptions of each parameter are displayed on the GUI and will not be included in this document.

To modify parameters, fill in the desired values in the appropriate fields and press the "Apply Changes" button.

Note: Parameters must be edited section by section. If parameters are changed in the "Global Admin Tuning Parameter Configuration" section and then the "Apply Changes" button is pressed in the "Global Tuning Parameter Configuration," modifications in the first section will be ignored.

4.6.1.25 Operator Configuration

This page consists of a list of operator names and their current permission settings and allows an Ingest Security operator to configure the authorized users for the Data Pool Ingest GUI. Here operators can be added, edited, or removed. Figure 4.6.1-113 shows the general overview of this page.

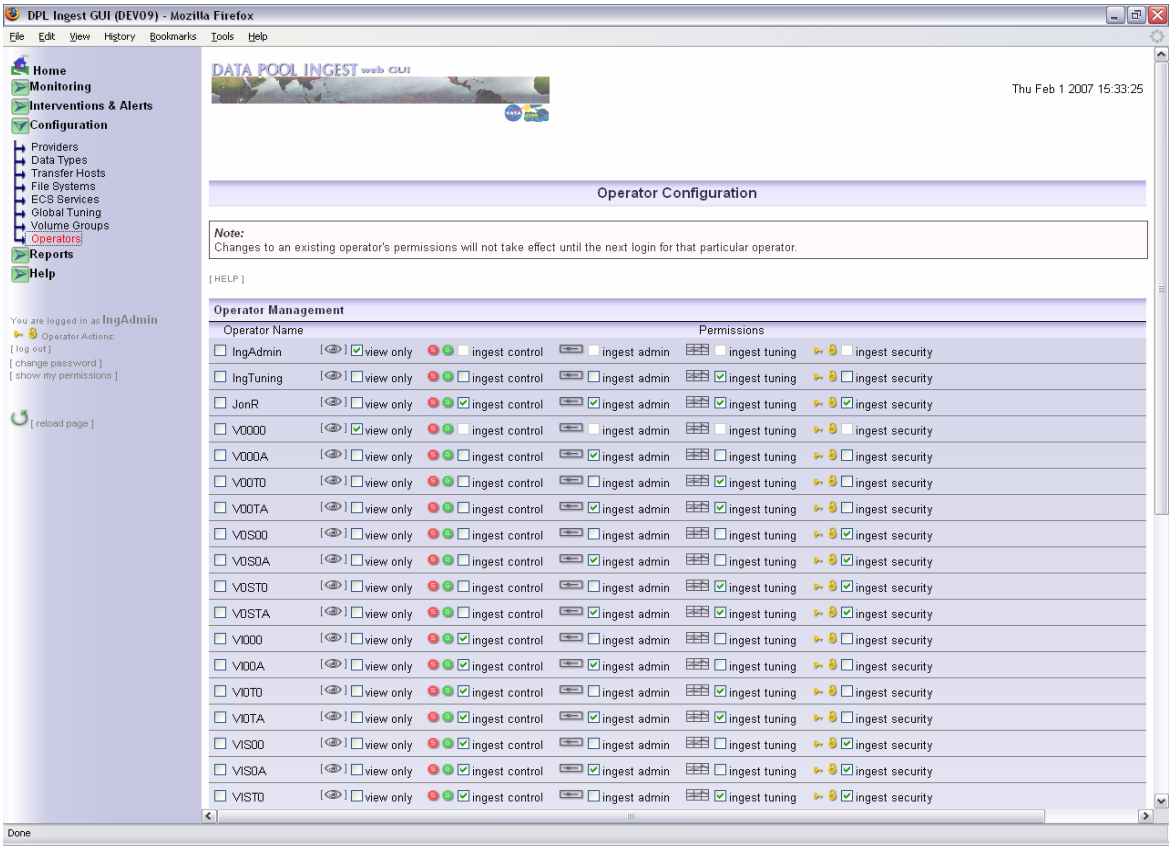


Figure 4.6.1-113. Operator Configuration Page

Permission Levels Explained:

There are 5 different permission levels. View Only is a special case: if an operator is assigned the View Only permission level, it may not have any other permissions. In any other case, the other 4 levels can be combined together as they represent the ability to manage an exclusive set of properties associated with data pool ingest. For example, an operator may be assigned Ingest Control and Ingest Admin permissions simultaneously, but not View Only and Ingest Admin. See Table 4.6.1-34 for the available permission levels and their descriptions.

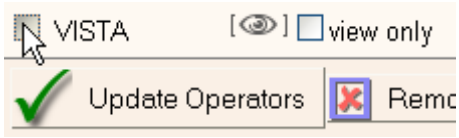
Table 4.6.1-34. Operator Permissions

Icon	Permission Level	Description
[ ]	**View Only**	The operator cannot modify any field nor take any actions on the GUI. Most buttons, textboxes, checkboxes, drop-down lists, etc. are disabled, with the exception of filters and sorts. View Only operators can also generate reports.
	Ingest Control	For Ingest Requests or Interventions, the operator can: Suspend, resume, cancel, or change the priority of Ingest Requests Suspend, resume, cancel, or retry Granules associated with an Ingest Request Add annotations to an Ingest Request or Intervention The operator can also suspend or resume the General Ingest Status, the Email Service, Providers, Polling Locations, File Systems, Transfer Hosts, and ECS Services, and can also clear Alerts.
	Ingest Admin	The operator can add, edit, and delete the following configurable items: Providers and Polling Locations, Data Types, Transfer Hosts, File Systems, ECS Services, and Volume Groups.
	Ingest Tuning	The operator can modify Global and host-specific tuning configuration parameters.
	Security Admin	The operator can add, edit, or delete operators and change operator permissions.

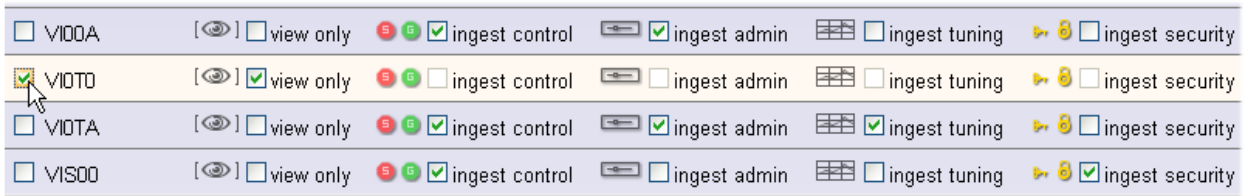
4.6.1.25.1 Configuring an Operator

To change an operator's permission settings, do the following:

1. Next to the operator name, check the box next to the operators you would like to update.



2. Select any combination of permissions for each checked operator. Note how that when **View Only** is checked, the other permission checkboxes are automatically unchecked and disabled; this permission setting must be exclusive of the others.



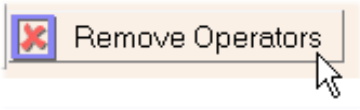
3. Click the "Update Operators" button at the bottom:

4.6.1.25.2 Deleting Operators

To remove an operator from the list, do the following:

1. Select an operator by checking the box next to the operator name (more than one may be selected):

2. Click the ”Remove Operators” button. You will be prompted for confirmation:

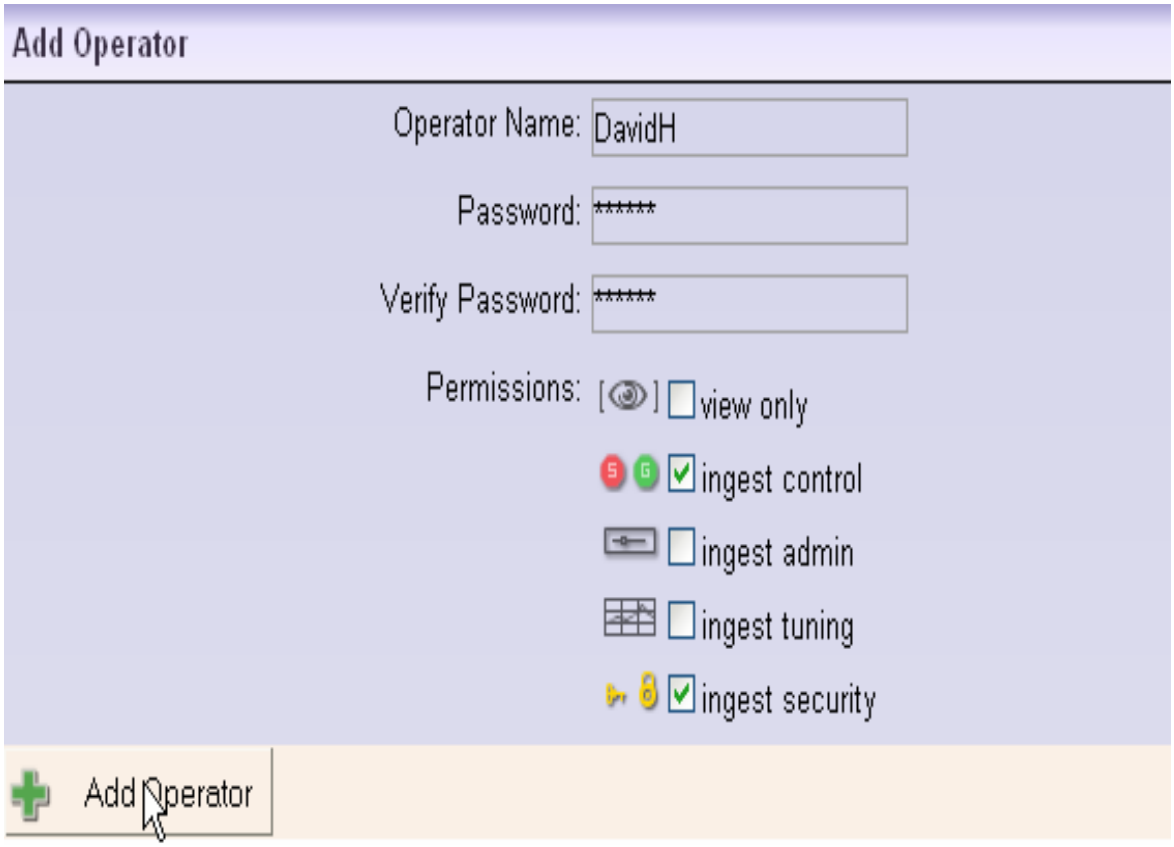


3. The page will reload, with the selected operator(s) no longer appearing on the list.

4.6.1.25.3 Adding Operators

To add an operator, do the following:

1. Under the “Add Operator” section of the page (located at the bottom of the operator list), enter in the operator name and password, and then select the desired permissions. At least one permission level must be selected.
2. Click the “Add Operator” button at the bottom of the page.



3. You will be prompted for confirmation. The page will reload with the new operator added to the list.

4.6.1.26 Reports

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

4.6.1.26.1 Report Formats and Layouts

This report pages display the information across several data providers or data types. An example of the Detailed Report page is shown in Figure 4.6.1-114. As with all types of reports, the operator must select a date range (presets are provided for the last 24 and 48 hours), as well as criteria for the search. These include one or more data providers, one or more data types, and one or more final request statuses. All Data Criteria fields are optional, but at least one selection of one field must be made to generate the report.

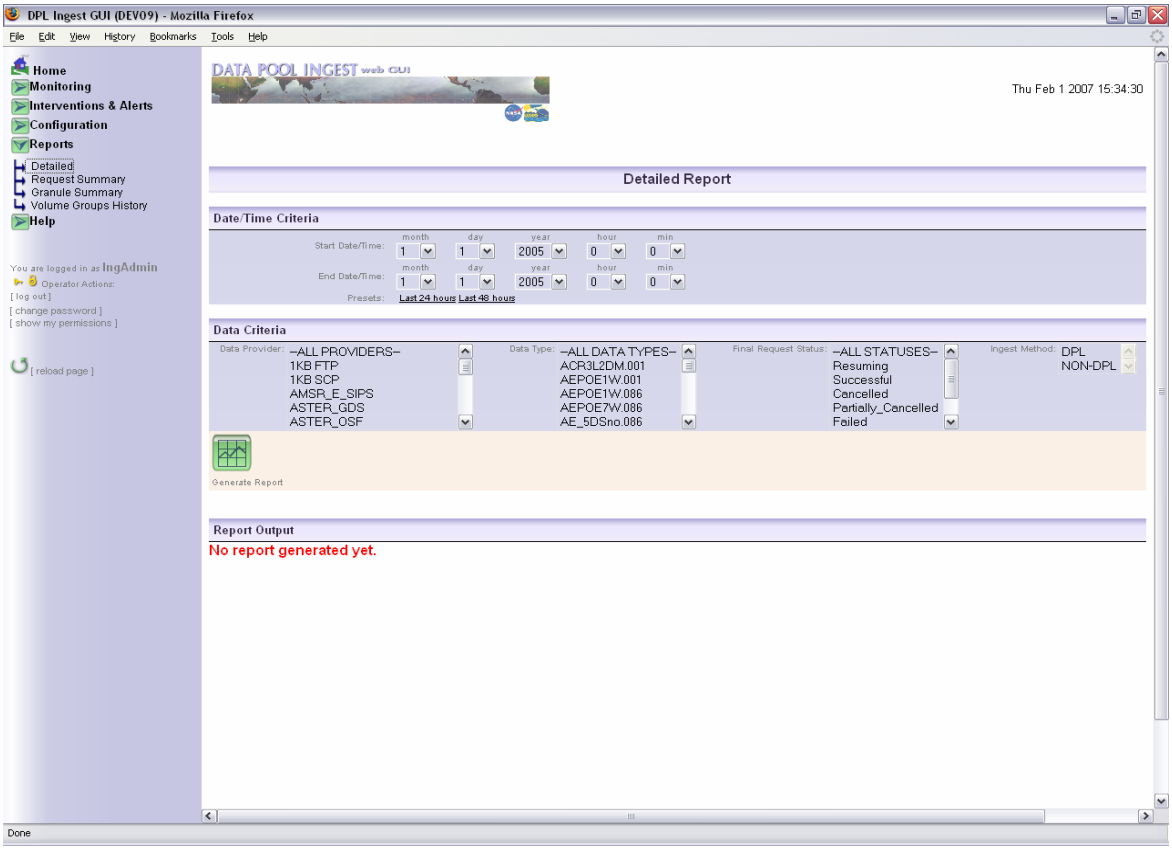


Figure 4.6.1-114. Detailed Report Page

4.6.1.26.2 Generating the report

Due to the large volume of data that may be in the database, reports can sometime take a while to process and be displayed. Immediately upon pressing the "Generate Report" button, a transitional screen is loaded with the message "Processing Your Request…", as show in Figure 4.6.1-115.

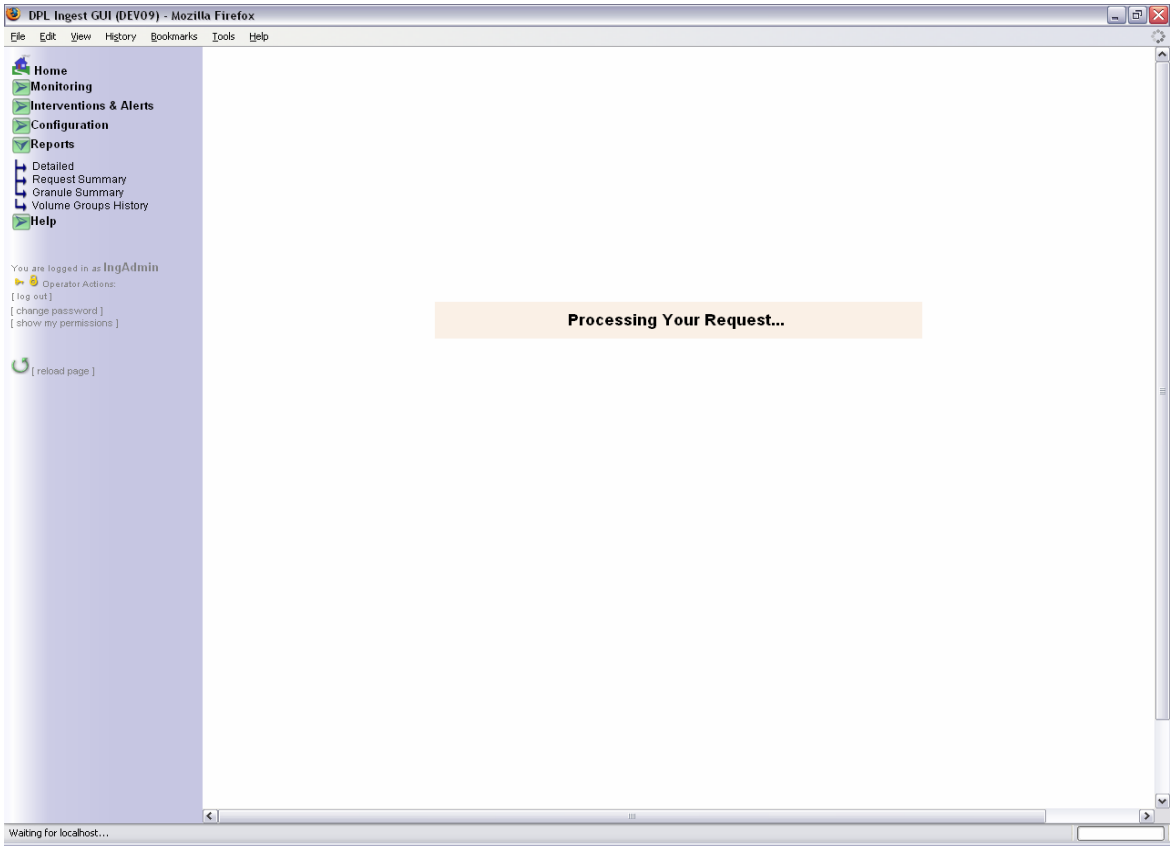


Figure 4.6.1-115. Report Page processing a report request

4.6.1.26.3 Fields Generated Reports

The various report pages look similar at first glance, but they all produce different fields. The following figures (Figure 4.61-116, Figure 4.6.1-117, and Figure 4.6.1-118) display the headers generated for each particular report type. Some example data is also shown along with the headers.

Reports containing averages (e.g., “size avg.” on the Request Summary Report) actually contain weighted averages, which is in effect an average of averages. For example, “size avg.” is an average of all of the granules, weighed against the average of all the other averages for each Data Provider.

Note that the current search criteria (data and date/time) are always shown at the top of the report output.

Current Report Criteria:

Data Provider(s): [ALL]

Data Type(s): [ALL]

Final Request Status: [ALL]

Start Date/Time: 1/11/2006 15:18

End Date/Time: 31/10/2006 15:18

Report Output

Req.ID	Data Provider	Ingest Type	Ingest Method	Start Date/Time	End Date/Time	Tot.# grans.	# Succ. grans.	Vol (MB)	File Count	Time to xfer (mins)	Time to preproc (min)	Time to Archive (min)	Priority	Restart Flag
21807	S4P00	Polling_w/DR	DPL	2006-11-01 08:21:07	2006-11-01 08:21:19	1	1	6.311	2	0	8	0	VHIGH	
21808	S4P00	Polling_w/DR	DPL		2006-11-01 08:29:06	1		6.245	2	0	0	0	VHIGH	
21809	ASTER_OSF	Polling_w/DR	DPL	2006-11-01 10:03:09	2006-11-01 10:03:10	1		0.473	2	0	0	0	NORMAL	
21810	ASTER_OSF	Polling_w/DR	DPL	2006-11-01 10:03:09	2006-11-01 10:03:10	1		0.473	2	0	0	0	NORMAL	
21811	ASTER_OSF	Polling_w/DR	DPL	2006-11-01 10:03:09	2006-11-01 10:03:10	1		0.473	2	0	0	0	NORMAL	

Figure 4.6.1-116. Detailed Report Layout

Current Report Criteria:

Data Type(s): [ALL]

Final Request Status: [ALL]

Start Date/Time: 1/11/2006 15:21

End Date/Time:31/10/2006 15:21

Report Output

Data Provider	Ingest Type	Ttl. Reqs	Ttl. Errors	Gran Avg	Gran Max	File Avg	File Max	Size Avg (MB)	Size Max (MB)	Xfer time Avg (mins)	Xfer time Max (mins)	Preproc time Avg (mins)	Preproc time Max (mins)	Archive Time Avg (mins)	Archive Time Max (mins)
ASTER_OSF		12	0	1	1	2	2	0.473	0.473	10	126	3	14	0	1
CRIT_4150_2		10	0	1	1	2	2	0.473	0.473	0	1	1	2	0	0
MODAPS_TERRA_FPROC		1	0	1	1	2	2	0.473	0.473	0	0	2	2	0	0
S4P00		57	0	1	1	2	3	16.157	71.236	0	2	2	8	0	1

Figure 4.6.1-117. Request Summary Report Layout

Current Report Criteria

Data Provider(s): [ALL]

Data Type(s): [ALL]

Final Request Status: [ALL]

Start Date/Time: 1/11/2006 15:21

End Date/Time: 30/10/2006 15:21

Report Output

Data Provider	Ingest Type	Data Type	Ttl. Grans	Ttl. Errors	File Avg	File Max	Size Avg (MB)	Size Max (MB)	Xfer time Avg (mins)	Xfer time Max (mins)	Preproc time Avg (mins)	Preproc time Max (mins)	Archive Time Avg (mins)	Archive Time Max (mins)
ALL_ESDTS		AEPOE1W	2	0	2	2	0.048	0.048	0	1	19	27	1	3
ALL_ESDTS		AEPOE7W	2	0	2	2	0.100	0.100	0	1	11	15	1	1
ALL_ESDTS		AE_5DSno	2	0	2	2	0.100	0.100	1	2	18	21	0	0
ALL_ESDTS		AE_DyOcn	4	0	2	2	0.100	0.100	1	3	16	28	0	1
ALL_ESDTS		AE_DySno	4	0	2	2	0.100	0.100	0	1	18	29	1	4
ALL_ESDTS		AE_L2A	29	0	2	2	0.103	0.103	2	5	16	30	1	4
ALL_ESDTS		AE_Land3	4	0	2	2	0.100	0.100	2	3	11	17	0	3
ALL_ESDTS		AE_MoOcn	3	0	2	2	0.100	0.100	2	3	12	24	0	0

Figure 4.6.1-118. Granule Summary Report Layout

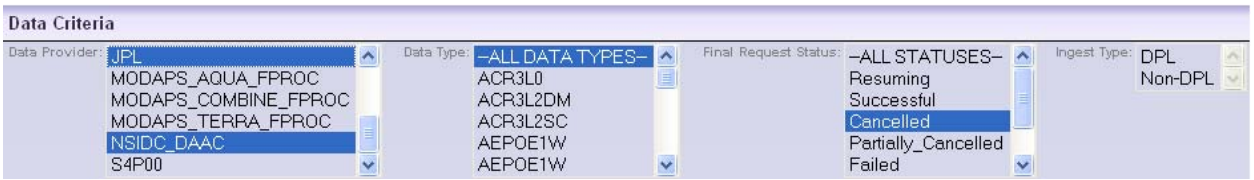
4.6.1.26.4 Generating the report

To generate a report, take the following steps:

1. Select the type of report you wish to see from the navigation panel. For this example, select Detailed, Request Summary, or Granule Summary. Volume Group History is covered in a separate section.

2. The report page will be loaded. Select the date/time range. If you leave the time fields at 0:00, it will be assumed that this will cover the entire 24-hour period:

3. Select the data criteria for the search. Several values of each criterion may be selected to narrow the search, but at least one field must selected (hold down the Ctrl key to select multiple items):



4. Click the green button to submit the query and generate the report.

5. A message will appear, alerting the operator that the system is processing the request. This may take a few seconds.
6. The report will be displayed on the bottom of the page (see Figure 4.61-116, Figure 4.6.1-117, and Figure 4.6.1-118 for report output examples).
7. If you want to save the report, use your browser's "Save Page As…" function to save the page in HTML format.

4.6.1.26.5 Volume Groups History Page

The Volume Groups History page displays the history of the configuration changes that have occurred to volume groups, as shown in Figure 4.6.1-119. To view the report for a particular Volume Group, select the Volume Group from the box at the top of the page and click the "retrieve" button. Once this button is clicked, the page will automatically refresh with the report specific to that Volume Group (the page is initially blank when first loaded). Table 4.6.1-35 contains the volume groups history page field descriptions.

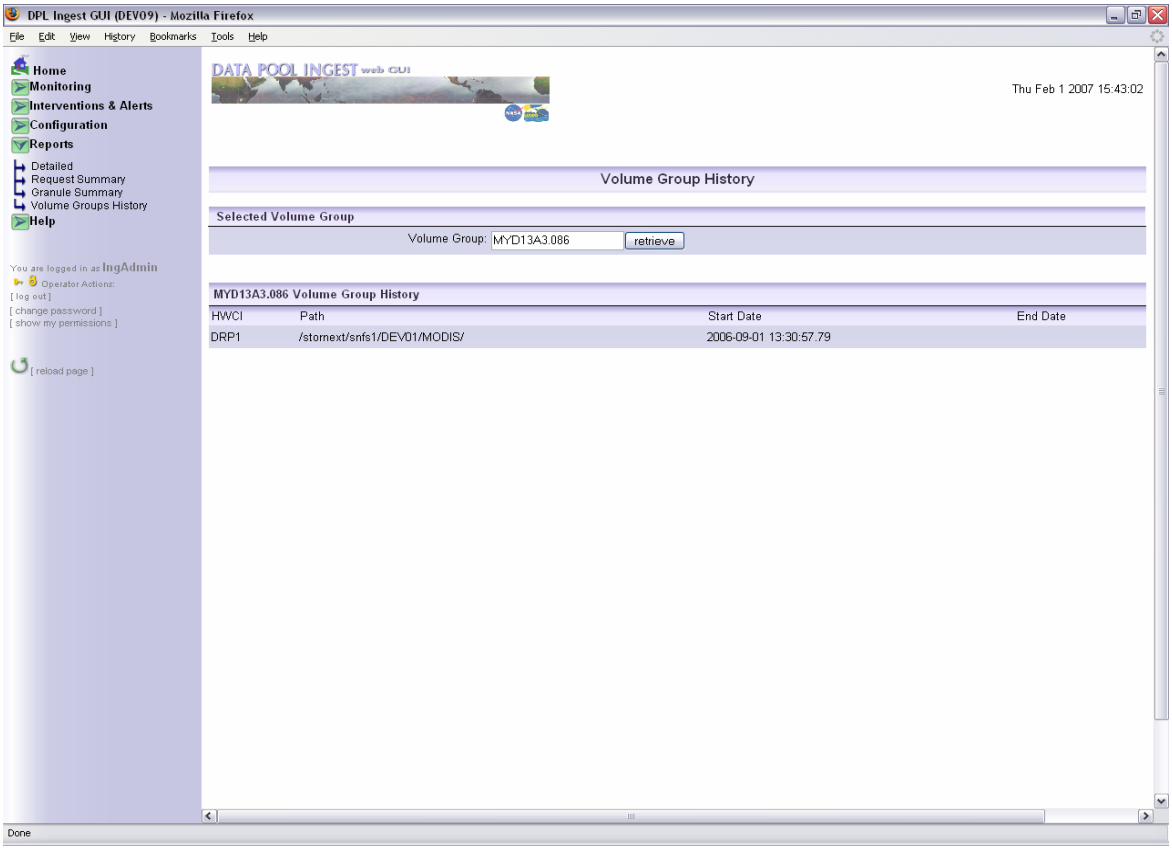


Figure 4.6.1-119. Volume Groups History

This page features a search-as-you-type input. Simply type in any characters of the Volume Group for which you want to see the history. A list of suggestions automatically pops up, and from there you may select a suitable Volume Group. Figure 4.6.1-120 shows how you can type the first three characters of a desired Volume Group and get suggestions for your search.

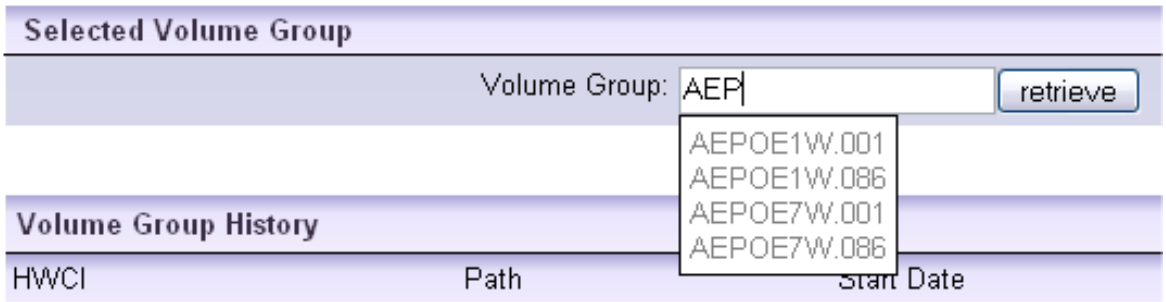


Figure 4.6.1-120. Volume Group History Page: Search-As-You-Type Input

The following figure shows how you can type any sequential characters of the Volume Group and get suggestions for your search (Figure 4.6.1-121).

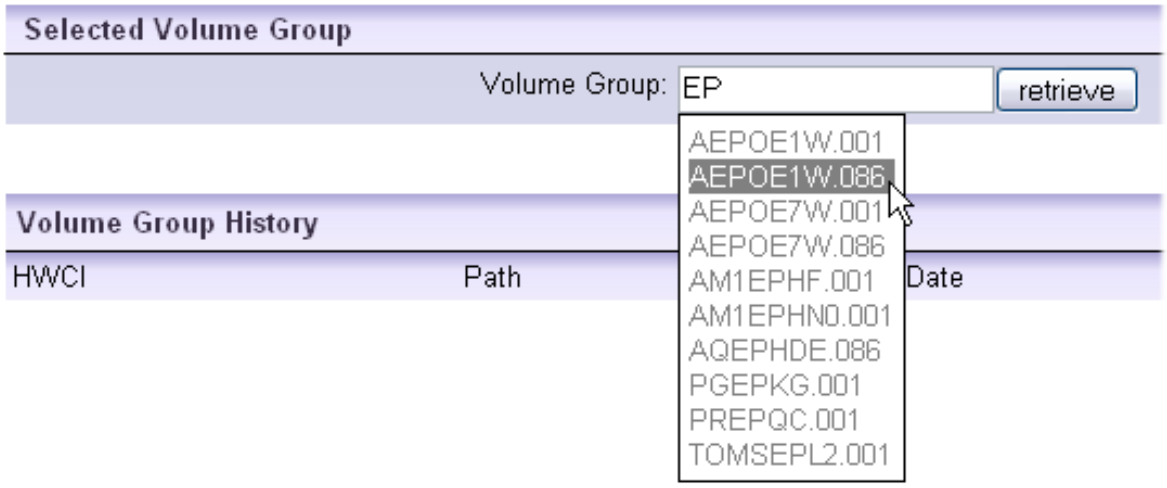


Figure 4.6.1-121. Search-As-You-Type (Example 2)

Table 4.6.1-35. Volume Groups History Page Field Description

Field Name	Entry	Description
Volume Group (Data Type. Version ID + Volume Group Type Suffix)	Required	The name of the Volume Group for which the history report will be generated.
Path	System Generated	In reverse chronological order, the fully qualified Unix paths to where data has been stored for the specified data type. The current path is listed first.
HWCI	System Generated	The label of the Archive silo group instance that was responsible for storing data of the specified data type.
Start Date	System Generated	The date on which this configuration became active for the listed data type.
End Date	System Generated	The date on which this configuration was superseded by new configuration information. If blank, this row reflects the current configuration for the volume group. If any row has a blank end date, the volume group is closed, and no further data is accepted for that volume group.

4.6.1.27 Help Pages and Context Help

4.6.1.27.1 Help Pages

The last section found in the navigation bar, the “Help” section, contains information to which the operator can have ready access while operating the Data Pool Ingest GUI. Included in this section are three pages: General Topics, Context Help, and About, as shown in Figure 4.6.1-122.

Figure 4.6.1-122. Help Navigation Section

4.6.1.27.2 General Topics

This page includes an index of topics that should be useful to the operator in understanding how the GUI and Data Pool Ingest system work, and is shown in Figure 4.6.1-123. The operator can press on the name of a section from the index in order to jump to the section text.

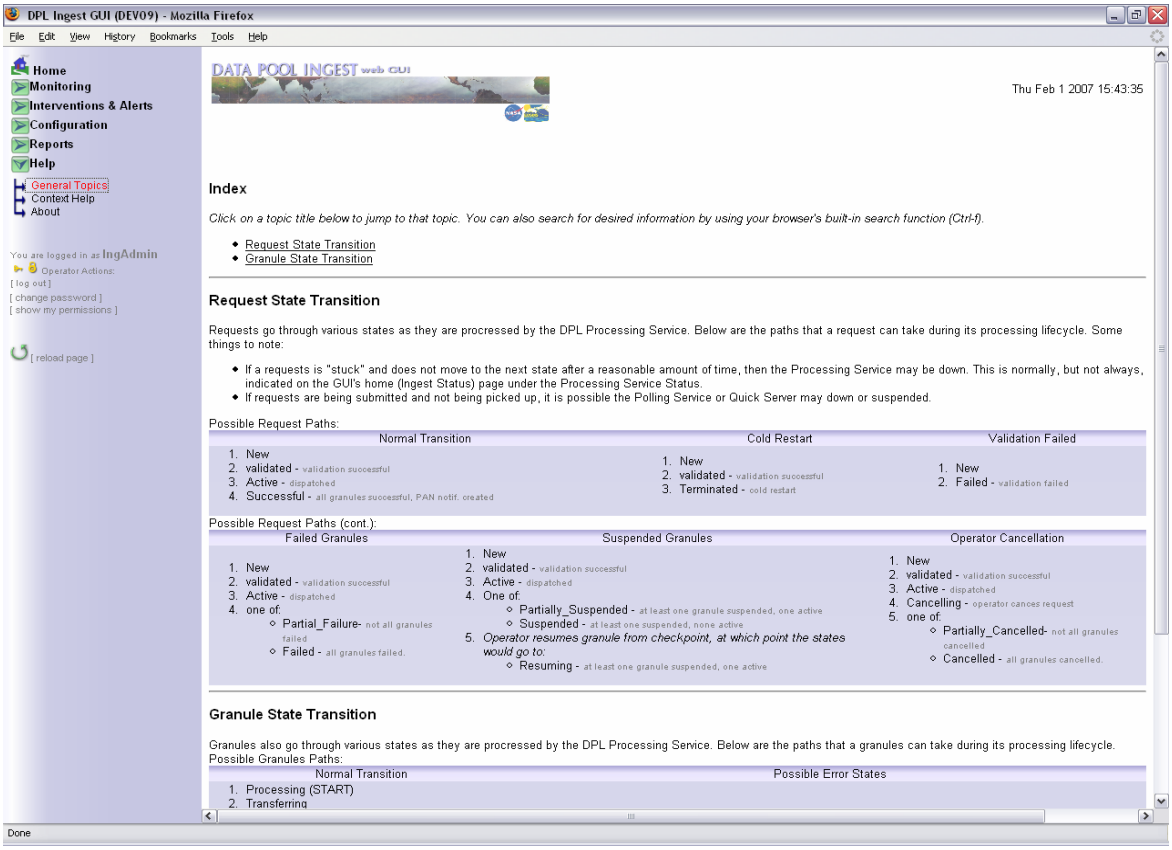


Figure 4.6.1-123. Help – General Topics

4.6.1.27.3 Context Help

This page explains another tool provided by the operators to assist them in effectively using the Data Pool Ingest GUI. For more information about the details of this help page, see Section 4.6.1.27.5.

4.6.1.27.4 About

This page provides recommendations for software to use the GUI and a brief description of the development of the GUI.

4.6.1.27.5 Context Help

Throughout most pages on this GUI, you can get relevant, context-sensitive help by hovering your mouse (no need to click) over the **[help]** text. In many cases this is to explain the significance of a parameter or to provide instructions on what to do on the page. A blue pop-over

window will appear and disappears as soon as the mouse is moved away, as shown in Figure 4.61-124, Figure 4.6.1-125, and Figure 4.6.1-126.

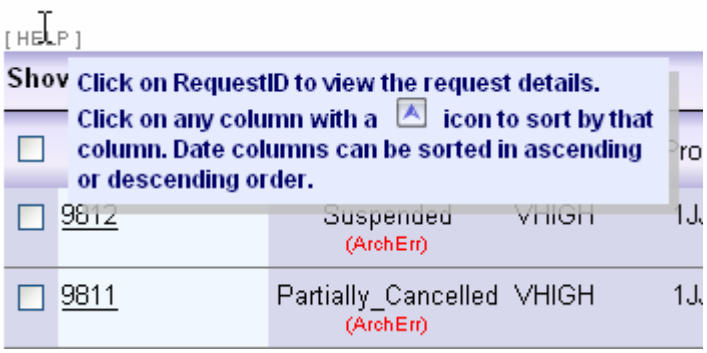


Figure 4.6.1-124. Request Detail Page – Instructions on How to View Request Details

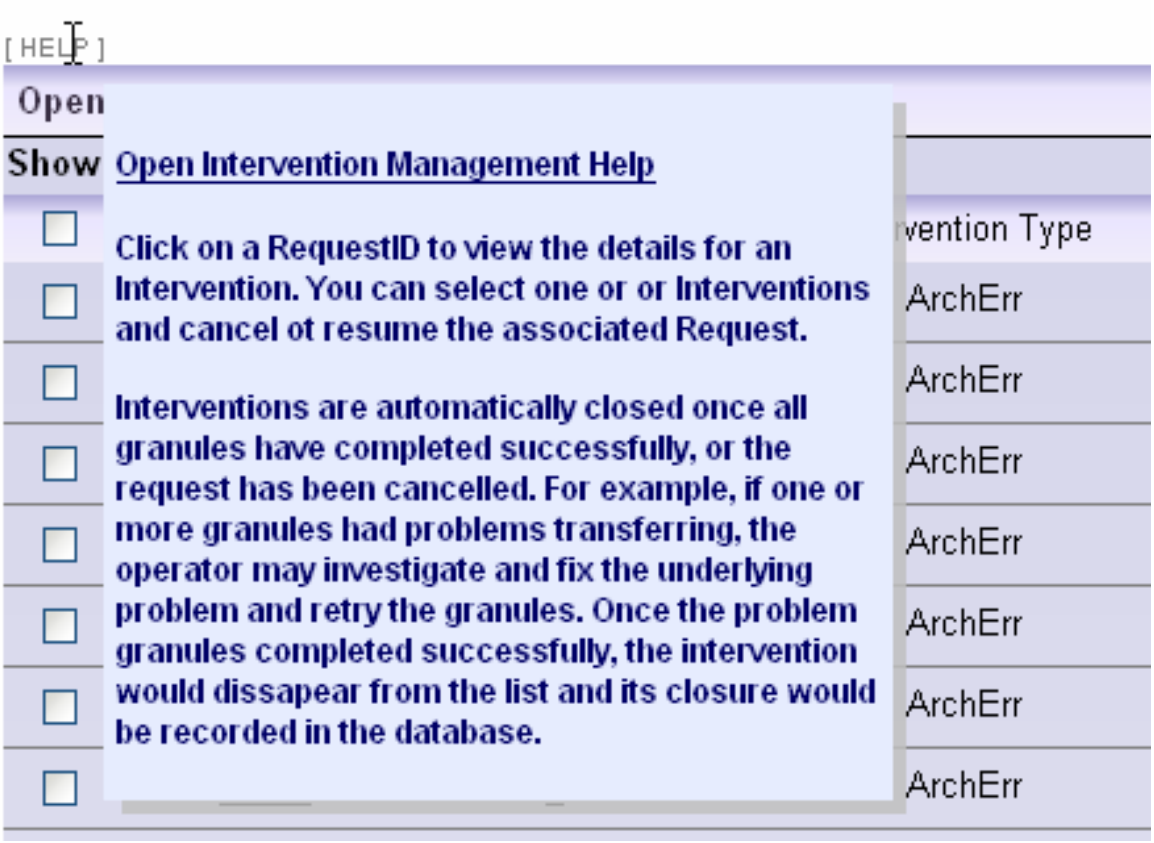


Figure 4.6.1-125. Intervention Monitoring Page – Assistance for Managing Interventions

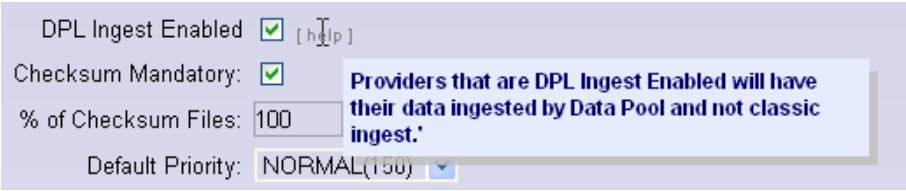


Figure 4.6.1-126. Provider Detail Configuration Page – Parameter Explanation

4.6.1.28 Browser Requirements

The specific browser requirements are stated elsewhere in this document. The recommended browsers are the only ones that should be used, as other browsers may not handle rendering and JavaScript correctly (for example, IE handles some JavaScript differently than Firefox).

JavaScript must also be enabled to run the application. In most cases, the cache size is automatically set and should be sufficient. Java is not required and need not be enabled in the browser to run the DPL Ingest GUI.

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