

4.7.26 Migration Stage Error Support Tool

The Migration Stage Error Support Tool provides the DAAC Operations Staff with a command-line interface to set granules that failed staging to their pre-staged state for retry by the migration scripts. If a granule file is identified to be missing or corrupt, the tool provides the ability to look for the backup copy of the file and update the migration database tables to migrate from the backup copy of the file instead of from the primary copy.

4.7.26.1 Using the Migration Stage Error Support Tool

The Migration Stage Error Support Tool is started by entering the following command from the /usr/ecs/<mode>/CUSTOM/utilities directory:

- **EcMgStageError.pl --mode <mode> [--file <filepath> | --gran <list of ecs ids>] [--backup]**

Table 4.7.26-1 shows the parameters for the Migration Stage Error Support Tool.

Table 4.7.26-1. Command Line Parameters of the Migration Stage Error Support Tool

| Parameter Name | Description |
|----------------|---|
| --mode | Mandatory. Specifies the mode of operation. It must be a valid, existing mode with a format of OPS or TS[1-4] or DEV0[1-9]. |
| --file | Optional. Specifies the absolute path of a file containing a list of ECS ids which failed staging. |
| --gran | Optional. Specifies a list of ECS ids to process on the command line. All the ids must be enclosed in double quotes and the ids must be separated by a single white space within the double quotes. |
| --backup | Optional. Specifies that prior to setting the granules that failed staging to their pre-stage states, look for the backup copy of the granule and update the migration database tables to migrate from the backup copy of the granule files instead of from the primary copy. |
| --help | Optional. Prints out the help page for the tool. |

There is no required ordered sequence of the parameters. The --mode parameter is mandatory. The --file and --gran parameters must not be used together. When using the --help parameter, the mode need not be specified.

4.7.26.2 Migration Stage Error Support Tool Examples

Below are examples for invoking this tool:

1. EcMgStageError.pl --mode TS1

The tool will go to the DsMgError table and identify all granule files that failed staging (i.e. all granules where ErrorCode = "STAGEFAILED"). For each granule which failed staging, the granule state in DsMgGranuleState will be set to its pre-staged state to be retried by the

migration staging script. The error in DsMgError will also be cleared. If the media State in DsMgMediaState is a terminal state (U or C) for the media associated with the granule, the tool will reset the media State to A.

2. **EcMgStageError.pl --mode TS1 --backup**

The tool will go to the DsMgError table and identify all granule files that failed staging. For each file processed it will first look for the backup copy and update the migration tables to migrate from the backup copy of the file instead of from the primary copy. The tool will then set the granule and file to pre-staged state to be retried by the migration staging script. The error in DsMgError will also be cleared.

3. **EcMgStageError.pl --mode TS1 --file /home/user/ecsids.txt**

Instead of going to the DsMgError table to identify the granules that failed staging, the tool will process the granules in the given input file. The behavior is the same as example number one.

4. **EcMgStageError.pl --mode TS1 --file /home/user/ecsids.txt --backup**

Instead of going to the DsMgError table to identify the granules that failed staging, the tool will process the granules in the given input file. The behavior is the same as example number two.

5. **EcMgStageError.pl --mode TS1 --gran "1234 3456 7867"**

Instead of going to the DsMgError table to identify the granules that failed staging, the tool will process the granules given on the command-line. The behavior is the same as example number one.

6. **EcMgStageError.pl --mode TS1 --gran "1234 3456 7867" --backup**

Instead of going to the DsMgError table to identify the granules that failed staging, the tool will process the granules given on the command-line. The behavior is the same as example number two.

7. **EcMgStageError.pl --help**

The tool will print the help page to standard out.

4.7.26.3 Required Operating Environment

The Migration Stage Error Support Tool will run on the same host as the migration scripts.

4.7.26.4 Interfaces and Data Types

Table 4.7.26-2 lists the supporting products that this tool depends upon in order to function properly.

Table 4.7.26-2. Interface Protocols

| Product Dependency | Protocols Used | Comments |
|--------------------|----------------|---|
| Inventory database | SQL | Via SQL server machines. |
| Perl module | Perl | Module to connect to the database and print out the nicely formatted help page. |

4.7.26.5 Configuration File Format – EcMgOnlineArchive.properties

This tool uses the same configuration file as the migration scripts use. This configuration file contains vital details about how to connect to the Sybase server. Without this file, the tool can not run. Table 4.7.26-3 describes the configuration parameters in the EcMgOnlineArchive.properties file which are applicable to the Migration Stage Error Support Tool.

Table 4.7.26-3. Configuration Parameters

| Parameter Name | Description |
|-------------------|---|
| DB_USER | The user name for the Sybase connection. |
| DB_SERVER | The name of the Sybase SQL server. |
| DB_PWSEED | Password seed used for connecting to the Sybase database. |
| DB_AIM | The AIM inventory database name. |
| DB_RETRY_INTERVAL | The number of seconds to wait for a database retry. |
| DB_RETRY_COUNT | The number of retries for a failed database execution. |
| SNMS_HOST | The host where the StorNext Quick Server resides. |
| SNMS_PORT | The port number on which the StorNext Quick Server listens. |

4.7.26.6 Special Constraints

The Migration Stage Error Support Tool should be executed only while the migration scripts are not running. Running the Migration Stage Error Support Tool concurrently with the migration scripts may cause unexpected results since it is possible for the granule, file and media state to be altered by the migration scripts.

The Migration Stage Error Support Tool runs only if the AIM databases are available.

It is very important to not interrupt the tool when the --backup parameter is used. Doing so may potentially fill up the archive cache. The --backup parameter will set the specified granules that failed staging to use the backup copy of the granule, set the granules to their prestage state, and flush the previously staged copy out of the archive cache. Interruption prior to flushing the granules will cause the granules to remain in the cache.

4.7.26.7 Outputs

Outputs will be printed to standard out. A simple message stating the number of STAGEFAILED errors processed successfully and unsuccessfully will be printed. The DAAC Operations Staff should investigate all errors processed unsuccessfully by looking at the log file.

4.7.26.8 Event and Error Messages

No error messages will be displayed on standard out. Error messages will be logged.

4.7.26.9 Logs

The tool logs messages in the /usr/ecs/<mode>/CUSTOM/logs/EcMgStageError.log file.

4.7.26.10 Recovery

The tool does not support automatic recovery from an interrupted run. Manual intervention will be required to recover from an interrupted run (contact Riverdale for assistance if needed).

If the --backup parameter is used, it is very important for the staff to not interrupt the run. Doing so could cause some granules in the migration database tables to be pointing to the backup copy of the file, but the original file will not be flushed from the cache. If this scenario does occur for any reason, manual intervention is required to identify the specific file(s) to flush and the StorNext administrator must flush the file(s) from the archive cache.