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EOSDIS Maintenance and Development Project

Training Material for the EMD Project
Volume 9: Data Distribution

April 2004

Raytheon Company
Upper Marlboro, Maryland

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Volume 9: Data Distribution

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Preface

This document is a formal contract deliverable. It requires Government review and approval within 45 business days. Changes to this document will be made by document change notice (DCN) or by complete revision.

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Abstract

This is Volume 9 of a series of lessons containing the training material for the Earth Observing System Data and Information System (EOSDIS) Maintenance and Development (EMD) Project. This lesson provides a detailed description of the process required for data distribution.

***Keywords**:* training, instructional design, course objective, distribution, data distribution, DDIST, Product Distribution System, PDS, Order Management Subsystem, OMS, Order Manager, Release 7, Synergy IV.

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Introduction

Identification

Training Material Volume 9 is part of Contract Data Requirements List (CDRL) Item 23, which is a required deliverable under the Earth Observing System Data and Information System (EOSDIS) Maintenance and Development (EMD) Contract (NAS5-03098).

Scope

Training Material Volume 9 describes the process and procedures for data distribution. This lesson is designed to provide the operations staff with sufficient knowledge and information to satisfy all lesson objectives.

Purpose

The purpose of this Student Guide is to provide a detailed course of instruction that forms the basis for understanding data distribution. Lesson objectives are developed and will be used to guide the flow of instruction for this lesson. The lesson objectives will serve as the basis for verifying that all lesson topics are contained within this Student Guide and slide presentation material.

Status and Schedule

This lesson module provides detailed information about training for the current baseline of the system. Revisions are submitted as needed.

Organization

This document is organized as follows:

Introduction:	The Introduction presents the document identification, scope, purpose, and organization.
Related Documentation:	Related Documentation identifies parent, applicable and information documents associated with this document.
Student Guide:	The Student Guide identifies the core elements of this lesson. All Lesson Objectives and associated topics are included.
Slide Presentation:	Slide Presentation is reserved for all slides used by the instructor during the presentation of this lesson.

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Related Documentation

Parent Documents

The parent documents are the documents from which the EMD Training Material's scope and content are derived.

423-41-01	Goddard Space Flight Center, EOSDIS Core System (ECS) Statement of Work
423-46-03	EMD Task 101 Statement of Work For ECS SDPS Maintenance
423-46-02	Contract Data Requirements Document for EMD Task 101 ECS SDPS Maintenance

Applicable Documents

The following documents are referenced within this EMD Training Material, or are directly applicable, or contain policies or other directive matters that are binding upon the content of this document:

420-05-03	Goddard Space Flight Center, Earth Observing System (EOS) Performance Assurance Requirements for the EOSDIS Core System (ECS)
423-41-02	Goddard Space Flight Center, Functional and Performance Requirements Specification for the Earth Observing System Data and Information System (EOSDIS) Core System (ECS) (ECS F&PRS)
423-46-01	Goddard Space Flight Center, Functional and Performance Requirements Specification for the Earth Observing System Data and Information System (EOSDIS) Core System (ECS) Science Data Processing System (EMD F&PRS)

Information Documents

Information Documents Referenced

The following documents are referenced herein and amplify or clarify the information presented in this document. These documents are not binding on the content of the EMD Training Material.

609-EMD-001	Release 7 Operations Tools Manual for the EMD Project
611-EMD-001	Mission Operation Procedures for the EMD Project
910-TDA-022	Custom Code Configuration Parameters for ECS

Information Documents Not Referenced

The following documents, although not referenced herein and/or not directly applicable, do amplify or clarify the information presented in this document. These documents are not binding on the content of the EMD Training Material.

305-EMD-001	Release 7 Segment/Design Specification for the EMD Project
311-EMD-001	Release 7 Data Management Subsystem (DMS) Database Design and Database Schema Specifications for the EMD Project
311-EMD-002	Release 7 INGEST (INS) Database Design and Schema Specifications for the EMD Project
311-EMD-003	Release 7 Planning and Data Processing Subsystem Database Design and Schema Specifications for the EMD Project
311-EMD-004	Release 7 Science Data Server Database Design and Schema Specifications for the EMD Project
311-EMD-005	Release 7 Storage Management and Data Distribution Subsystems Database Design and Database Schema Specifications for the EMD Project
311-EMD-006	Release 7 Subscription Server Database Design and Schema Specifications for the EMD Project
311-EMD-007	Release 7 Systems Management Subsystem Database Design and Schema Specifications for the EMD Project
311-EMD-008	Release 7 Registry Database Design and Schema Specifications for the EMD Project
311-EMD-009	Release 7 Product Distribution Subsystem (PDS) Database Design and Database Schema Specifications for the EMD Project
311-EMD-010	Release 7 NameServer Database Design and Schema Specifications for the EMD Project
311-EMD-011	Release 7 Order Manager Server Database Design and Schema Specifications for the EMD Project
311-EMD-012	Release 7 Spatial Subscription Server Database Design and Schema Specifications for the EMD Project
311-EMD-013	Release 7 Data Pool Database Design and Schema Specifications for the EMD Project
313-EMD-001	Release 7 ECS Internal Interface Control Document for the EMD Project
152-TP-001	ACRONYMS for the EOSDIS Core System (ECS) Project
152-TP-003	Glossary of Terms for the EOSDIS Core System (ECS) Project

Data Distribution Overview

Lesson Overview

This lesson will provide you with the complete process by which the ECS personnel perform data distribution, including hard media distribution operations using the Production Distribution System (PDS), and order management using the Order Manager (OM) graphical user interface (GUI). The processes described in the lesson apply to Distribution Technicians. The procedures involved in data distribution through the ECS Data Distribution (DDIST) Computer Software Configuration Item (CSCI) include such tasks as monitoring data distribution requests; changing the priority of a distribution request; canceling, suspending and/or resuming a distribution request; unloading/loading tape stackers. The procedures involved in OM GUI operation include such tasks as launching the OM GUI, responding to an open intervention, viewing distribution request information, viewing a completed intervention, and checking OM queue status. The procedures involved in PDS operation include such tasks as starting up PDS, shutting down PDS, monitoring/controlling product processing using PDS, monitoring/controlling order processing using PDSIS, and troubleshooting PDS problems.

Lesson Objectives

Overall Objective - The overall objective of the Data Distribution lesson is for personnel involved in maintenance and operation of the Earth Observing System Data and Information System (EOSDIS) Core System (ECS) to develop proficiency in the procedures that apply to data distribution.

Condition - The student will be given oral or written information and requirements for performing data distribution activities, access to the Data Server Subsystem, access to the PDS, access to the OM GUI, a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project.*

Standard - The student will perform data distribution activities in accordance with the prescribed procedures without error.

Specific Objective 1 - The student will describe the general functions and processes associated with data distribution (in the context of ECS DDIST, PDS, and OM GUI operations).

Condition - The student will be given written or oral questions concerning the general functions and processes associated with data distribution.

Standard - The student will state without error the general functions and processes associated with data distribution in accordance with the lesson content and the applicable procedures.

Specific Objective 2 - The student will perform the steps involved in logging in to ECS hosts.

Condition - The student will be given a statement of the requirements for logging in to ECS hosts, access to the Data Server Subsystem (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will access the command shell, set the DISPLAY environmental variable, and log in to the specified host using secure shell and the specified user ID.

Specific Objective 3 - The student will perform the steps involved in launching the Data Distribution Operator graphical user interface (GUI) and the Storage Management Control GUI.

Condition - The student will be given a statement of the requirements for launching the Data Distribution Operator and Storage Management Control GUIs, access to the Data Server Subsystem (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will log in to the appropriate host using secure shell, enter the command to start the Data Distribution Operator GUI in the specified mode, and enter the command to start the Storage Management Control GUI in the specified mode.

Specific Objective 4 - The student will perform the steps involved in monitoring/controlling data distribution requests, including configuring data distribution polling, filtering data distribution requests, changing the priority of distribution requests, suspending/resuming distribution requests, and canceling distribution requests.

Condition - The student will be given a statement of the requirements for monitoring/controlling data distribution requests, access to the previously launched Data Distribution Operator GUI in the Data Server Subsystem (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will monitor/control data distribution requests (including configuring data distribution polling, filtering requests, and changing the status of distribution requests as directed) and respond to questions concerning the current status of distribution requests.

Specific Objective 5 - The student will perform the steps involved in modifying an e-mail preamble applicable to data distribution.

Condition - The student will be given a statement of the requirements for modifying an e-mail preamble applicable to data distribution, access to the previously launched Data Distribution Operator GUI in the Data Server Subsystem (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will select the Preamble Editor tab of the Data Distribution Operator GUI, select the appropriate media type, select the appropriate preamble type, edit the preamble text, and save the edited preamble.

Specific Objective 6 - The student will perform the steps involved in configuring Storage Management polling functions.

Condition - The student will be given a statement of the requirements for configuring Storage Management polling functions, access to the previously launched Storage Management Control GUI in the Data Server Subsystem (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will select the appropriate option from the pull-down menu on the Storage Management Control GUI, set the Operator Notification Timer and/or Cache Statistics Timer to the appropriate polling states as directed, enter database polling rates as directed, set the error retry rate as directed, and apply the modifications.

Specific Objective 7 - The student will perform the steps involved in deleting files from cache.

Condition - The student will be given a statement of the requirements for deleting files from cache, access to the previously launched Storage Management Control GUI in the Data Server Subsystem (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will select the Cache Stats. tab on the Storage Management Control GUI, select the cache containing the files to be deleted, select the file(s) to be deleted from the cache, and mark the file(s) for deletion.

Specific Objective 8 - The student will perform the steps involved in viewing storage management event log information.

Condition - The student will be given a statement of the requirements for viewing storage management event log information, access to the previously launched Storage Management Control GUI in the Data Server Subsystem (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will select the Event Logging tab of the Storage Management Control GUI, enter the defining characteristic(s) of the event, search the event log for events that meet the specified criteria, observe event information displayed in the Event Log table, and respond to questions concerning the event information displayed in the Event Log table.

Specific Objective 9 - The student will perform the steps involved in monitoring storage management server operations.

Condition - The student will be given a statement of the requirements for monitoring storage management server operations, access to the Data Server Subsystem (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will monitor storage management servers (including filtering requests) and respond to questions concerning the current status of storage management requests.

Specific Objective 10 - The student will perform the steps involved in launching the Order Manager (OM) GUI.

Condition - The student will be given a statement of the requirements for launching the OM GUI, access to ECS hosts (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will log in to an appropriate host using secure shell, enter the command to start the Netscape browser, enter the URL to access the OM GUI in the specified mode, and enter the appropriate user name and password in the security dialogue box.

Specific Objective 11 - The student will perform the steps involved in viewing open intervention information on the OM GUI.

Condition - The student will be given a statement of the requirements for viewing open intervention information on the OM GUI, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to select the Open Interventions link and the Open Intervention Detail page for a specific open intervention and will respond to questions concerning the intervention.

Specific Objective 12 - The student will perform the steps involved in responding to an open intervention using the OM GUI.

Condition - The student will be given a statement of the requirements for responding to an open intervention using the OM GUI, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to select the Open Interventions link, select the specified intervention, assign self to work on the intervention, select the appropriate attributes for the intervention, apply the attributes, and confirm the disposition of the intervention.

Specific Objective 13 - The student will perform the steps involved in monitoring and controlling distribution requests on the OM GUI.

Condition - The student will be given a statement of the requirements for monitoring and controlling distribution request information on the OM GUI, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to select the Distribution Requests link and respond to questions concerning distribution request status, change the priority of a distribution request (if applicable), suspend, resume, cancel, or resubmit a distribution request (if applicable), view open intervention information (if applicable), edit ftp push parameters (if applicable), view operator alerts (if applicable), view to staging requests (if applicable), and/or view ftp push distribution requests (if applicable).

Specific Objective 14 - The student will perform the steps involved in changing the priority of a distribution request using the OM GUI.

Condition - The student will be given a statement of the requirements for changing the priority of a distribution request using the OM GUI, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to select the priority from the option button in the Priority column of the row associated with the specified request and apply the selected priority.

Specific Objective 15 - The student will perform the steps involved in suspending, resuming, canceling, or resubmitting a distribution request using the OM GUI.

Condition - The student will be given a statement of the requirements for suspending, resuming, canceling, or resubmitting a distribution request using the OM GUI, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to click on the appropriate button in the Action column of the row associated with the request, respond to the applicable dialogue box(es), initiate an intervention to resubmit the specified request (if resubmitting a request), specify the

appropriate attributes of the intervention as specified in the requirements (if resubmitting a request), and confirm the disposition of the intervention (if resubmitting a request).

Specific Objective 16 - The student will perform the steps involved in editing ftp push parameters.

Condition - The student will be given a statement of the requirements for editing ftp push parameters, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to select the applicable Request ID in the Distribution Requests table (if necessary), select the Edit FtpPush Parameters button on the Distribution Request Detail page (if necessary), enter appropriate values in the text boxes (as necessary), and select the applicable change button.

Specific Objective 17 - The student will perform the steps involved in viewing operator alerts on the OM GUI.

Condition - The student will be given a statement of the requirements for viewing operator alerts on the OM GUI, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to select the Operator Alerts link, respond to questions concerning specific alerts as displayed on the Operator Alerts page, select the corresponding details link in the Alert Info column, and respond to questions concerning alert details as displayed on the detail page.

Specific Objective 18 - The student will perform the steps involved in viewing a completed intervention using the OM GUI.

Condition - The student will be given a statement of the requirements for viewing a completed intervention using the OM GUI, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to select the Request Management link, select the Completed Interventions link, and respond to questions concerning a specified completed intervention as displayed on the Completed Interventions page.

Specific Objective 19 - The student will perform the steps involved in viewing and responding to suspended ftp push distribution destinations using the OM GUI.

Condition - The student will be given a statement of the requirements for viewing and responding to suspended ftp push distribution destinations using the OM GUI, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to select the FtpPush Monitor link, select the Suspended Destinations link, respond to questions concerning the information displayed on the Suspended Destinations page, select the Resume button to resume a suspended destination, either enter the destination name (for a destination to be suspended) in the Destination Name text box or type the host name in the FTP Node text box, and select the Suspend button to suspend an active destination.

Specific Objective 20 - The student will perform the steps involved in checking and modifying OM queue status using the OM GUI.

Condition - The student will be given a statement of the requirements for checking and modifying OM queue status using the OM GUI, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to select the **OM Status Pages** link, select the **OM Queue Status** link, respond to questions concerning OM queue status, select the appropriate state from the correct Change State option button as directed, and apply the state change(s).

Specific Objective 21 - The student will perform the steps involved in checking staging status.

Condition - The student will be given a statement of the requirements for checking staging status, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to select the **OM Status Pages** link, select the **Media Type** link or **FTP Push Destination** link as directed, and respond to questions concerning staging status as displayed on the staging status pages.

Specific Objective 22 - The student will perform the steps involved in checking and modifying OM configuration parameters.

Condition - The student will be given a statement of the requirements for checking and modifying OM configuration parameters, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to select the OM Configuration link, select the Aging Parameters, Server/Database, Media or FTP Push Policy link as directed, respond to questions concerning configuration parameters as displayed on the configuration parameters pages, enter the new value(s) in the text entry box(es) for the relevant parameter(s), and apply the new value(s).

Specific Objective 23 - The student will perform the steps involved in adding a destination to the frequently used destinations list.

Condition - The student will be given a statement of the requirements for adding a destination to the frequently used destinations list, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to select the OM Configuration link, select the FTP Push Policy link, select the Add a Destination button, enter value(s) in the text entry box(es) for the relevant attribute(s)/parameter(s) as directed, select the retry mode from the option button as directed, enter the applicable text in the Notes text box as directed, apply the values entered for the new destination, and confirm the new destination.

Specific Objective 24 - The student will perform the steps involved in viewing the OM GUI log.

Condition - The student will be given a statement of the requirements for viewing the OM GUI log, access to the previously launched OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will use the OM GUI to select the Logs link, select the OM GUI Log Viewer link, enter the appropriate number of lines to be displayed (as directed), initiate viewing of the log, and respond to questions concerning entries in the OM GUI log.

Specific Objective 25 - The student will perform the steps involved in preparing an input file for use with the OMS CI.

Condition - The student will be given a statement of the requirements for preparing an input file for use with the OMS CI, access to ECS hosts (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will access a terminal window logged in to the Data Pool Server host, enter the path to the “OMS/cgi-bin” directory, use text editor commands to create a file that specifies the relevant values (as directed) to be sent to the OMS.

Specific Objective 26 - The student will perform the steps involved in processing an input file specified for Synergy III exceptions.

Condition - The student will be given a statement of the requirements for processing an input file specified for Synergy III exceptions, access to ECS hosts (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will access a terminal window logged in to the Data Pool Server host, enter the path to the "OMS/cgi-bin" directory, enter the command to start the OMS CI in the specified mode with the appropriate options for the specified exceptions, and respond appropriately to menu prompts.

Specific Objective 27 - The student will perform the steps involved in configuring how long order-tracking information is kept in the OMS database.

Condition - The student will be given a statement of the requirements for configuring how long order-tracking information is kept in the OMS database, access to ECS hosts (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will access a terminal window logged in to the Data Pool Server host, enter the path to the "OMS/cgi-bin" directory, enter the command to start the OMS CI in the specified mode with the appropriate options for order-tracking information retention, and respond appropriately to menu prompts.

Specific Objective 28 - The student will perform the steps involved in switching between Synergy IV and Synergy III operations.

Condition - The student will be given a statement of the requirements for switching between Synergy IV and Synergy III operations, access to ECS hosts (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will access a terminal window logged in to the Data Pool Server host, enter the path to the "OMS/cgi-bin" directory, enter the command to start the OMS CI in the specified mode with the appropriate options for switching between Synergy IV and Synergy III operations, respond appropriately to menu prompts (but not actually switch between Synergy IV and Synergy III), and describe how to complete the switch between Synergy IV and Synergy III operations.

Specific Objective 29 - The student will perform the steps involved in modifying system parameters in database tables.

Condition - The student will be given a statement of the requirements for modifying system parameters in database tables, access to the Data Server Subsystem (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will log in to the appropriate host using secure shell and use the appropriate GUI, script, or interactive structured query language (isql) commands to modify the value assigned to the parameter in a database table.

Specific Objective 30 - The student will perform the steps involved in troubleshooting DDIST problems.

Condition - The student will be given a statement of the requirements for troubleshooting data distribution problems, access to the Data Server Subsystem (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will review the trouble symptoms, respond to requests that exceed the distribution request threshold (if applicable), check for an acquire failure, check appropriate log files (as necessary), take action to correct the problem(s), verify that distribution request processing has resumed, and respond to questions concerning the possible cause(s) of the problem.

Specific Objective 31 - The student will perform the steps involved in troubleshooting Order Manager (OM) GUI problems.

Condition - The student will be given a statement of the requirements for troubleshooting OM GUI problems, access to the OM GUI (through a workstation or X terminal), a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will review the trouble symptoms, Respond to Order Manager GUI user messages (as necessary), check the OM GUI log (as necessary), take action to correct the problem(s), verify that the problem(s) has (have) been corrected, and respond to questions concerning the possible cause(s) of the problem.

Specific Objective 32 - The student will perform the steps involved in starting up PDS.

Condition - The student will be given a statement of the requirements for starting up PDS, access to the PDS, a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will log on to the PDS Server interface computer, start the PDS Operator Interface (PDSOI), the PDSIS Operator Interface (PDSIS OI), the PDS Job Monitor, the PDS Quality Check GUI, the PDS Maintenance Module; in addition the student will log on

to the Rimage compact disk (CD) production system personal computer (PC) and start the Rimage CD Production Software.

Specific Objective 33 - The student will perform the steps involved in shutting down PDS.

Condition - The student will be given a statement of the requirements for shutting down PDS, access to the PDS, a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will exit from the PDS Maintenance Module, the PDS Job Monitor, the PDS Operator Interface (PDSOI), the Rimage CD Production Software (after all executing PDS jobs are completed or at a logical stopping point), and the PDS Quality Check GUI.

Specific Objective 34 - The student will perform the steps involved in monitoring/controlling product processing using PDS.

Condition - The student will be given a statement of the requirements for monitoring/controlling product processing using PDS, access to the PDS, a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will determine the status of jobs/units, activate jobs, respond to a status of QC-Hold [perform a quality-control (QC) check or verification], mark jobs "Complete" in PDSSA, and generate PDS production reports.

Specific Objective 35 - The student will perform the steps involved in monitoring/controlling order processing using the PDSIS OI.

Condition - The student will be given a statement of the requirements for monitoring/controlling order processing using the PDSIS OI, access to the PDSIS, a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will determine the status of orders/units, clear specified errors in PDSIS, mark jobs "Shipped" in PDSIS, and reject a specified unit or order.

Specific Objective 36 - The student will perform the steps involved in troubleshooting PDS problems.

Condition - The student will be given a statement of the requirements for troubleshooting PDS problems, access to the PDS, a copy of 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*, and a copy of 611-CD-610-002, *Mission Operation Procedures for the ECS Project*.

Standard - In accordance with the lesson content, the applicable procedure, and the statement of requirements the student will review the trouble symptoms, check the status of relevant hosts/servers (as necessary), check log files (as necessary), take action to correct the problem(s), and respond to questions concerning the possible cause(s) of the trouble symptoms.

Importance

This lesson applies to students who will be Distributed Active Archive Center (DAAC) Distribution Technicians. The lesson will provide them with the knowledge and skills needed when performing their assigned tasks. Those tasks include the following types of activities:

- Launching the Data Distribution Operator and Storage Management Control GUIs.
- Monitoring/controlling data distribution requests.
- Modifying packing list and e-mail preambles.
- Configuring Storage Management polling.
- Deleting files from cache.
- Viewing Storage Management Event Log information.
- Monitoring Storage Management server operations.
- Launching the Order Manager GUI.
- Monitoring/controlling Order Manager operations.
- Using the OMS configuration script (OMS CI)
- Modifying system parameters.
- Troubleshooting DDIST problems.
- Starting up PDS.
- Shutting down PDS.
- Monitoring/controlling product processing using PDS.
- Monitoring/controlling order processing using the PDSIS OI.
- Using the PDS and PDSIS Cleanup Managers.
- Troubleshooting PDS problems.

The lesson describes why and how the activities are performed. Consequently, the students will become aware of what tasks they will be performing on the job and how to accomplish those tasks.

Distribution Concepts

ECS Context

Data distribution for ECS is accomplished at the Distributed Active Archive Centers (DAACs). The people involved in data distribution activities are Distribution Technicians.

The ECS Context Diagram (Figure 1) shows the relationships among subsystems within the Science Data Processing component of ECS. The Order Manager Subsystem (OMS) manages all the orders for data arriving via either the V0 Gateway (GTWAY) or the Spatial Subscription Server (NSBRV). The OMS performs validation of the orders it receives and distributes each validated request to the appropriate ECS order-fulfillment service; i.e., either the Science Data Server (SDSRV) in the Data Server Subsystem (DSS) or the Product Distribution System (PDS). The DSS, which manages access to the data archive, is key to data distribution as well as several other functions. The Product Distribution System (PDS) supports the distribution of data on the following types of media:

- 8mm tape cartridges.
- Digital Linear Tape (DLT).
- Compact disk (CD).
- DVD (formerly “digital video disk” or “digital versatile disk” now referred to as just "DVD").

Of course, the context diagram (Figure 1) shows a generalized (high-level) view of ECS. The Order Manager Subsystem (OMS) architecture diagram (Figure 2) illustrates the relationship of the Order Manager with the various ECS subsystems on both the input (order-receiving) and output (order-dispatching) sides of order management. The Data Distribution (DDIST), Storage Management (STMGT), and Science Data Server (SDSRV), architecture diagrams (Figures 3 through 5 respectively) focus on the individual computer software configuration items (CSCIs) of the Data Server Subsystem and their relationships with each other and with other subsystems. The Product Distribution System Interface Server (PDSIS) and Product Distribution System Stand-Alone (PDSSA) architecture diagrams (Figures 6 and 7) focus on the physical media distribution processes and the relationship of physical media distribution with various ECS subsystems.

- OMS (Figure 2) is the subsystem within ECS that validates orders from users and dispatches validated requests to the ECS order-fulfillment services.
  - Receives orders from the V0 Gateway (GTWAY), the Machine-to-Machine Gateway, the Data Pool Web Access GUI, or the Spatial Subscription Server (NSBRV).

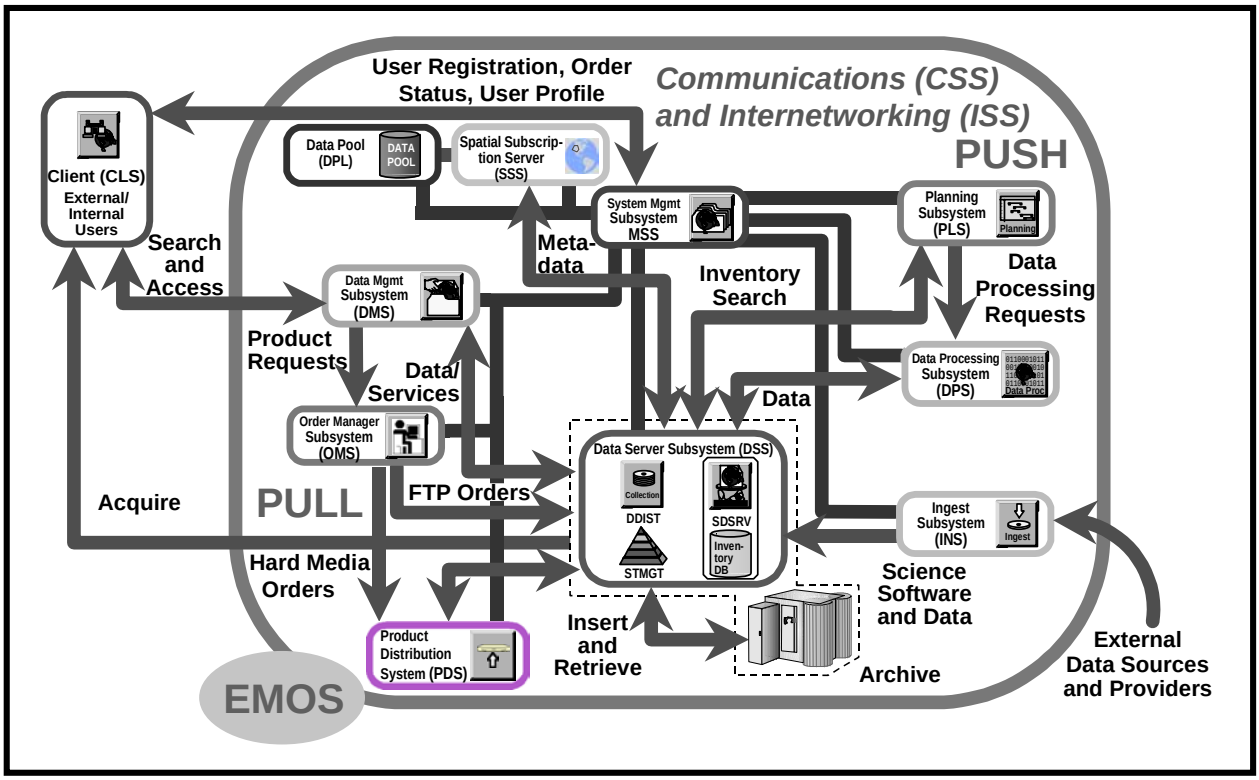

Figure 1. ECS Context Diagram

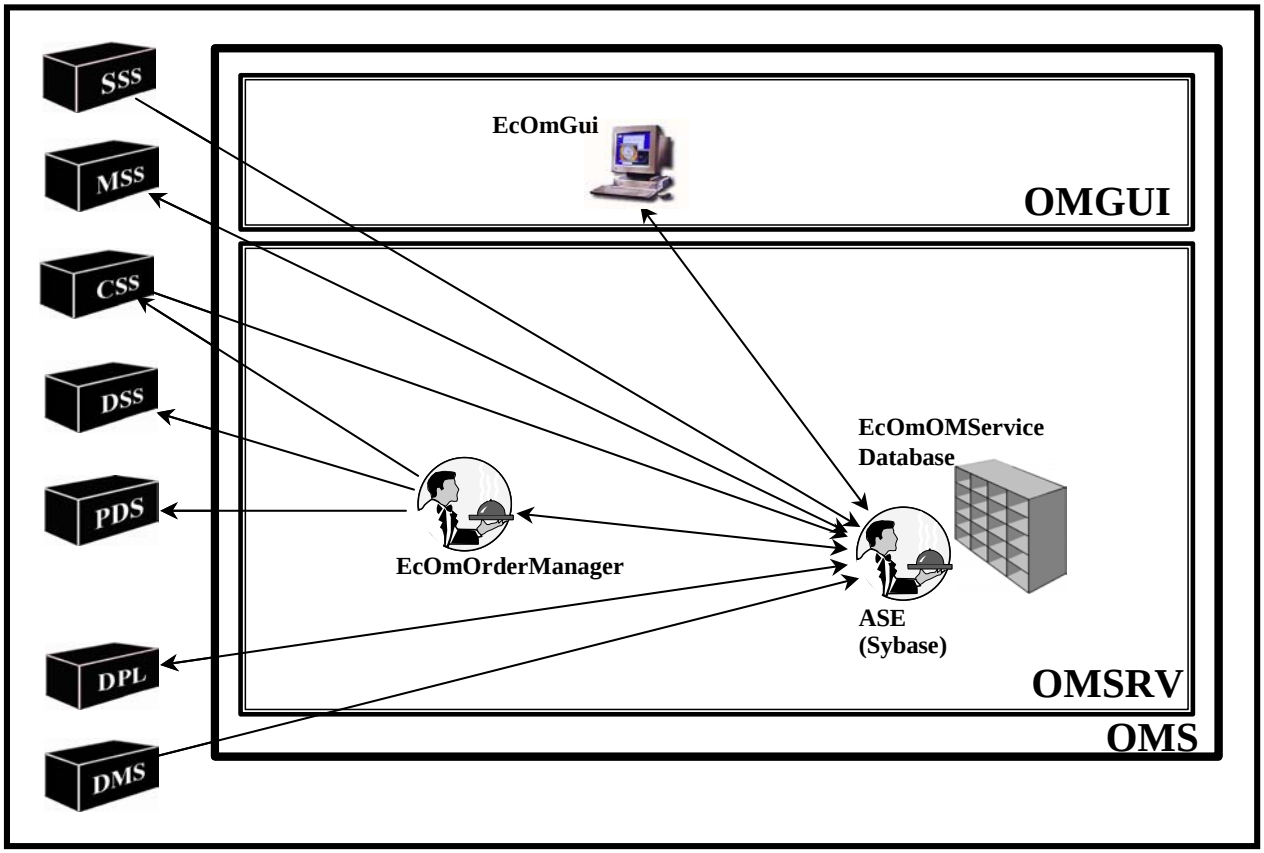

Figure 2. Order Manager Subsystem (OMS) Architecture

  - Performs validation of orders and creates "interventions" for invalid orders (puts the orders on hold).
  - Dispatches each validated request to the appropriate ECS order-fulfillment service; i.e., PDS, SDSRV, or ftp daemon.

- DDIST (Figure 3) is the part of the DSS that formats and distributes data to users.
  - Accepts requests from the SDSRV CSCI.
  - Directs the STMGT CSCI to transfer data.
- STMGT (Figure 4) is the part of the DSS that stores, manages, and retrieves data files on behalf of other parts of the Science Data Processing components (including Data Distribution).
  - Provides interfaces that allow Data Distribution to obtain access to disk space.
  - Provides for the copying of files into the archive for permanent storage.

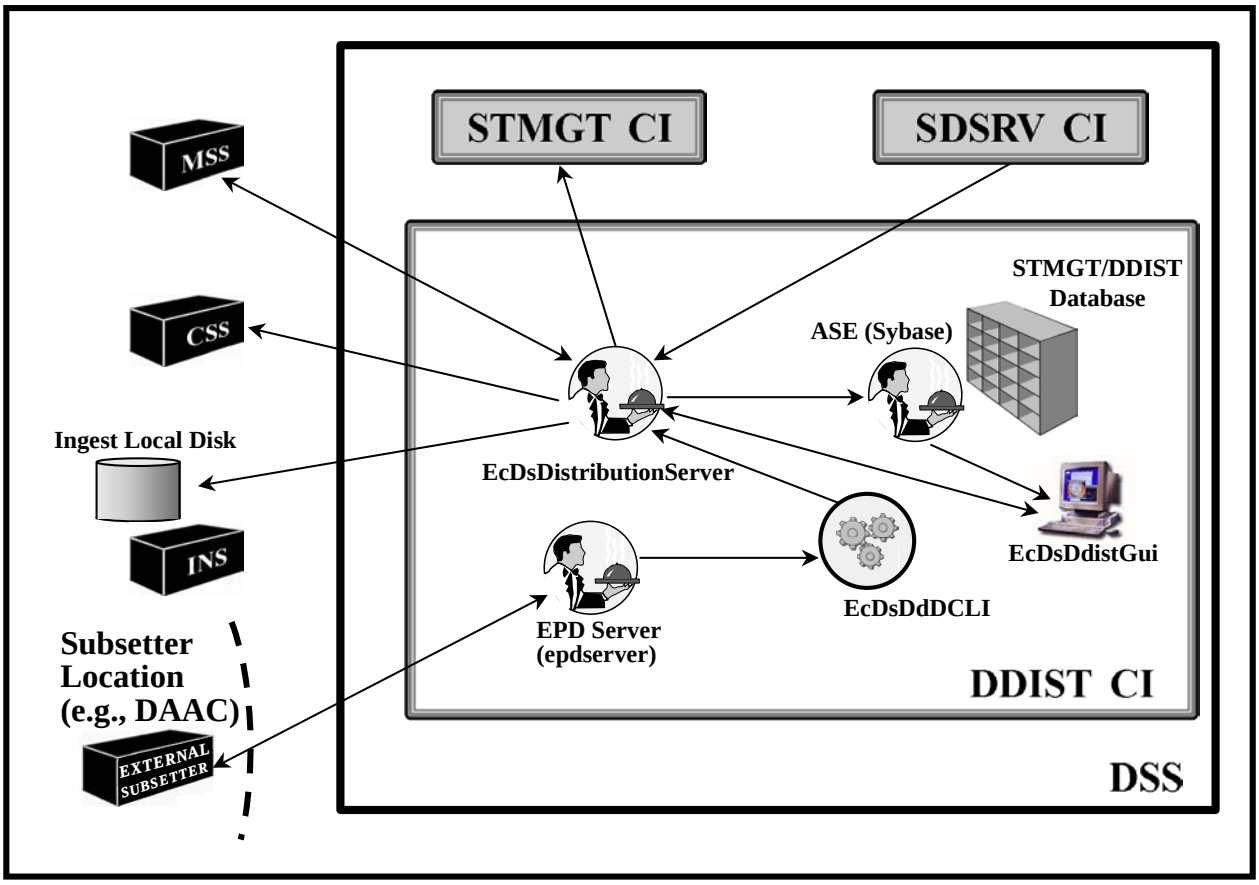

Figure 3. DSS Data Distribution (DDIST) CSCI Architecture

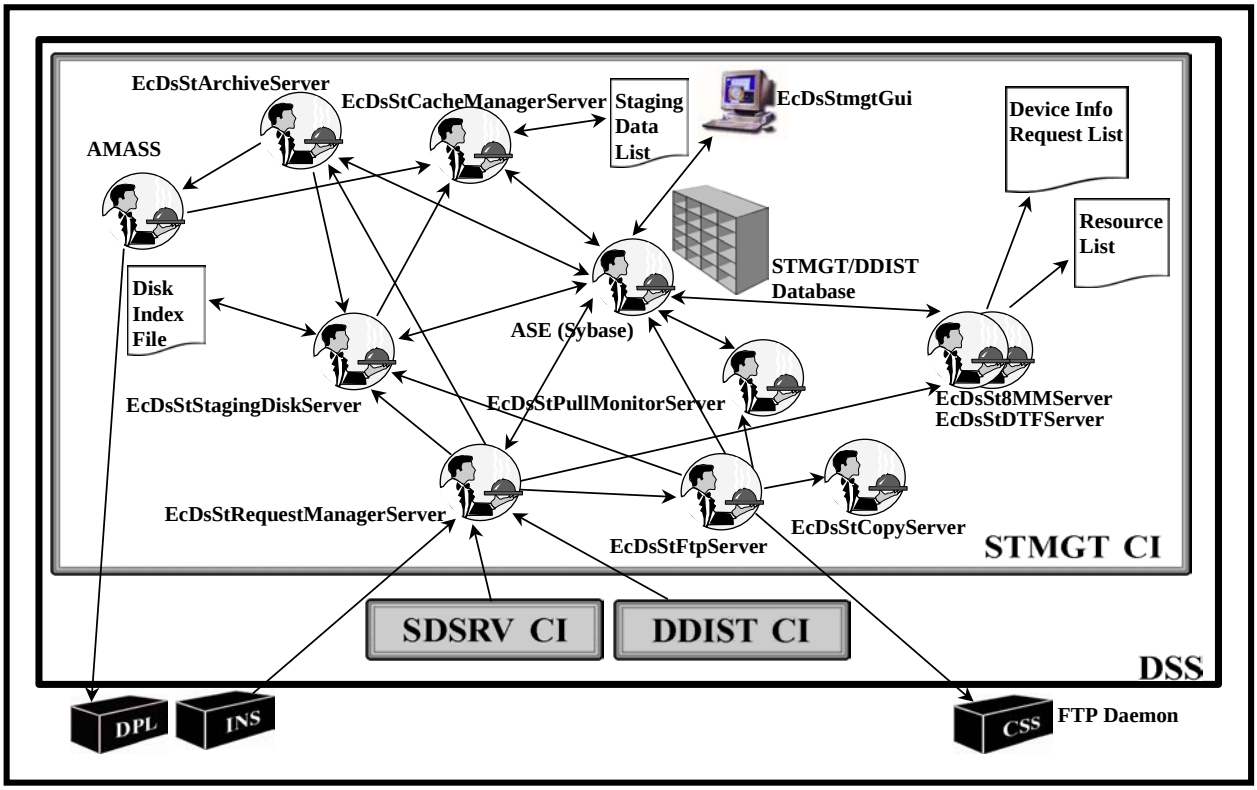

Figure 4. DSS Storage Management (STMGT) CSCI Architecture

- SDSRV (Figure 5) is the part of the DSS that manages and provides user access to collections of non-document Earth Science data.
  - Checks/verifies metadata.
  - Issues requests to the STMGT and DDIST CSCIs to perform storage and distribution services in support of the processing of service requests, such as insertion of data into the archive or distribution of data products from the archive.
- PDSIS (Figure 6) is the part of PDS that provides the interface between ECS and the PDSSA.
  - Accepts multiple digital product requests via Version 0 Gateway (V0GW) Object Description Language (ODL) files that are forwarded to PDSIS by the Order Manager Server.
  - Requests digital product data that are not in the Data Pool from ECS in product request parameter files that are sent via the Science Data Server (SDSRV) Command Line Interface (SCLI).
  - Receives digital product data from ECS via ftp push.

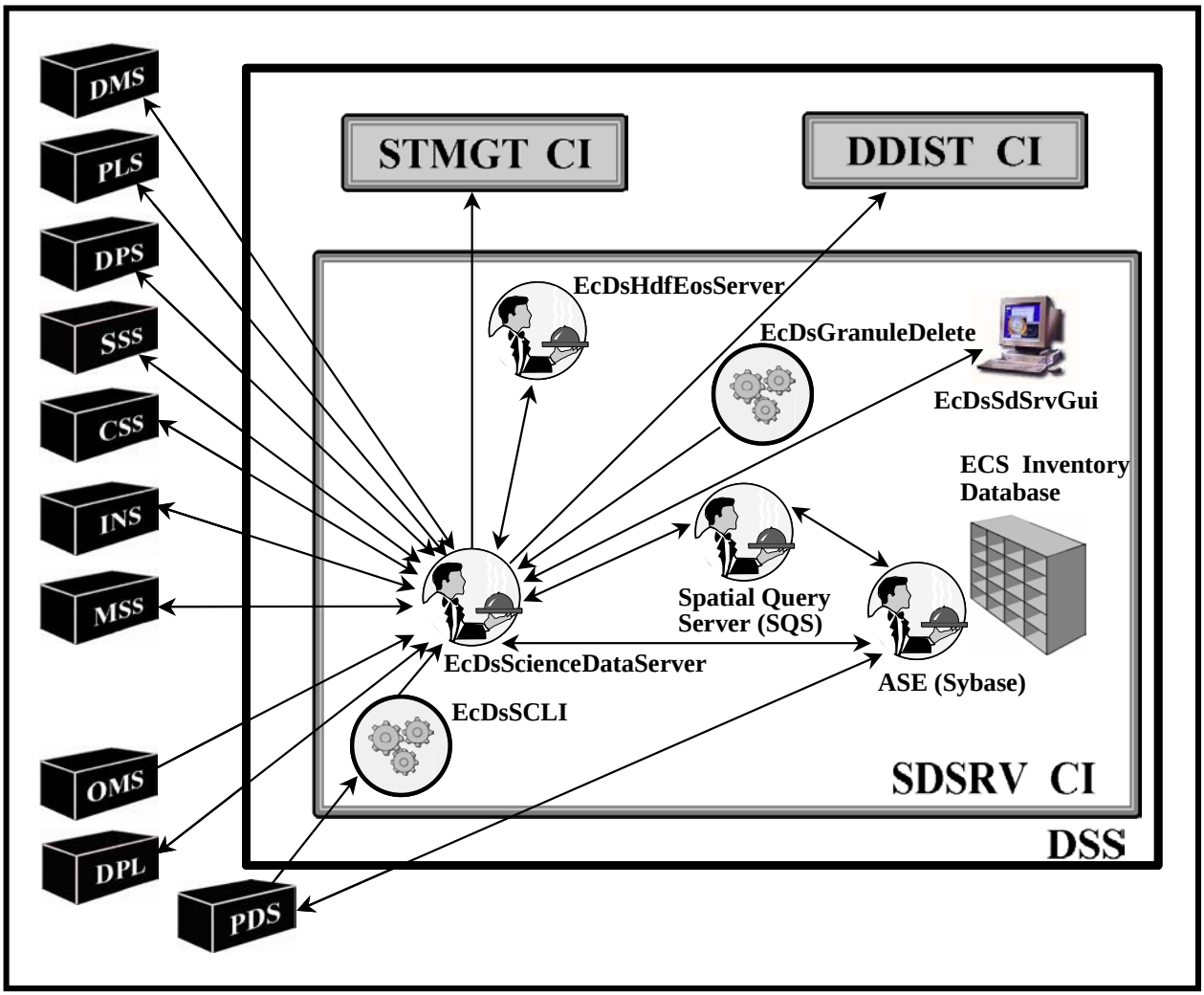

Figure 5. DSS Science Data Server (SDSRV) CSCI Architecture

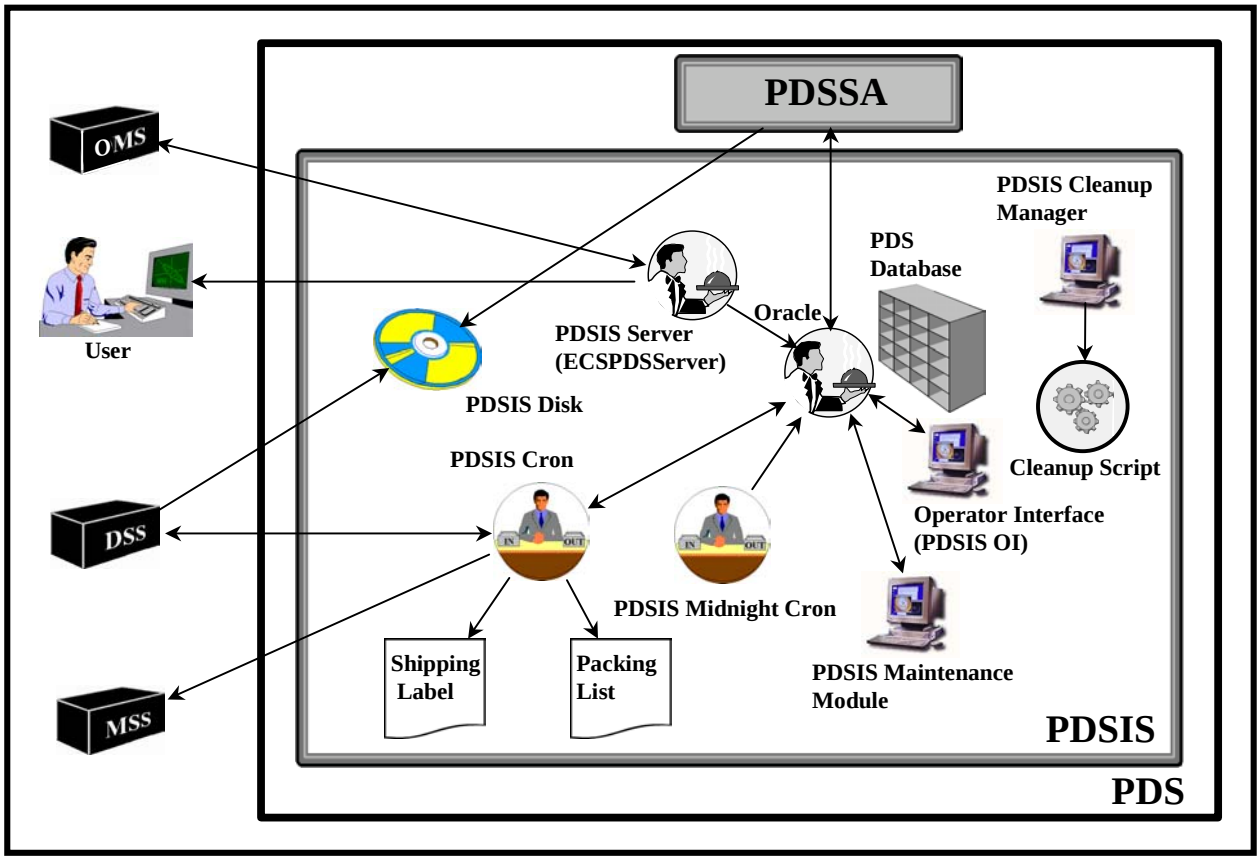

Figure 6. Product Distribution System Interface Server (PDSIS) Architecture

- Coordinates PDSSA processing to include detection and resolution of data transfer problems, data flow control, and order recovery.
- Generates packaging and shipping artifacts.
  - Packing lists.
  - Shipping labels.
  - E-mail distribution notices.

- PDSSA (Figure 7) is the part of PDS that transfers digital products to physical media.
  - Acquires digital products from either PDS disk or Data Pool disks, resolves and detects transfer problems, and re-pulls data
  - Transfers digital products to any of the following types of physical media:
    - CD-ROM.
    - DVD-ROM.

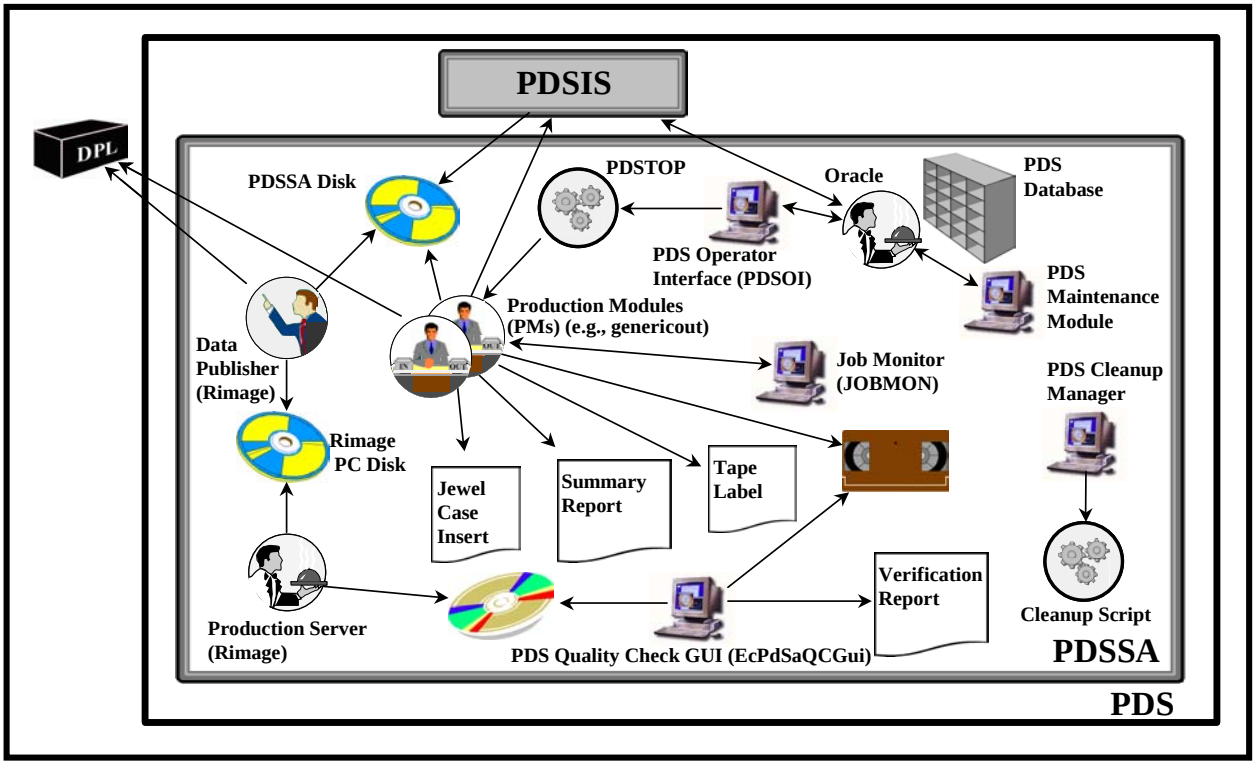

Figure 7. Product Distribution System Stand-Alone (PDSSA) Architecture

- High-density 8mm tape.
- DLT 7000c.

– Prints labels and inserts:

- Tape labels.
- CD-ROM and DVD-ROM labels (printed on the disks).
- Jewel-case inserts.

– Removes digital source files upon completion of a media product.

– Supports management of PDSSA data, job status, and reports.

– Supports management of PDSSA operations through operator interfaces.

Order Manager Subsystem (OMS)

The Order Manager Subsystem (OMS) performs the following functions:

- Manages all the orders arriving via either the V0 Gateway (GTWAY) the Machine-to-Machine Gateway, the Data Pool Web Access GUI, or the Spatial Subscription Server (NSBRV).
- Performs validation of the orders it receives before submitting the applicable requests to the order-fulfilling services.
- Dispatches each validated request to the appropriate ECS order-fulfillment service; e.g., PDS, SDSRV, or ftp daemon depending on whether the request is for physical media or electronic distribution.

The orders that arrive via the V0 Gateway are those that have been submitted by EDG, EOSDIS ClearingHOuse (ECHO), or ASTER Ground Data System (GDS) users.

- The OMS has no involvement with other types of orders (e.g., input data for Data Processing) that do not come from either the V0 Gateway the Machine-to-Machine Gateway, the Data Pool Web Access GUI, or the Spatial Subscription Server.

If a request does not pass validation, an “intervention” is created and the request is held until it has been reviewed by a DAAC technician.

- The intent is to catch many of the kinds of exceptions or errors that have caused requests to fail or be suspended during downstream request processing.
  - Such problems include very large orders and inappropriate media selections (given the size of the order).
- A DAAC technician reviews each intervention and either modifies the request (so it will be likely to succeed) or terminates the request (if it can’t be made to succeed).
  - In either case negative effects on downstream processing are less likely to occur.

If errors are encountered during processing or shipping, the DAAC technician can cancel or resubmit the affected request using the Order Manager GUI.

The OMS has the following three major components (as shown in Figure 2):

- Order Manager Server.
  - Server that processes data requests from ordering services; e.g., the V0 Gateway or the Spatial Subscription Server (NSBRV).
  - Dispatches the requests to order-fulfillment services; e.g., Science Data Server (SDSRV), Product Distribution System (PDS), or ftp daemon.

- Sybase ASE Server.
  - COTS software application that handles order management-related interactions (including insertion and retrieval of data) with the Order Management database.
- Order Manager (OM) GUI.
  - GUI that allows operators to view and modify requests that the Order Manager Server has placed on hold because they require operator intervention.
  - In addition, the GUI allows operators to suspend, resume, cancel, resubmit, or change the priority of requests.

The following scripts in the /usr/ecs/*MODE*/CUSTOM/WWW/OMS/cgi-bin directory on the Data Pool Server host implement the **OM GUI** (but are not invoked directly by Distribution personnel):

- EcCoLogin.pl
- EcCoShutDown.pl
- EcOmGuiAgingConfig.pl
- EcOmGuiAlerts.pl
- EcOmGuiCloseConfirmation.pl
- EcOmGuiCompletedInterv.pl
- EcOmGuiCompletedIntervDetail.pl
- EcOmGuiConfigureFtpPush.pl
- EcOmGuiConfigureFtpPushDetail.pl
- EcOmGuiConfirmActions.pl
- EcOmGuiDBConfig.pl
- EcOmGuiDistributionRequestDetail.pl
- EcOmGuiDistributionRequests.pl
- EcOmGuiDistributionRequestsFilters.pl
- EcOmGuiEcsOrder.pl
- EcOmGuiEditFtpPushParameters.pl
- EcOmGuiEnvPerl
- EcOmGuiError.pl
- EcOmGuiFtpPushDestinationsDetail.pl

- EcOmGuiFtpSuspendedDestinations.pl
- EcOmGuiHelp.pl
- EcOmGuiHome.pl
- EcOmGuiHomePage.pl
- EcOmGuiLogViewer.pl
- EcOmGuiMediaConfig.pl
- EcOmGuiNav.pl
- EcOmGuiOpenInterv.pl
- EcOmGuiOpenIntervDetail.pl
- EcOmGuiOpenIntervDetailApplyAll.pl
- EcOmGuiQueueStatus.pl
- EcOmGuiServerStatistics.pl
- EcOmGuiStagingStatus.pl
- EcOmGuiUserProfile.pl

Distribution personnel start the OMS Command Line Interface (OMS CI) using following start-up script that is available in the /usr/ecs/*MODE*/CUSTOM/WWW/OMS/cgi-bin directory on the Data Pool Server host:

- EcOmConfig.pl

Data Distribution (DDIST)

The DDIST CSCI is the part of ECS Science Data Processing (SDP) that manages the distribution of data products to requesters, whether they are internal or external to SDP. The Distribution Technician uses DDIST when monitoring and controlling the distribution of data products. The Distribution technician has access to DDIST primarily through the Data Distribution Operator graphical user interface (GUI).

DDIST has the following five major components (as shown in Figure 3):

- Data Distribution Operator GUI (EcDsDdistGui).
  - GUI that allows the technician to track and manipulate distribution requests through GUI controls and database information.

- Distribution Server (EcDsDistributionServer).
  - Server that provides the control and coordination for data distribution through request processing.
- Sybase Adaptive Server Enterprise (ASE) Server.
  - Commercial off-the-shelf (COTS) software application that handles the request list and has a set of stored procedures that updates the request configuration, provides the request configuration to GUI operations and check-points the state of the CSCI for fault recovery purposes.
- External Product Dispatcher (EPD).
  - Receives products from external subsetter and transfers them via DDIST Command Line Interface (DCLI) to DDIST (i.e., the Distribution Server).
- DDIST Command Line Interface (DCLI).
  - Submits distribution requests for distribution of externally subsetted products.

Distribution personnel use the following start-up script that is available in the /usr/ecs/*MODE*/CUSTOM/utilities directory on the Operations Workstation:

- EcDsDdistGuiStart.
  - Launches the Data Distribution Operator GUI.

The following start-up scripts in the /usr/ecs/*MODE*/CUSTOM/utilities directory on the Distribution Server host (Sun internal server host) are typically called by other applications and are not normally invoked directly by Distribution personnel:

- EcDsDataDistributionAppStart.
- EcDsDdStart.
- EcDsDistributionServerStart.
  - Starts the Distribution Server.

In addition to the preceding start-up scripts the following scripts are available in the /us/ecs/*MODE*/CUSTOM/utilities directory on the Distribution Server host (Sun internal server host):

- DsDdSendMailPl.pl.
- EcDsDdPTEdit.pl.
  - Obsolete Perl script that used to allow system operators to change the threshold for the number of threads that could be active for each priority level of distribution requests.

Storage Management (STMGT)

The STMGT CSCI manages all physical storage resources for all DSS components including the following items:

- Tape robotic archive.
- Random Array of Inexpensive Disks (RAID) disk cache.
- On-line storage.
- Peripheral devices (e.g., various types of magnetic tape drives) used for ingesting data.

During the distribution of data, STMGT provides DDIST and SDSRV with interfaces that copy files out of the archive and allocate magnetic disk space for staging the files. In addition, STMGT provides DDIST with interfaces that copy files for electronic distribution. Furthermore, STMGT maintains a user pull area that supports electronic pull distribution.

STMGT has the following major components (as shown in Figure 4):

- Archive Server (EcDsStArchiveServer).
  - Server that provides access to stored data.
  - There can be multiple archive servers running at a given site, each with its own type of data or storage medium.
- Staging Servers.
  - Cache Manager Server (EcDsStCacheManagerServer) - Server that manages a group of data files that have been retrieved from the archive and placed into a cache area on staging disk; it maintains a list of the data files so that subsequent data retrieval requests are fulfilled immediately without requiring an additional archive access.
  - Pull Monitor (EcDsStPullMonitorServer) [The pull monitor is just a symbolic link to the Cache Manager Server binary executable image.] - Server that manages the files in the user pull area; deletes files as they are retrieved (i.e., electronically "pulled") from the user pull area by respective ECS users or as the files become stale (their time-out periods expire).
  - Staging Disk Server (EcDsStStagingDiskServer) - Server that manages shared disk space; it allows clients to allocate disk space and reserve files between staging directories and from non-staging to staging directories.

- Resource Managers.
  - 8mm Server (EcDsSt8MMServer) - Server that schedules access to the 8mm cartridge tape drives used by Ingest; maintains a request queue based on priority and time of request receipt.
  - DTF-2 Server (EcDsStDTFServer) - Server that schedules access to the DTF-2 (second-generation Sony Digital Tape Format) cartridge tape drive(s); maintains a request queue.
  - FTP Server (EcDsStFtpServer) - Server that schedules access for Ingest or distribution file transfer protocol (ftp); maintains a request queue.
  - Copy Server (EcDsStCopyServer) - Server that executes secure copy (scp) distribution requests on behalf of EcDsStFtpServer.
- Storage Management Request Manager (EcDsStRequestManagerServer).
  - Routes requests to the appropriate server for servicing.
  - Provides the primary point of detection and recovery for unexpected client or server termination.
- Storage Management Control GUI (EcDsStmgtGui).
  - GUI to the Storage Management/Data Distribution shared database; allows the technician to set parameters and configurations that control the STMGT servers.
- Sybase ASE Server.
  - COTS software application that handles insertion and retrieval of data concerning storage management activities into/from the STMGT/DDIST database.
- Archival Management and Storage System (AMASS).
  - COTS software application that supports the functioning of the data repository hardware (e.g., archive robotics).

Distribution personnel use the following start-up script that is available in the /usr/ecs/*MODE*/CUSTOM/utilities directory on the Operations Workstation:

- EcDsStmgtGuiStart.
  - Launches the Storage Management Control GUI.

The following start-up scripts in the /usr/ecs/*MODE*/CUSTOM/utilities directory on the Ingest Server host, Access/Process Coordinators (APC) Server host, Distribution Server host (Sun internal server host), and/or File and Storage Management System (FSMS) Server host are typically called by other applications and are not normally invoked directly by Distribution personnel:

- EcDsStFtpServerStart.
  - Starts the ftp server.
- EcDsStStagingDiskServerStart.
  - Starts a staging disk server.
- EcDsStStart.
  - Starts DSS storage management.
- EcDsStStorageMgmtAppStart.
  - Starts DSS storage management (old form of EcDsStStart).
- EcDsStArchiveServerStart.
  - Starts an archive server.
- EcDsStCacheManagerServerStart.
  - Starts a cache manager server.
- EcDsStRequestManagerServerStart.
  - Starts the Request Manager.
- EcDsSt8MMServerStart.
  - Starts the 8mm Server.
- EcDsStDLTServerStart.
  - Starts the DLT Server.
- EcDsStCDROMServerStart.
  - Starts the CD Server.

In addition to the preceding applications the following scripts are available in the /us/ecs/*MODE*/CUSTOM/utilities directory on a variety of hosts, including the APC Server host, and/or FSMS Server host:

- EcDsCheckArchive.
- EcDsStConfigVolGrps.

- EcDsStDbBuild.
  - Creates and empties database and pre-loads initialization data.
- EcDsStDbDrop.
- EcDsStDbDump.
  - Dumps the database to a backup device.
- EcDsStDbDumpTrans.
- EcDsStDbLoad.
  - Restores the database from a backup copy.
- EcDsStDbLoadTrans.
- EcDsStDbPatch.
  - Upgrades a Release 4.0 Drop 4P database to Drop 4PL.
- EcDsStFilesPerTapeUtility.
- EcDsStVolGrpCreateMain.pl.

Science Data Server (SDSRV)

The SDSRV CSCI is the part of the Data Server Subsystem that issues requests to the STMGT and DDIST CSCIs to perform storage and distribution services in support of the processing of service requests, such as insertion of data into the archive or distribution of data products to requesters (including other ECS subsystems). Among the services that SDSRV provides to other parts of the ECS is searching the inventory database to determine whether particular granules are available in the archive. For example, the Machine-to-Machine Gateway does searches through the Science Data Server even when it places its orders through the OMS instead of the SDSRV. That means the Science Data Server must be running in order for the Machine-to-Machine Gateway to operate correctly whether the Machine-to-Machine Gateway is configured to submit its orders to the OMS or SDSRV.

SDSRV has the following major components (as shown in Figure 5):

- Science Data Server (EcDsScienceDataServer).
  - Server responsible for managing collections of Earth Science and related data and for servicing requests for the storage, search, retrieval, and manipulation of data within those collections.
- Hierarchical Data Format (HDF) EOS Server (EcDsHdfEosServer).
  - Server that provides science data subsetting capabilities for Earth Science data that have been configured with a subsetting service.

- Granule Deletion Administration Tool (EcDsGranuleDelete).
  - Provides a command line operator interface for deleting granules either in both the inventory and the archive or just the archive.
  - The associated Production History (PH), Quality Assessment (QA) and Browse granules can also be deleted.
- Science Data Server GUI (EcDsSdSrvGui).
  - GUI that allows the operator to monitor active EcDsScienceDataServer requests and receive descriptor files and dynamic link libraries (dll) for configuring Earth Science Data Types (ESDTs) in the EcDsScienceDataServer.
- Science Data Server (SDSRV) Command Line Interface (SCLI) (EcDsSCLI).
  - Provides a command line interface that receives requests (via product request parameter files) for acquiring granules from the archive.
  - Supports the S4PM [reprocessing system for Moderate-Resolution Imaging Spectroradiometer (MODIS) data] and the Product Distribution System (PDS).
- Autometric Spatial Query Server (SQS).
  - COTS software application that provides the capability to manage spatial data types of earth science catalog metadata (including specialized spatial searches) for the ECS Science Data Processing Segment (SDPS).
- Sybase Adaptive Server Enterprise (ASE) Server.
  - COTS software application that provides the management of spatial data types of an earth science catalog of metadata for the SDPS. Includes capabilities for searching and storing the catalog.

The following start-up script is available in the /usr/ecs/*MODE*/CUSTOM/utilities directory on the Operations Workstation:

- EcDsSdSrvGuiStart.
  - Launches the Science Data Server GUI.

The following scripts are available in the /us/ecs/*MODE*/CUSTOM/utilities directory on the SDSRV Server host (Sun internal server host):

- EcTsDsClientDriverStart.
- EcDsSrConvertEvt.
- EcDsSrDbBuild.
- EcDsSrDbDrop.

- EcDsSrDbDump.
- EcDsSrDbLoad.
- EcDsSrDbMigrate.
- EcDsSrDbPatch.
- EcDsSrDbValids.

Product Distribution System Interface Server (PDSIS)

The PDSIS is the part of PDS that provides the interface between ECS and the PDSSA. The Distribution Technician uses PDSIS when monitoring and controlling the processing of orders for distribution of data products on physical media (i.e., disks or tapes). The Distribution technician has access to PDSIS primarily through the PDSIS Operator Interface (PDSIS OI).

PDSIS has the following six major components (as shown in Figure 6):

- PDSIS Operator Interface (PDSIS OI).
  - Uses Oracle Forms to provide a menu-driven GUI that allows the technician to monitor and control order processing.
- PDSIS Maintenance Module.
  - Contains Oracle Forms GUIs that provide a means by which the technician can respond to problems with order processing and perform database maintenance.
- PDSIS Server (ECSPDSServer).
  - Java-based server that detects requests from ECS for products to be distributed on hard media and inserts data concerning the request into the PDS database.
- PDSIS Cron.
  - Java-based cron job that at regular intervals spawns threads (as necessary) to handle acquire requests to ECS, printing of shipping documents, ECS order-tracking database updates, and a number of other PDSIS activities.
- PDSIS Midnight Cron.
  - Java-based cron job that performs database maintenance and updates log files at regular intervals.
- PDSIS Cleanup Manager.
  - GUI used for specifying a cleanup strategy and generating a Bourne-shell script to implement the strategy.

- Cleanup Script.
  - Bourne-shell script invoked via cron to implement the cleanup strategy created using the PDSIS Cleanup Manager.
- Oracle Database Server.
  - COTS relational database management system software application that manages PDS order and job data for both PDSIS and PDSSA.

To start the PDSIS GUIs distribution personnel typically use the following aliases that are available when one logs in to the PDS Server host using either a PDS user ID (e.g., pds, pds_st, or pds_it) or a PDSIS user ID (e.g., pdsis, pdsis_ts1, or pdsis_ts2):

- pdsisoi.
  - Launches the PDSIS Operator Interface (PDSIS OI).
- pdsismaint.
  - Brings up a PDSIS Maintenance Module log-in window.

Aliases may vary somewhat depending on the site set-up.

Alternatively, distribution personnel may use the following start-up scripts that are available in the "run" subdirectory of the PDS root directory (i.e., /usr/local/pds/run, /usr/local/pds_st/run, or /usr/local/pds_it/run depending on whether OPS-, TS1-, or TS2-mode processing is being accomplished) on the PDS Server host:

- pdsisoi_*mode*.sh, (e.g., pdsisoi.sh, pdsisoi_st.sh, or pdsisoi_it.sh, depending on whether OPS-, TS1-, or TS2-mode processing is being accomplished).
  - Launches the PDSIS Operator Interface (PDSIS OI).
- pdsismaint_*mode*.sh (e.g., pdsismaint.sh, pdsismaint_st.sh, or pdsismaint_it.sh, depending on whether OPS-, TS1-, or TS2-mode processing is being accomplished).
  - Brings up a PDSIS Maintenance Module log-in window.

Script names may vary somewhat depending on the site set-up.

Distribution personnel use the following scripts that are available in the /usr/local/pdsis_*mode*/utilities directory (i.e., /usr/local/pdsis/utilities, /usr/local/pdsis_ts1/utilities, or /usr/local/pdsis_ts2/utilities) on the PDS Server host:

- EcPdPDSISServerStart.
  - Starts the PDSIS Server (ECSPDSServer).
- EcPdIsPdsisCleanup.
  - Launches a PDSIS Cleanup Manager GUI.

- EcPdPDSISResetOrder.
  - Resets an order or a unit within an order.

The following start-up scripts in the /usr/local/pdsis_*mode*/utilities directory (i.e., /usr/local/pdsis/utilities, /usr/local/pdsis_ts1/utilities, or /usr/local/pdsis_ts2/utilities) on the PDS Server host are typically called by other applications (especially cron) and are not normally invoked directly by distribution personnel:

- EcPdPDSISCronStart.
  - Starts the PDSIS Cron job.
- EcPdPDSISMidnightCronStart.
  - Starts the PDSIS Midnight Cron job.
- EcPdIsPdsisActivator.
  - Activates PDSIS orders based on available staging space and DDIST load.
- EcPdIsStartActivateCron.
  - Starts EcPdIsPdsisActivator.

Product Distribution System Stand-Alone (PDSSA)

The PDSSA is the part of PDS that transfers digital products to physical media. The Distribution Technician uses PDSSA when monitoring and controlling the processing of jobs involving the transfer of data products to physical media (i.e., disks or tapes). The Distribution technician has access to PDSSA primarily through the PDS Operator Interface (PDSOI), the PDS Job Monitor (JOBMON), and the PDS Quality Check GUI.

PDSSA has the following eleven major components (as shown in Figure 7):

- PDS Operator Interface (PDSOI).
  - Uses Oracle Forms to provide a menu-driven GUI that allows the technician to monitor and control job processing.
- PDS Job Monitor (JOBMON).
  - GUI that provides a graphical view of system resources, as well as the capability to check the status of current production jobs in some detail.
- PDS Quality Check GUI (EcPdSaQCGui).
  - Provides an operator interface for verification [i.e., quality control (QC) check] of products.

- PDS Maintenance Module.
  - Contains Oracle Forms GUIs that provide a means by which the technician can respond to problems with job processing and perform database maintenance.
- PDSTOP (pdstop2.pl).
  - Top-level PDSSA process in the form of a Perl script that is invoked by the PDSOI when the latter generates a production parameter file (PPF).
  - Responds to a PPF from the PDSOI by calling the appropriate Production Module (PM) to process a job.
- Production Modules (e.g., genericout, or genericout2).
  - C-language programs that respond to production tasking (PPF) by assembling the required product data, conducting volume-spanning calculations, generating product media, and passing status and production file information back to PDSOI.
- Rimage Data Publisher.
  - COTS software application that supports CD/DVD production by polling the PDS job control directory for files to transfer and transferring the data by ftp to the PDS Rimage Dell host (Rimage PC) disk.
- Rimage Production Server.
  - COTS software application that manages production of CDs and DVDs, including writing the data to disk.
- PDS Cleanup Manager.
  - GUI used for specifying a cleanup strategy and generating a Bourne-shell script to implement the strategy.
- Cleanup Script.
  - Bourne-shell script invoked via cron to implement the cleanup strategy created using the PDS Cleanup Manager.
- Oracle Database Server.
  - COTS relational database management system software application that manages PDS order and job data for both PDSIS and PDSSA.

To start the PDSSA GUIs distribution personnel typically use the following aliases that are available when one logs in to the PDS Server host as a PDS user (i.e., pds, pds_st, or pds_it):

- pdsoi.
  - Launches the PDS Operator Interface (PDSOI).

- pdsmaint.
  - Brings up a PDS Maintenance Module log-in window.
- jobmon.
  - Launches the PDS Operator Interface (PDSOI).

Aliases may vary somewhat depending on the site set-up.

Alternatively, distribution personnel may use the following start-up scripts that are available in the "run" subdirectory of the PDS root directory (i.e., /usr/local/pds/run, /usr/local/pds_st/run, or /usr/local/pds_it/run depending on whether OPS-, TS1-, or TS2-mode processing is being accomplished) on the PDS Server host:

- pdsoi_*mode*.sh, (e.g., pdsoi.sh, pdsoi_st.sh, or pdsoi_it.sh, depending on whether OPS-, TS1-, or TS2-mode processing is being accomplished).
  - Launches the PDS Operator Interface (PDSOI).
- pdsmaint_*mode*.sh (e.g., pdsmaint.sh, pdsmaint_st.sh, or pdsmaint_it.sh, depending on whether OPS-, TS1-, or TS2-mode processing is being accomplished).
  - Brings up a PDS Maintenance Module log-in window.
- jobmonitor.
  - Launches a Job Monitor GUI.
- pdscleanup.
  - Launches a PDS Cleanup Manager GUI.

Script names may vary somewhat depending on the site set-up.

The following start-up script is available in the "jobmon" subdirectory of the PDS root directory (i.e., /usr/local/pds/jobmon, /usr/local/pds_st/jobmon, or /usr/local/pds_it/jobmon depending on whether OPS-, TS1-, or TS2-mode processing is being accomplished) on the PDS Server host:

- jobmonitor.
  - Launches a Job Monitor GUI.

Script name may vary somewhat depending on the site set-up.

The following start-up script is available in the run/verify subdirectory of the PDS root directory (i.e., /usr/local/pds/run/verify, /usr/local/pds_st/run/verify, or /usr/local/pds_it/run/verify depending on whether OPS-, TS1-, or TS2-mode processing is being accomplished) on the PDS Server host:

- EcPdSaQCGui.
  - Launches the PDS Quality Check GUI.

In general the applications in the "run" subdirectory of the PDS root directory (i.e., /usr/local/pds/run, /usr/local/pds_st/run, or /usr/local/pds_it/run) on the PDS Server host are not normally invoked directly by Distribution personnel. Typically, the programs/scripts are called by other applications. Furthermore, the "run" subdirectory of the PDS root directory contains quite a few scripts and production modules (e.g., demout, drgout, l1out, and nlapsout) that are used in non-ECS implementations of PDS. Among the applications involved in the ECS implementation of ECS are the following programs and scripts:

- genericout.
  - Production module for distributing most types of ECS data on physical media.
  - Differs from genericout2 in that genericout writes each ordered unit to a unit-numbered directory while genericout2 writes all data to the root of the volume (units are not placed within individual directories).
  - Both genericout and genericout2 start and end within genericout.
- genericout2.
  - Production module for distributing most types of ECS data on physical media.
  - Differs from genericout in that genericout2 writes all data to the root of the volume (units are not placed within individual directories) while genericout writes each ordered unit to a unit-numbered directory.
  - Both genericout2 and genericout start and end within genericout.
- l0out.
  - Production module for processing Level 0 Landsat-7 jobs.
- mkisofs.
  - COTS software for generating ISO 9660 image files of a directory tree for subsequent transfer to CD/DVD. (ISO is the name of the International Organization for Standardization.)
- pdstop2.pl.
  - Top-level PDS process that is normally invoked by PDSOI.
  - Calls the appropriate product generation software based on the product type in a particular PDS order (as specified in a PPF).
- xgettape_notae.
  - Program called by production modules to generate a Media Drive Selection window so the technician can identify the specific device to be used for writing data to the medium.

The Data Distribution Process

Data Distribution is a process of retrieving archived data and providing the data to requesters in response to the orders they submit. The requesters may be classified in either of the following two categories:

- External to ECS.
  - For example, scientists at Science Computing Facilities (SCFs) may have standing orders for the data products that are processed using their science software.
- Internal to ECS.
  - For example, the Data Processing Subsystem depends on Data Distribution to distribute copies of archived science software and input data in support of data processing.

Data retrieved from the archives can be distributed to requesters using any of the following three general methods:

- Electronic pull.
- Electronic push.
- Hard (physical) media distribution on disks or tape cartridges [distributed through the Product Distribution System (PDS)].

The method of data distribution is dictated by the nature of the data distribution request. (The requester specifies the distribution method when ordering or subscribing to the data.)

If the requester specifies distribution in the electronic “pull” mode, data not already in the Data Pool are retrieved from the archive and placed in the Data Pool. The requester is notified that the data are available for retrieval from the particular location for a set period of time. The requester initiates a file transfer procedure (ftp “get”) to move the data electronically (over a communications network) to the requester’s own system.

In response to a request for distribution in the electronic “push” mode, data are retrieved from the archive (if not already in the Data Pool) and placed in the Data Pool. Then the data are transferred electronically (via ftp “put”) to the requester’s designated storage location (specified in the distribution request) under the control of the data server. The requester is notified when the data push has been completed.

If the requester submits a request for hard media distribution, PDS copies the data and metadata files from the Data Pool to the media. The PDS sends an e-mail distribution notice (order shipment notification) in standard ECS format to the requester's e-mail address (as specified in the original order).

In general, data distribution operations proceed as follows:

- Electronic Pull:
  - A requester connects to the system and performs a search [e.g., using the EOS Data Gateway (EDG)] for a specific data product.
  - When the system notifies the requester that the product has been found, the requester submits an order for a “pull” of the data using ftp.
  - OMS validates the request (e.g., determines whether the specified distribution medium is appropriate for the quantity of data).
  - OMS queues an insert action in the Data Pool database for each granule of a request that is not found to be on Data Pool disk.
  - The Data Pool (DPL) queues a granule-staged action in the OMS database with status. (DPL notifies OMS when each granule has been staged.)
  - OMS builds and sends an e-mail notification to the requester stating that the order has been filled.
  - The requester pulls (transfers) the data by ftp from the Data Pool disk (from the location specified in the e-mail notification) to the requester’s own system. (User directories have links to staged granules.)
- Electronic Push:
  - A requester connects to the system and performs a search for a specific data product.
  - When the system notifies the requester that the product has been found, the requester submits an order for an ftp push of the data. The requester supplies all the necessary system, path, and security information to enable the requested data to be placed in a directory on the requester's system.
  - OMS validates the request (e.g., determines whether the specified distribution medium is appropriate for the quantity of data).
  - OMS queues an insert action in the Data Pool database for each granule of a request that is not found to be on Data Pool disk.
  - The Data Pool (DPL) queues a granule-staged action in the OMS database with status. (DPL notifies OMS when each granule has been staged.)
  - OMS requests the ftp daemon to ftp the granule(s) to the requester.
  - OMS builds and sends an e-mail notification to the requester stating that the order has been filled.

- Physical Media Distribution:
  - A requester connects to the system and performs a search for a specific data product.
  - The requester submits an order for a shipment of specific data on a physical medium.
  - If an order to be delivered on a physical medium is for a product other than a Landsat-7 product, the Order Manager Server forwards the order to the Product Distribution System (PDS).
  - For Landsat-7 products, the V0 Gateway first forwards the order to be delivered on a physical medium to the Distributed Ordering, Research, Reporting and Accounting Network (DORRAN) at the Earth Resources Observation Systems (EROS) Data Center (EDC); then when the gateway receives a validated Product Request from DORRAN, it sends the Landsat-7 order to the Order Manager Server, which forwards the order to PDS.
  - If the data for an order have not been pre-staged to the Data Pool, the PDS orders the requested data from the ECS using the Science Data Server (SDSRV) Command Line Interface (SCLI).
    - The PDS may break up large orders into smaller sets and may elect to order granules for a request individually.
  - If the data for an order have not been pre-staged to the Data Pool, ECS delivers the data to the PDS using its standard ftp push data distribution capability.
  - The PDS transfers the data from either the Data Pool or the PDS directories (as applicable) to the specified physical medium.
    - Metadata from the Data Pool are copied onto the physical medium in XML format (as .xml files).
    - Metadata from the Science Data Server are copied onto the physical medium in ODL format (as .met files).
  - PDS e-mails a data distribution notice (order shipment notification) to the user and (for Landsat-7 orders) to DORRAN.
  - The PDS updates the ECS order-tracking database to completed status.

PDS (PDSIS) Order Management

PDS does not break down orders in the same manner as ECS. The differences are reflected in the way the various elements are managed as well as the terminology that refers to the different elements. The ECS to PDS order breakdown structure is illustrated in Figure 8.

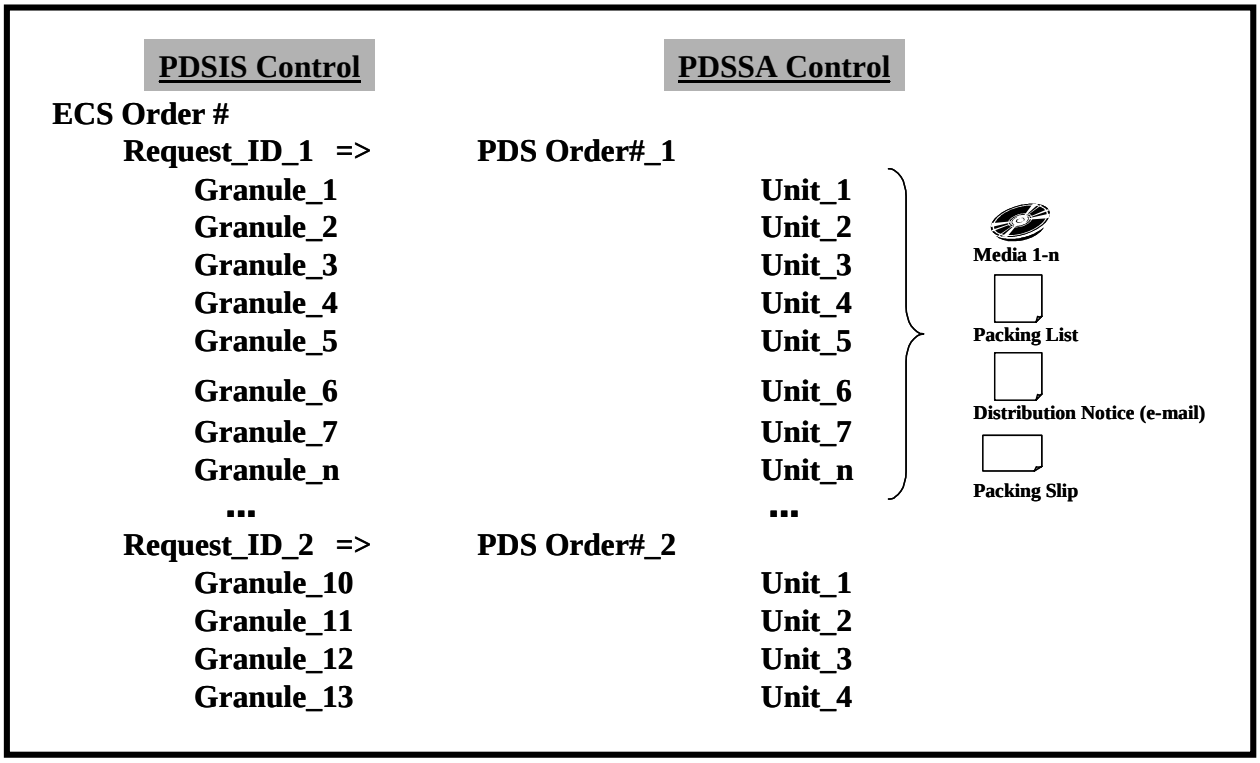

Figure 8. ECS to PDS Order Breakdown Structure

ECS "orders" are composed of "requests" and requests consist of granules. In PDS (i.e., PDSIS) each ECS "request" is converted to an "order" composed of "units." A PDS unit consists of one granule.

ECS requests are grouped by media type. If there is a problem with a request in an ECS order, it causes a problem with the entire order. In PDS if there is a problem with some of the units in an order, it is possible to ship a partial order (i.e., the customer receives the units that can be completed). Additional units in the order may be completed at a later time.

Large orders (e.g., ≥300GB) are managed by PDSIS via a "grouping" methodology, which affects both media creation and working space cleanup and release. There are two grouping factors, only one of which (as specified in one of the PDSIS database tables) is in effect at a time.

The two grouping factors are as follows:

- Granule size.
- Group limits.

The grouping factor is relevant only for orders that are larger than the value assigned to the current grouping factor. For example, if the values in the database specify that the current grouping factor is granule size and the size limit is 35,000, an order for 600 megabytes of data would not be broken up into chunks because it is smaller than the granule size limit. When the size of an order (e.g., 45,000 megabytes) is greater than the size limit, PDSIS makes a chunk of

data available to PDSSA after the amount of data received from ECS reaches the size limit (35,000 megabytes).

If the current grouping factor is “group limits,” PDSIS makes a chunk of an order available to PDSSA when the number of units specified in the database has been received from ECS. If the value for the group limit is NULL, all units are made available to PDSSA only after all unit data have been staged by ECS.

When PDSSA completes units, the disk space is made available for additional data from ECS.

PDS order grouping (granule size/group limits) setup is illustrated in Figure 9.

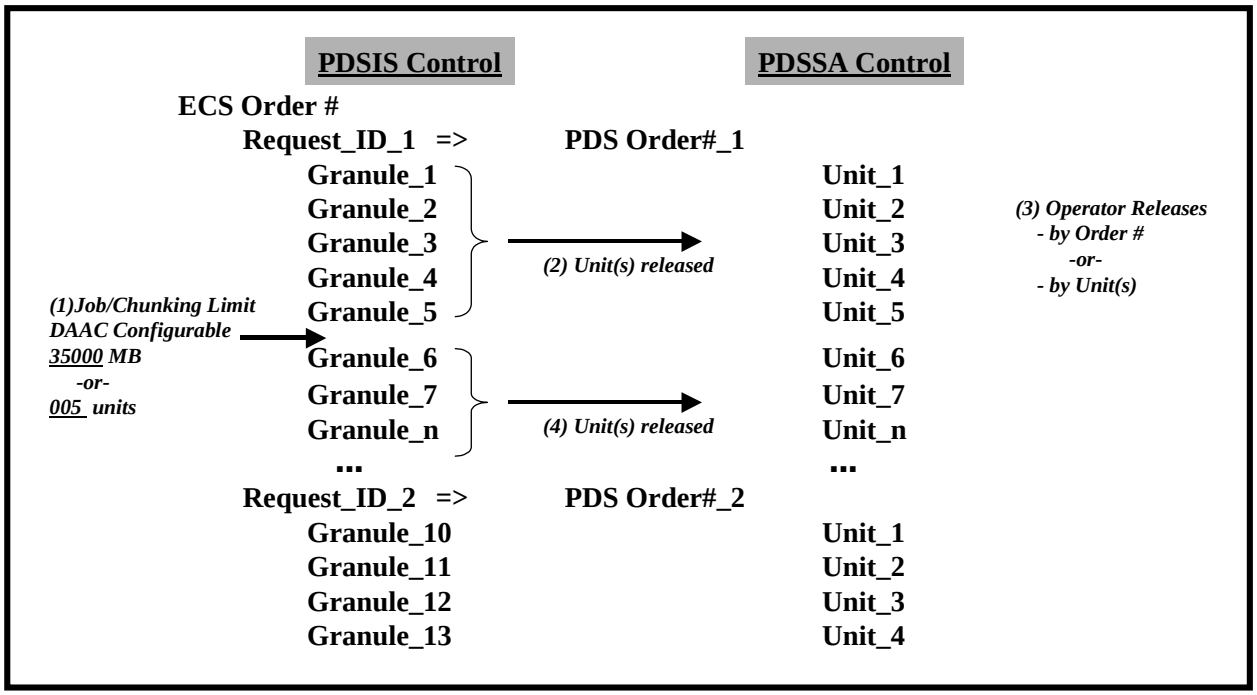

Figure 9. PDS Order Grouping

Logging in to ECS Hosts

Logging in to ECS Hosts

Logging in to ECS hosts is accomplished from a UNIX command line prompt. It is an initial set of steps that is performed when accomplishing many other Data Distribution tasks.

Logging in to ECS hosts starts with the assumption that the applicable hosts are operational and the Distribution Technician has logged in to a workstation or X-term that has access to the applicable network in the ECS system.

Logging in to ECS Hosts

NOTE: Commands in Steps 1 through 3 are typed at a UNIX system prompt.

1 At the UNIX command line prompt type **setenv DISPLAY *clientname*:0.0** then press the **Return/Enter** key.

- Use either the X terminal/workstation IP address or the machine-name for the client name.
- When using secure shell, the DISPLAY variable is set just once, before logging in to remote hosts. If it were to be reset after logging in to a remote host, the security features would be compromised.

2 If logging in to the PDS Server host, in the terminal window (at the command line prompt) start the log-in to the appropriate host by typing **/tools/bin/ssh –l *pds_userid hostname*** then press **Return/Enter**.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- The **-l** option used with the ssh command allows logging in to the remote host (or the local host for that matter) with a different user ID (in this case the login ID is changed to a PDS user ID).
- ***pds_userid*** refers the PDS user ID or PDSIS user ID.
  - The PDS user IDs **pds**, **pds_st**, and **pds_it** are used for PDS operations in the OPS, TS1, and TS2 modes respectively.
  - The PDSIS user IDs **pdsis**, **pdsis_ts1**, and **pdsis_ts2** are used for PDSIS operations in the OPS, TS1, and TS2 modes respectively.

- An alternative method is to type the command in the format **/tools/bin/ssh *pds_userid@hostname***. For example:

  /tools/bin/ssh pds@x0dig06

- Depending on the set-up it may or may not be necessary to include the path (i.e., /tools/bin/) with the ssh command. Using ssh alone is often adequate. For example:

  ssh -l pds x0dig06

  - or -

  ssh pds@x0dig06

- If you receive the message, "Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?" enter **yes** ("y" alone will not work).

- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<*user@localhost*>'** appears; continue with Step 3.

- If you have not previously set up a secure shell passphrase, go to Step 4.

3 If logging in to an ECS host other than the PDS Server host, in the terminal window (at the command line prompt) start the log-in to the appropriate host by typing **/tools/bin/ssh *hostname*** then press **Return/Enter**.

- The **-l** option can be used with the ssh command to allow logging in to the remote host (or the local host for that matter) with a different user ID. For example, to log in to x0acs06 as user cmops type **/tools/bin/ssh -l cmops x0acs06** then press **Return/Enter**.

- An alternative method of logging in with a different user ID is to type the command in the format **/tools/bin/ssh *userid@hostname***. For example:

  /tools/bin/ssh cmops@x0acs06

- Depending on the set-up it may or may not be necessary to include the path (i.e., /tools/bin/) with the ssh command. Using ssh alone is often adequate. For example:

  ssh x0acs06

  - or -

  ssh -l cmops x0acs06

  - or -

  ssh cmops@x0acs06

- Examples of Sun internal server host names include **e0acs06**, **g0acs06**, **l0acs06**, and **n0acs06**.
- Examples of Sun external server host names include **e0ins01, g0ins01, l0ins01**, and **n0ins01**.
- Examples of APC Server host names include **e0acg11**, **g0acg01**, **l0acg02**, and **n0acg01**.
- Examples of FSMS Server host names include **e0drg11**, **g0drg01**, **l0drg01**, and **n0drg01**.
- Examples of Operations Workstation host names include **e0acs03**, **g0acs02**, **l0acs01**, and **n0acs03**.
- Examples of Ingest Server host names include **e0icg11, g0icg01, l0acg02**, and **n0acg01**.
- If you receive the message, "Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?" enter **yes** ("y" alone will not work).
- If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter *passphrase* for RSA key '<*user@localhost*>'** appears; continue with Step 4.
- If you have not previously set up a secure shell passphrase, go to Step 5.

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

- If a command line prompt is displayed, log-in is complete.
- If the passphrase is unknown, press **Return/Enter**, which should cause a **<*user@remotehost*>'s password:** prompt to appear (after the second or third try if not after the first one), then go to Step 5.
- If the passphrase is entered improperly, a **<*user@remotehost*>'s password:** prompt should appear (after the second or third try if not after the first one); go to Step 5.

5 If a prompt for **<*user@remotehost*>'s password:** appears, type your ***password*** then press **Return/Enter**.

- A command line prompt is displayed.
- Log-in is complete.

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Launching the Data Distribution Operator and Storage Management Control GUIs

Launching the Data Distribution Operator and Storage Management Control GUIs

The following software applications are associated with Data Distribution:

- Data Distribution Operator GUI (EcDsDdistGui).
- Distribution Server (EcDsDistributionServer).
- Sybase ASE Server.

In addition, Data Distribution depends on a number of related servers, especially the Science Data Server and Storage Management servers, to participate in the distribution of data from the archive.

The following software applications are associated with Storage Management:

- Storage Management Control GUI (EcDsStmgtGui).
- Archive Server (EcDsStArchiveServer).
- Cache Manager Server (EcDsStCacheManagerServer).
- Pull Monitor (EcDsStPullMonitorServer).
- Staging Disk Server (EcDsStStagingDiskServer).
- 8mm Server (EcDsSt8MMServer).
- FTP Server (EcDsStFtpServer).
- Storage Management Request Manager (EcDsStRequestManagerServer).
- Sybase ASE Server.
- Archival Management and Storage System (AMASS).

The Storage Management Control GUI can be used in distribution operations to monitor cache (e.g., pull area) statistics. Access to the GUIs must be gained through the use of UNIX commands.

Launching the Data Distribution Operator and Storage Management Control GUIs starts with the assumption that the applicable servers are running and the Distribution Technician has logged in to the ECS system.

Launching the Data Distribution Operator and Storage Management Control GUIs

1 Access a terminal window logged in to the Operations Workstation.

- Examples of Operations Workstation host names include **e0acs03**, **g0acs02**, **l0acs01,** and **n0acs03**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/utilities** then press **Return/Enter**.

- Change directory to the directory containing the Data Distribution Operator GUI and Storage Management Control GUI start-up scripts (e.g., EcDsDdistGuiStart, EcDsStmgtGuiStart).
- The ***MODE*** will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 (for SSI&T).
  - TS2 (new version checkout).
- Note that the separate subdirectories under /usr/ecs apply to different operating modes.

3 Type **EcDsDdistGuiStart *MODE*** then press **Return/Enter**.

- The **Data Distribution Operator GUI Distrib'n Requests** tab (Figure 10) is displayed.

4 Type **EcDsStmgtGuiStart *MODE*** then press **Return/Enter**.

- The **Storage Management Control** GUI **Storage Config.** tab (Figure 11) is displayed.

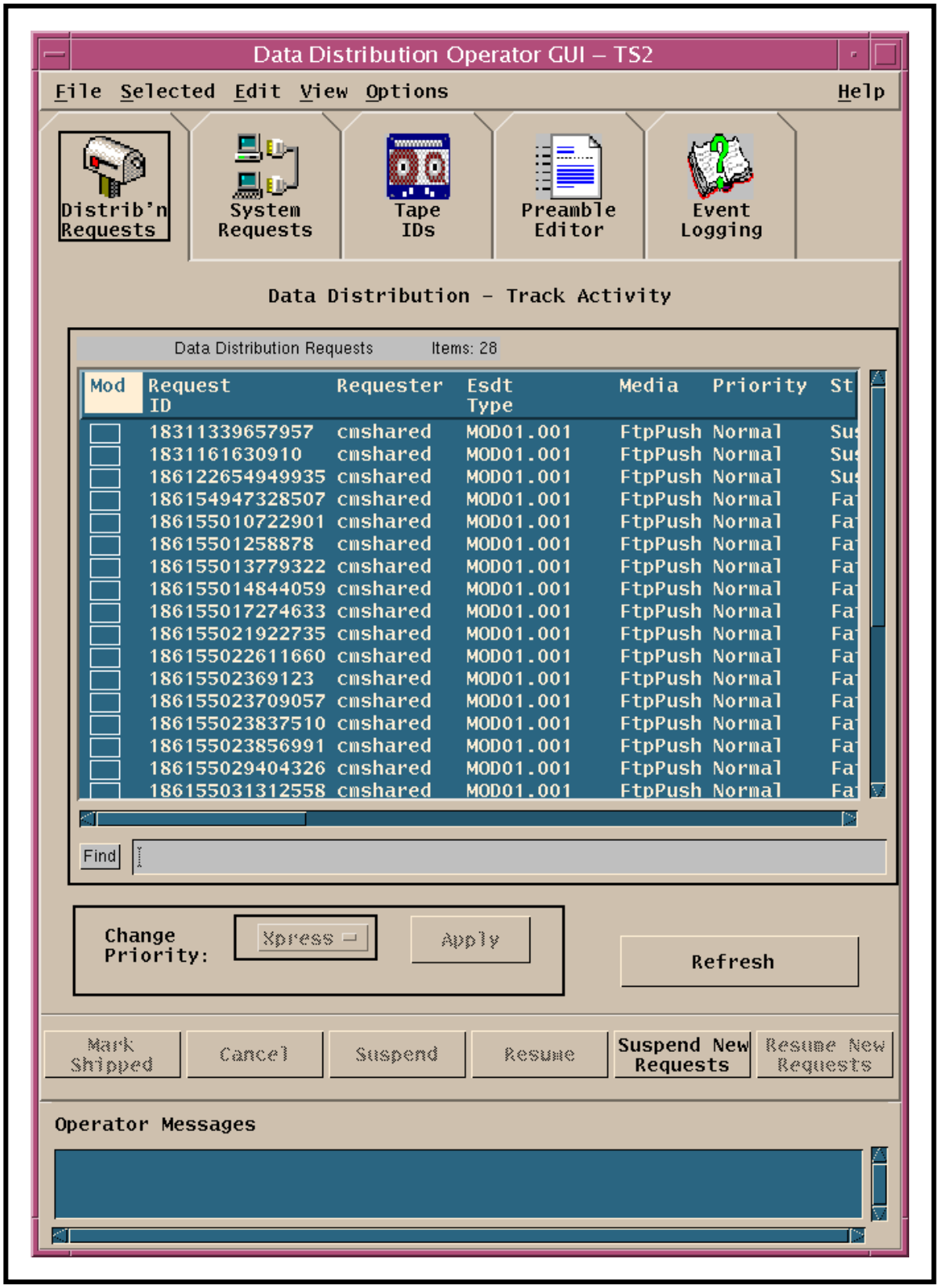

Figure 10. Distrib'n Requests Tab (Data Distribution Operator GUI)

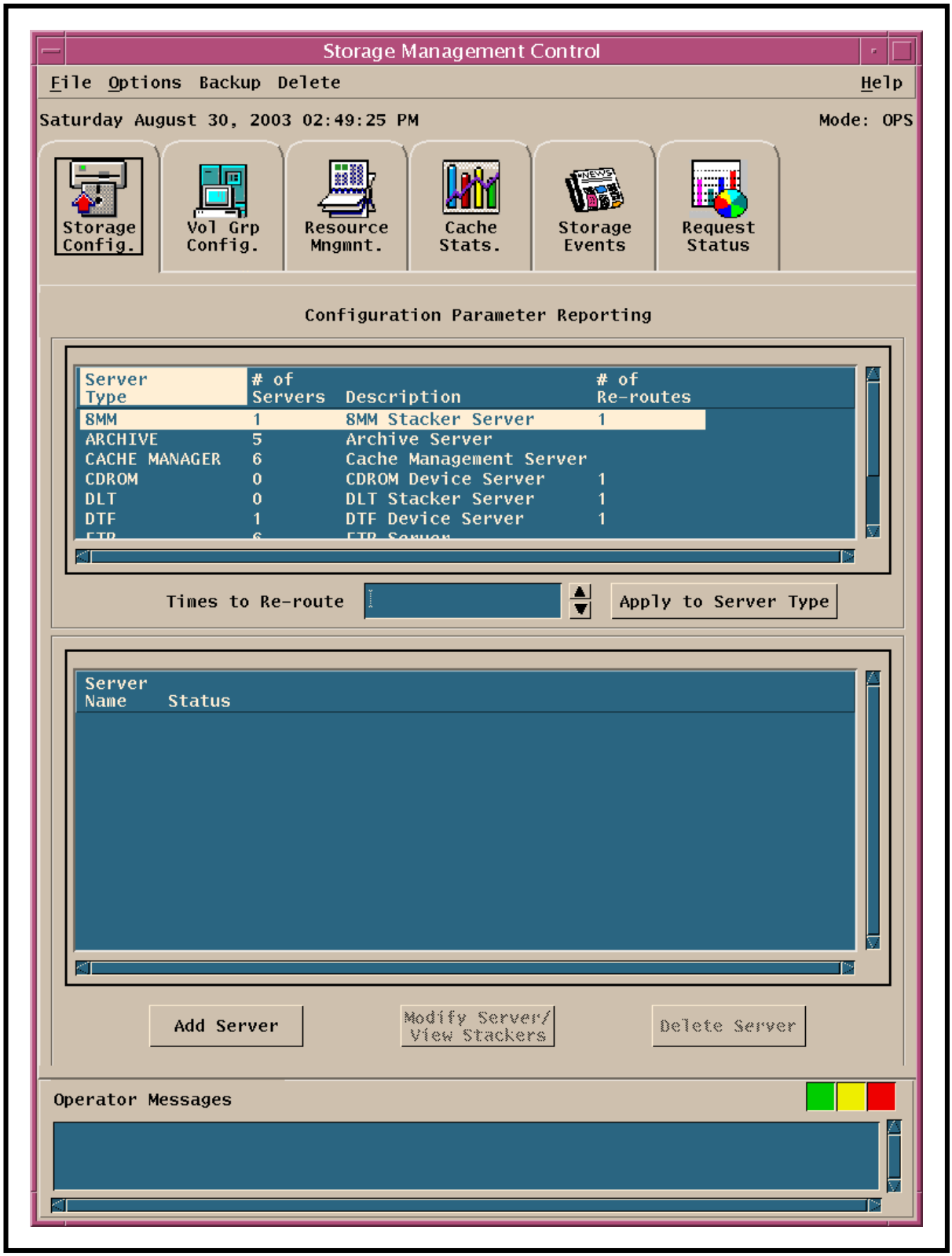

Figure 11. Storage Config. Tab (Storage Management Control GUI)

Monitoring/Controlling Distribution Requests

Monitoring/Controlling Data Distribution Requests

Data Distribution activities are monitored and controlled using the **Data Distribution Operator GUI** and the **Storage Management Control** GUI. The **Data Distribution Operator GUI** has the following five tabs:

- **Distrib'n Requests** [for monitoring/controlling distribution requests].
- **System Requests** [not currently functional].
- **Hard Media** [obsolete].
- **Preamble Editor** [for editing packing lists and other messages to requesters].
- **Event Logging** [not currently functional].

The **Storage Management Control** GUI has the following six tabs:

- **Storage Config.** [for configuring Storage Management components].
- **Vol Grp Config.** [for configuring archive volume groups].
- **Resource Mngmnt.** [for monitoring/controlling media resources].
- **Cache Stats.** [for monitoring/controlling the contents of various caches].
- **Storage Events** [for searching for events in the Event Log].
- **Request Status** [for displaying the status of requests in Storage Management].

The Distribution Technician monitors and manages data distribution requests primarily via the **Data Distribution - Track Activity** window of the **Distrib'n Requests** tab (Figure 10) on the **Data Distribution Operator GUI**. From the **Data Distribution - Track Activity** window the DAAC Distribution Technician can perform the following functions:

- View data distribution requests.
- Change the priority of a selected distribution request.
- Cancel or suspend a request.
- Resume processing of a suspended request.
- Filter on all or specific requests by...
  - Request ID.

- Requester.
- All Requests.
- Media Type.
- State (current status).

The **Data Distribution - Track Activity** window displays the following information for each data distribution request:

- Mod [contains a check mark if the request has been selected/modified (e.g., suspended) by the operator during the current session].
- Request ID.
- Requester.
- Esdt Type.
- Media [type].
- Priority.
- State [current state of the request].
- Status Mnemonic [message indicating there is an operator message attached to the request].
- Submission Time [(and date) GMT].
- End Time [(and date) GMT].
- Overdue [“Yes” if the specified number of hours is exceeded]
- Total Size [of the request] (bytes).
- Media # Completed.
- # of Media.
- # of Granule.
- # of Files.
- Order ID.
- Ordered State [the next state that the request should have (based on operator input)].
- User String [comment supplied by the requester].

The procedure for monitoring data distribution requests starts with the assumption that all applicable servers and the **Data Distribution Operator GUI** are currently running and the **Distrib’n Requests** screen (Figure 10) is being displayed.

1 Configure polling as described in the procedure for **Configuring Data Distribution Polling** (subsequent section of this lesson).

2 Observe information displayed on the **Distrib'n Requests** tab of the **Data Distribution Operator GUI**.

- By default, all current distribution requests are shown in the **Data Distribution Requests** list of the **Data Distribution - Track Activity** window (**Distrib'n Requests** tab).
- Note that Data Distribution controls much of the data retrieval from the archive (excluding retrieval for Data Pool insert); therefore, there may be a lot of activity on the **Data Distribution - Track Activity** screen, especially if data processing is operating at or near capacity.
  - Consequently, it may be useful to restrict the number of distribution requests displayed by filtering them as described in the next step of this procedure.
- Horizontal and vertical scroll bars allow viewing data that are not readily visible in the window.
- Clicking on any of the column headers of the **Data Distribution - Track Activity** screen causes the listed requests to be sorted in order by the column selected.
  - For example, clicking on the **Submission Time** column header causes the requests to be listed in the order in which the requests were submitted (i.e., oldest first).
- The **Refresh** button provides a means of updating the data on the screen.
- Selecting **View** → **Refresh** from the pull-down menu is an alternative means of updating the data on the screen.
- The **Find** button provides a means of performing a keyword search of the distribution requests.
  - A keyword search is performed by typing relevant text in the text entry box to the right of the **Find** button then clicking on the **Find** button.
    - Request(s) that have the search text are highlighted.

- The **Operator Messages** field at the bottom of the GUI displays messages concerning events occurring in distribution operations.
  - Error messages are described in Table 7 and Table 8 of the **Troubleshooting a DDIST, STMGT, or Order Manager GUI Failure** section (subsequent section of this lesson).
- To select (highlight) all requests being displayed in the **Data Distribution - Track Activity** window choose **Selected** → **Select All** from the pull-down menu.
- To deselect all highlighted requests being displayed in the **Data Distribution - Track Activity** window choose **Selected** → **Deselect All** from the pull-down menu.
- To access more detailed information concerning the status of a distribution request highlight the distribution request in the **Data Distribution - Track Activity** window then select **View**→ **Detailed** from the pull-down menu.
  - The detailed information is displayed in the **Operator Messages** field at the bottom of the GUI.

3 If the list of data distribution requests shown in the **Data Distribution - Track Activity** window needs to be filtered, perform the procedure for **Filtering Data Distribution Requests** (subsequent section of this lesson).

4 Observe data distribution requests displayed in the **Data Distribution Requests** list.

5 If it becomes necessary to change the priority of a data distribution request, perform the procedure for **Changing the Priority of Data Distribution Requests** (subsequent section of this lesson).

6 If it becomes necessary to either suspend a data distribution request or resume processing of a suspended request, perform the procedure for **Suspending/Resuming Data Distribution Requests** (subsequent section of this lesson).

7 If it becomes necessary to cancel a data distribution request, perform the procedure for **Canceling Data Distribution Requests** (subsequent section of this lesson).

8 If the system creates an open intervention with respect to a request (e.g., due to the failure of a request), go to the procedure for **Viewing Open Intervention Information on the OM GUI** (subsequent section of this lesson).

9 If it becomes necessary to reprocess or check on a data distribution request that has failed, been cancelled, or been shipped, perform the procedure for **Monitoring/Controlling Distribution Request Information on the OM GUI** (subsequent section of this lesson).

10 If there is a data distribution failure, perform the applicable procedure(s) in the **Troubleshooting DDIST and Order Manager GUI Problems** section of this lesson.

11 Repeat Steps 3 through 10 as necessary to monitor data distribution requests.

12 If it becomes necessary to exit from the **Data Distribution Operator GUI** select **File → Exit** from the pull-down menu.

Configuring Data Distribution Polling

The procedure for **Configuring Data Distribution Polling** is performed as part of the procedure for **Monitoring/Controlling Data Distribution Requests** (previous section of this lesson). The **Data Distribution Operator GUI Options** menu provides the Distribution Technician with a means of switching the Data Distribution database polling function on or off. In addition, there are several parameters that the technician can modify:

- DDist Polling Rate.
  - How often (in seconds) the system updates the information displayed in the **Data Distribution - Track Activity** window.
- Error Retry Rate.
  - Amount of time (in seconds) that the system waits before trying to poll the Data Server after a failed attempt.
- Select Confirmation Min.
  - Number of records that triggers a confirmation dialogue box for a selected action.
- Overdue Limit.
  - Time limit (in hours) for declaring requests "overdue."

The procedure for configuring data distribution polling starts with the assumption that all applicable servers and the **Data Distribution Operator GUI** are currently running and the **Data Distribution - Track Activity** window (Figure 10) on the **Distrib'n Requests** tab is being displayed.

Configuring Data Distribution Polling

---

1 Select **Options → System Settings** from the pull-down menu.

- The **Refresh Options** dialogue box (Figure 12) is displayed.

2 To change the DDist Polling state (from off to on or vice versa), click on the **DDist Polling On** button.

- If the button does not have a check mark in it, clicking on it turns DDist Polling on.

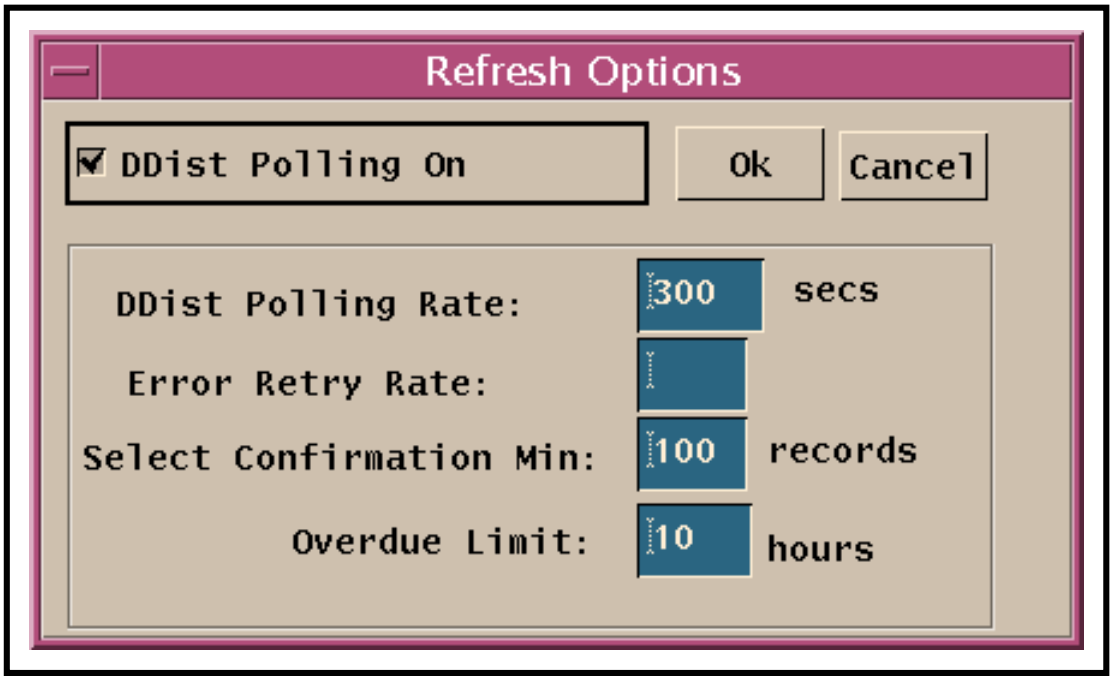

Figure 12. Refresh Options Dialogue Box

- If the button already has a check mark in it, clicking on it turns DDist Polling off.

3 To change the polling rate type the desired value (in seconds) in the **DDist Polling Rate** field.

- The default value is 30 seconds.

4 To specify an error retry rate, type the desired value (in seconds) in the **Error Retry Rate** field.

5 To specify a number of records that would trigger a confirmation dialogue box if selected, type the desired value (i.e., number of records) in the **Select Confirmation Min** field.

- When specifying a common action for a multiple requests that have been highlighted (e.g., when "resuming" a large group of suspended requests), a dialogue box is displayed to confirm that the action should be applied to all of the requests in the group.
- The **Select Confirmation Min** field specifies the minimum number of records for displaying the confirmation dialogue box.
  - The default value is 100.
    - If 100 requests (or more) are selected for a particular action, a dialogue box is displayed to confirm the action.

- If 99 requests (or fewer) are selected for a particular action, no confirmation dialogue box is displayed.

6 To specify a time limit for declaring requests "overdue," type the desired value (in hours) in the **Overdue Limit** field.

- Requests that exceed the number of hours specified in the **Overdue Limit** field are marked "Yes" in the **Overdue** column on the **Data Distribution - Track Activity** window.

7 When the appropriate data have been entered in the **Refresh Options** dialogue box fields, click on the appropriate button.

- **Ok** - to apply the selections and dismiss the **Refresh Options** dialogue box.
- **Cancel** - to dismiss the **Refresh Options** dialogue box without applying the selections.

8 Return to the procedure for **Monitoring/Controlling Data Distribution Requests**.

Filtering Data Distribution Requests

The procedure for **Filtering Data Distribution Requests** is performed as part of the procedure for **Monitoring/Controlling Data Distribution Requests** (previous section of this lesson). The **Data Distribution Operator GUI** provides the Distribution Technician with a means of filtering data distribution requests.

The distribution requests to be displayed in the **Data Distribution Requests** list (**Data Distribution - Track Activity** window shown in Figure 10) can be filtered using the **Distribution Filter Requests** dialogue box. The filtering can be done on the basis of the following criteria, either individually or in combination:

- Request ID.
- Requester.
- Media Type.
- State [of the request].

The procedure for filtering data distribution requests starts with the assumption that all applicable servers and the **Data Distribution Operator GUI** are currently running and the **Data Distribution - Track Activity** window (Figure 10) on the **Distrib'n Requests** tab is being displayed.

1 Select **View** → **Filter** from the pull-down menu.

- The **Distribution Filter Requests** dialogue box (Figure 13) is displayed.
- Perform as many of the following steps as necessary depending on the criteria for filtering distribution requests:
  - Request ID - Step 2.
  - Requester - Step 3.
  - All Requests - Step 4.
  - Media Type - Step 5.
  - State - Step 6.

2 If a specific distribution request is desired and the request ID is known, first click on the **Request ID** radio button, then click in the adjacent text box and type the request ID.

3 If data distribution requests submitted by a particular requester are desired, first click on the **Requester** radio button, then click in the adjacent text box and type the requester's identification.

- In the text box the requester must be identified exactly as known to the Data Server Subsystem.

4 If all data distribution requests are to be displayed in the **Data Distribution Requests** list, click on the **All Requests** radio button.

- The **All Requests** button is particularly useful for restoring the **Data Distribution Requests** list after reviewing a previously filtered set of requests.
- Go to Step 7.

5 If a list of data distribution requests filtered by media type(s) is needed, in the **Media Type** section of the **Filter Requests** dialogue box click on the type(s) of media to be displayed in the **Data Distribution - Track Activity** window.

- The following types of media are listed in the **Media Type** section of the **Filter Requests** dialogue box:
  - **8 MM** (tape) (not relevant - handled through PDS not DDIST).
  - **CDROM** (Compact Disk – Read-Only Memory (not relevant - handled through PDS not DDIST).

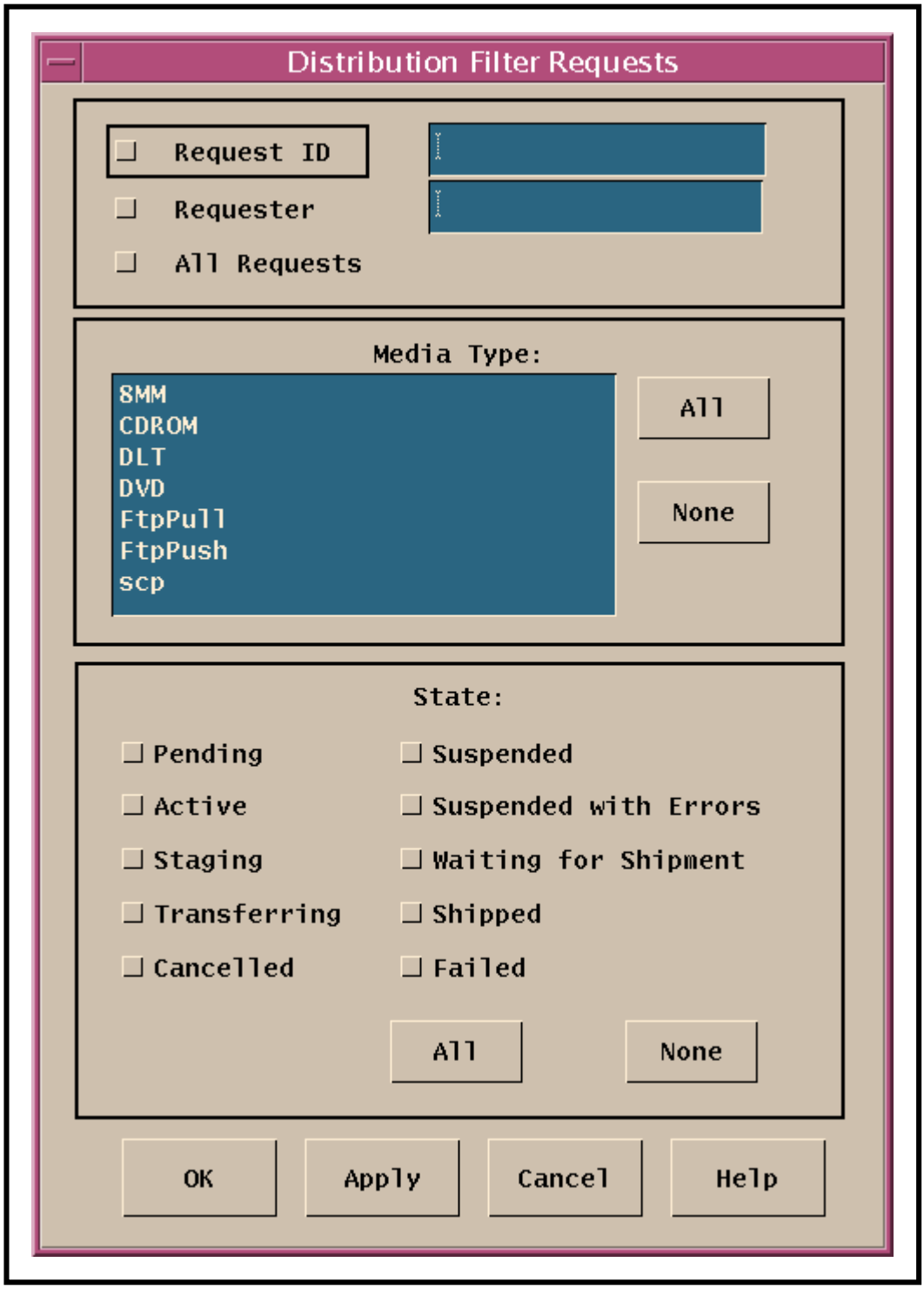

Figure 13. Distribution Filter Requests Dialogue Box

- **DLT** (Digital Linear Tape) (not relevant - handled through PDS not DDIST).
- **DVD** (not relevant - handled through PDS not DDIST)**.**
- **FtpPull.**
- **FtpPush.**
- **scp** (secure copy distribution)**.**

- In addition, buttons for the following media selections are available:
  - **All.**
  - **None.**
- If other filters (e.g., requester or state) are to be applied, the **Apply** button may be clicked to implement the media type filter and leave the **Filter Requests** dialogue box open.

6 If a list of data distribution requests filtered by state(s) is needed, click on the applicable button(s) in the **State** section of the **Filter Requests** dialogue box.

- Radio buttons corresponding to the following states are available:
  - **Pending.**
  - **Active.**
  - **Staging.**
  - **Transferring.**
  - **Cancelled.**
  - **Suspended.**
  - **Suspended with Errors.**
  - **Waiting for Shipment.**
  - **Shipped.**
  - **Failed.**
- In addition, the following state selections are available:
  - **All.**
  - **None.**
- If other filters (e.g., requester or media type) are to be applied, the **Apply** button may be clicked to implement the state filter and leave the **Filter Requests** dialogue box open.

7 When all filter criteria have been selected, click on the appropriate button:

- **OK -** to implement the selections and dismiss the **Distribution Filter Requests** dialogue box.
  - The **Data Distribution - Track Activity** window (Figure 10) reappears; only requests that meet the specified filter criteria appear in the list.
- **Apply** - to implement the selections without dismissing the **Distribution Filter Requests** dialogue box.
  - The **Distribution Filter Requests** dialogue box remains open.
- **Cancel** - to dismiss the **Distribution Filter Requests** dialogue box without implementing the selections.
  - The previously available **Data Distribution Requests** list is shown in the **Data Distribution - Track Activity** window (Figure 10).

8 Return to the procedure for **Monitoring/Controlling Data Distribution Requests**.

Changing the Priority of Data Distribution Requests

The procedure to **Change the Priority of Data Distribution Requests** is performed as part of the **Monitor/Control Data Distribution Requests** procedure (previous section of this lesson). The **Change Priority** area of the **Data Distribution - Track Activity** window (Figure 10) on the **Data Distribution Operator GUI** allows the Distribution Technician to change the priority of data distribution requests.

The procedure for changing the priority of data distribution requests starts with the assumption that all applicable servers and the **Data Distribution Operator GUI** are currently running and the **Data Distribution - Track Activity** window (Figure 10) on the **Distrib'n Requests** tab is being displayed.

Changing the Priority of Data Distribution Requests

---

1 If the list of data distribution requests shown in the **Data Distribution - Track Activity** window needs to be filtered to include the distribution request for which the priority is to be changed, perform the procedure for **Filtering Data Distribution Requests**.

2 Highlight the distribution request to be assigned a different priority by clicking on its entry in the **Data Distribution Requests** list.

3 Click and **hold** the **Change Priority** option button to display a menu of priorities, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

- The following priority codes are available:
  - **Xpress.**
  - **Vhigh.**
  - **High.**
  - **Normal.**
  - **Low.**
- Selected code is displayed on the **Change Priority** option button when the mouse button is released.

4 To implement the priority change click on the **Apply** button to the right of the priority option button.

5 Click on the **Refresh** button to update the data displayed on the screen.

- Priority of the request, as displayed in the **Priority** column of the **Data Distribution Requests** list, changes from its original value to the newly selected priority.
- A check mark is displayed in the **Mod** column of the **Data Distribution Requests** list to indicate that the request has been changed.

6 Repeat the preceding steps as necessary to change the priority of additional data distribution requests.

7 Return to the procedure for **Monitoring/Controlling Data Distribution Requests**.

Suspending/Resuming Data Distribution Requests

Under certain circumstances it may be advisable to suspend the processing of a data distribution request and resume it at a later time. For example, if there is a very large request that is taking up resources and causing other requests to back up waiting (especially requests from data processing that must be filled to allow processing to proceed), the request should be suspended. Processing of the request might be resumed at a time when the demand on data distribution was relatively light. Another example is that of a request that has been suspended by the system due to a system error. Processing of the request should be resumed after the conditions that caused the error have been corrected.

The procedure for **Suspending/Resuming Data Distribution Requests** is performed as part of the procedure for **Monitoring/Controlling Data Distribution Requests** (previous section of this

lesson). The **Data Distribution Operator GUI** provides the Distribution Technician with a means of suspending or resuming data distribution requests.

Use the procedure that follows to suspend or resume processing of data distribution requests. The procedure starts with the assumption that all applicable servers and the **Data Distribution Operator GUI** are currently running and the **Data Distribution - Track Activity** window (Figure 10) on the **Distrib'n Requests** tab is being displayed.

Suspending/Resuming Data Distribution Requests

---

1 If the list of data distribution requests shown in the **Data Distribution - Track Activity** window needs to be filtered to include the distribution request to be suspended or resumed, perform the procedure for **Filtering Data Distribution Requests**.

2 To **suspend** requests, perform Steps 3 through 6; to **resume** suspended requests, go to Step 7.

3 If all new requests displayed in the **Data Distribution Requests** list are to be suspended, click on the **Suspend New Requests** button.

- The data distribution requests are suspended.
- Go to Step 5.

4 If a single request displayed in the **Data Distribution Requests** list is to be suspended, first click on the corresponding row in the **Data Distribution Requests** list to highlight the request, then click on the **Suspend** button.

- The selected data distribution request is suspended.

5 Click on the **Refresh** button to update the data displayed on the screen.

- Status of request(s), as displayed in the **State** column of the **Data Distribution Requests** list, change(s) from original value to "Suspended."
- Check mark(s) is (are) displayed in the **Mod** column of the **Data Distribution Requests** list to indicate that changes have been made to the request(s).

6 If there are no suspended requests to be resumed at this time, return to the procedure for **Monitoring/Controlling Data Distribution Requests**.

7 If processing of all new requests displayed in the **Data Distribution Requests** list is to be resumed, click on the **Resume New Requests** button.

- The data distribution requests resume processing.
- Go to Step 9.

8 If processing of a single request displayed in the **Data Distribution Requests** list is to be resumed, first click on the corresponding row in the **Data Distribution Requests** list to highlight the request, then click on the **Resume** button.

- The selected data distribution request resumes processing.

9 Click on the **Refresh** button to update the data displayed on the screen.

- Status of request(s), as displayed in the **State** column of the **Data Distribution Requests** list, changes from "Suspended" to whatever state(s) is (are) appropriate for the continuation of request processing (depending on each request's status when it was suspended).
- Check mark(s) is (are) displayed in the **Mod** column of the **Data Distribution Requests** list to indicate that changes have been made to the request(s).

10 Return to the procedure for **Monitoring/Controlling Data Distribution Requests**.

Canceling Data Distribution Requests

The procedure for **Canceling Data Distribution Requests** is performed as part of the procedure for **Monitoring/Controlling Data Distribution Requests** (previous section of this lesson). The **Data Distribution Operator GUI** provides the Distribution Technician with a means of canceling data distribution requests.

The procedure for canceling data distribution request processing starts with the assumption that all applicable servers and the **Data Distribution Operator GUI** are currently running and the **Data Distribution - Track Activity** window (Figure 10) on the **Distrib'n Requests** tab is being displayed.

Canceling Data Distribution Requests

---

1 If the list of data distribution requests shown on the **Data Distribution - Track Activity** window needs to be filtered to include the distribution request to be canceled, perform the procedure for **Filtering Data Distribution Requests**.

2 To cancel a request first click on the corresponding row in the **Data Distribution Requests** list to highlight the desired request.

3 Click on the **Cancel** button near the bottom of the **Distrib'n Requests** tab.

- The selected data distribution request is canceled.

4 Click on the **Refresh** button to update the data displayed on the screen.

- Status of the request, as displayed in the **State** column of the **Data Distribution Requests** list, changes from its original value to “Canceled.”
- A check mark is displayed in the **Mod** column of the **Data Distribution Requests** list to indicate that the request has been changed.

5 Return to the procedure for **Monitoring/Controlling Data Distribution Requests**.

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Modifying Preambles

Modifying Preambles

The **Preamble Editor** tab (Figure 14) on the **Data Distribution Operator GUI** allows the Distribution Technician to review and/or modify the text of preambles to the following types of documents:

- Packing list.
- Successful e-mail.
- Failed e-mail.

The preambles are accessible in the **/usr/ecs/*MODE*/CUSTOM/data/DSS** directory on the Distribution Server host (Sun internal server host). The directory contains preambles for the different types of distribution. Figure 15 is a sample of the "ftp push successful e-mail" preamble file (EcDsDdFtpPushEMSuccessPreamble.txt).

The following three types of distribution only are currently relevant to DDIST distribution:

- Ftp pull.
- Ftp push.
- Secure distribution (scp).

Consequently, preambles for those types of distribution are the only preambles that are currently applicable.

The procedure for modifying preambles starts with the assumption that all applicable servers and the **Data Distribution Operator GUI** are currently running and the **Data Distribution - Track Activity** window (Figure 10) on the **Distrib'n Requests** tab is being displayed.

Modifying Preambles

1 Click on the **Data Distribution Operator GUI Preamble Editor** tab.

- The **Preamble Editor** screen (Figure 14) is displayed.

2 Select (highlight) the media type for which the preamble is to be modified by clicking on the corresponding row in the **Media Type** window.

- The following media types are listed:
  - **8mm.**

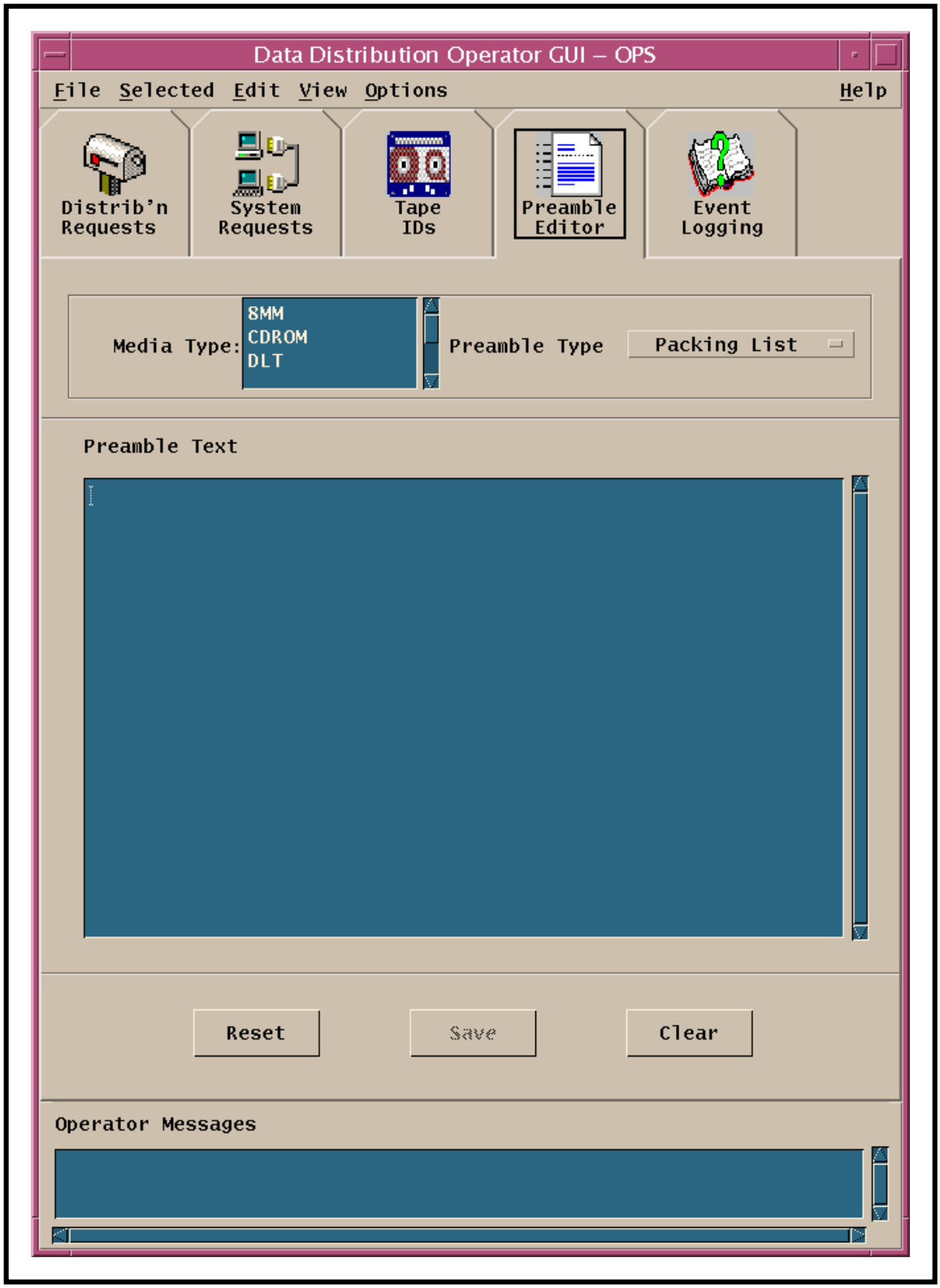

Figure 14. Preamble Editor Tab (Data Distribution Operator GUI)

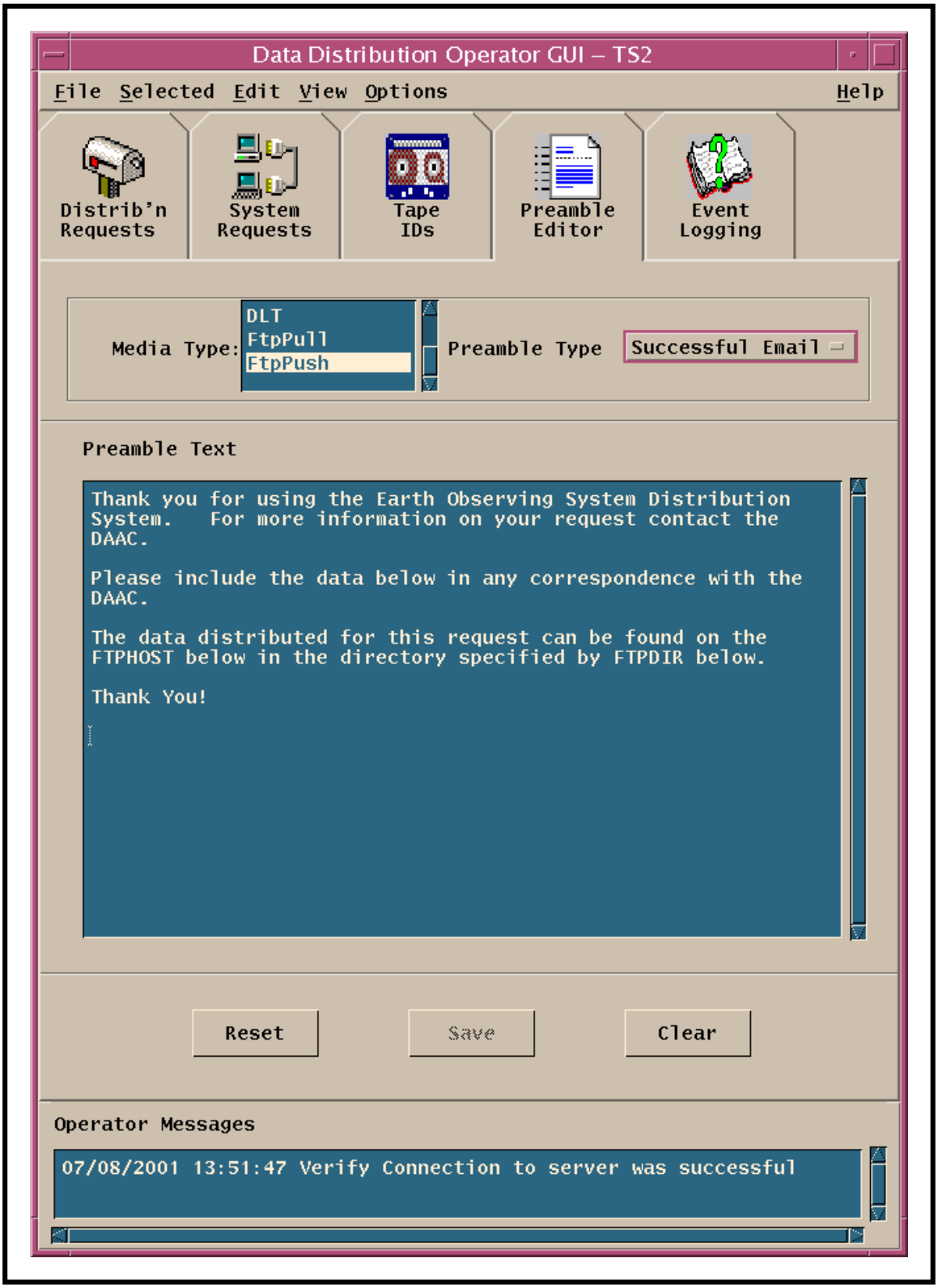

Figure 15. Sample FTP Push Successful E-Mail Preamble

- **CDROM.**
- **DLT.**
- **DVD.**
- **FtpPull.**
- **FtpPush.**
- **scp.**

- The selected media type is highlighted.

3 Click and hold the **Preamble Type** option button to display a menu of types of preambles, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

- The following preamble types are listed:
  - **Packing List.**
  - **Successful Email.**
  - **Failed Email.**
- The selected preamble type is displayed on the **Preamble Type** option button.
- The selected preamble is displayed in the **Preamble Text** window.
  - If the **Preamble Text** window is blank, either there is no current preamble of the specified type or the preamble file is empty. Proceed to Step 4 and create a new preamble.

4 Click in the **Preamble Text** window and type modifications to the preamble text as necessary.

- The following editing functions are available from the **Edit** pull-down menu or by clicking on the right mouse button:
  - **Cut.**
  - **Copy.**
  - **Paste.**

5 Click on the appropriate button from the following selections:

- **Save** - to save the preamble text as modified.
- **Reset** - to discard any changes and revert to the original (unmodified) preamble text.
- **Clear** - to remove all text from the **Preamble Text** window.

– When the **Clear** button has been selected, a **Preamble Save Confirmation Dialogue Box** (Figure 16) is displayed.

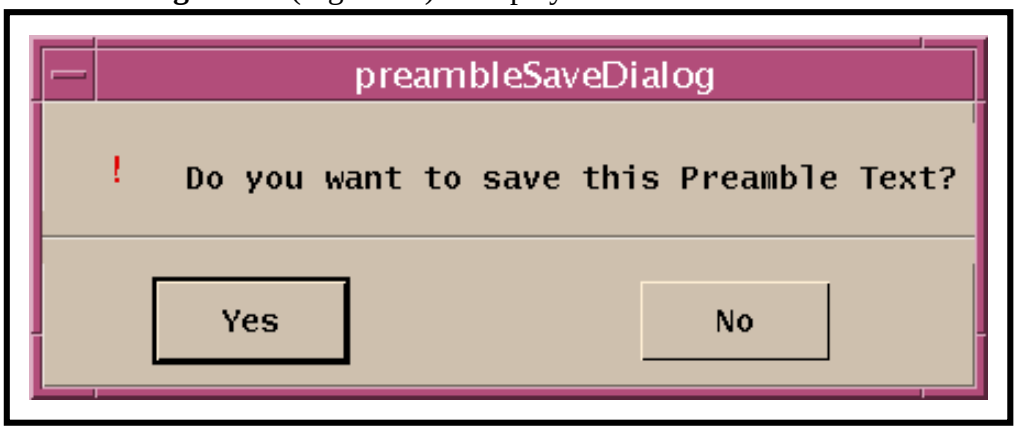

Figure 16. Preamble Save Confirmation Dialogue Box

6 If the **Preamble Save Confirmation Dialogue Box** is displayed, click on the appropriate button from the following selections:

- **Yes** - to save the preamble text as modified.
- **No** - to revert to the original (unmodified) preamble text.

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Configuring Storage Management Polling and Deleting Files from Cache

Configuring Storage Management Polling

The **Storage Management Control** GUI **Options** menu provides the Distribution Technician with a means of switching the **Operator Notification Timer Polling** on or off: In addition, the technician can modify the following parameters:

- Database Polling Rate.
  - How often (in seconds) the system updates the information displayed on the GUI.
- Error Retry Rate.
  - Amount of time (in seconds) that the system waits before trying to poll the database server after a failed attempt.

The procedure for configuring storage management polling starts with the assumption that all applicable servers and the **Storage Management Control** GUI are currently running and the **Storage Config.** tab (Figure 11) is being displayed.

Configuring Storage Management Polling

1 Select **Options** → **System Settings** from the pull-down menu.

- The **Session Settings** dialogue box (Figure 17) is displayed.

2 To change the **Operator Notification Timer Polling** state (from off to on or vice versa), click on the **Polling** button.

- If **OFF** is displayed in the **Polling** field , clicking on the adjacent button turns Polling on.
- If **ON** is displayed in the **Polling** field , clicking on the adjacent button turns Polling off.

3 To change the database polling rate, type the desired value (in seconds) in the **Database Polling Rate** field.

- The default value is 30 seconds.

4 To change the error retry rate, type the desired value (in seconds) in the **Error Retry Rate** field.

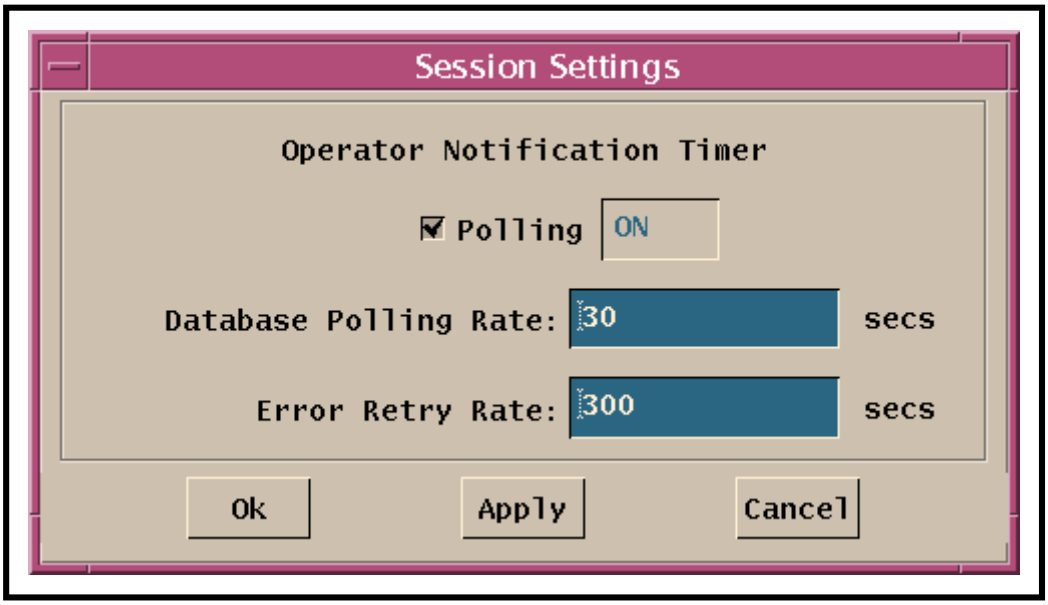

Figure 17. Session Settings Dialogue Box

5 When the appropriate data have been entered in the **Session Settings** dialogue box fields, click on the appropriate button.

- **Ok** - to apply the selections and dismiss the **Session Settings** dialogue box.
- **Apply** - to apply the selections without dismissing the **Session Settings** dialogue box.
- **Cancel** - to dismiss the **Session Settings** dialogue box without applying the selections.

Deleting Files from Cache

The **Storage Management Control** GUI's **Cache Stats.** tab displays all of the files that are in the cache areas, including the Pull Monitor and other staging areas. The data displayed on the **Cache Stats.** tab reports general statistics on the selected cache and allows the operator to manually delete expired files in cache areas.

A just-enough-cache cleanup strategy is used in Storage Management. A principal effect of the strategy is that caches (including the Pull Area) generally remain full because each cache manager (including the cache manager that is configured as the Pull Monitor or Pull Area Manager) automatically identifies and removes just enough old files to accommodate new ones. Consequently, it is likely that manual cache cleanup will not be performed very often. The procedure that follows is provided as a guide for those rare occasions when it is necessary to manually delete files from cache.

The procedure for deleting files from cache starts with the assumption that all applicable servers and the **Storage Management Control** GUI are currently running and the **Storage Config.** tab (Figure 11) is being displayed.

Deleting Files from Cache

---

1 Click on the **Storage Management Control** GUI **Cache Stats.** tab.

- The **Cache Stats.** tab (Figure 18) is displayed.

2 To define the size of a "page" of data displayed in the **Cache Information** table on the **Cache Stats.** tab type the number of rows per page in the **Max Rows Returned** text box.

- **Max Rows Returned** defines the size of a "page" of data displayed in the **Cache Information** table on the **Cache Stats.** tab.
  - For example, setting **Max Rows Returned** to 50 would cause data to be displayed in the **Cache Information** table in pages (groups) of 50 rows of data.
  - If there were 500 files in the selected cache and **Max Rows Returned** were set to 50, there would be 10 pages of data available for display, with the first 50 items being displayed in the **Cache Information** table.
  - The **Prev** and **Next** buttons provide means of displaying additional pages of data.

3 To view the contents of a particular cache (e.g., **FTP Pull Cache**) click and hold on the option button to the right of the **Cache** field, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

- The selected cache is displayed in the **Cache** field of the **Cache Stats.** tab.
- The following cache statistics are displayed in the **Cache Statistics** area:
  - **Current Utilization.**
  - **Used Space (Blocks).**
  - **Free Space (Blocks).**
  - **Total Space (Blocks).**
  - **Number of Resident Files.**
  - **Maximum File Size (Blocks).**
  - **Minimum File Size (Blocks).**
  - **Average File Size (Blocks).**

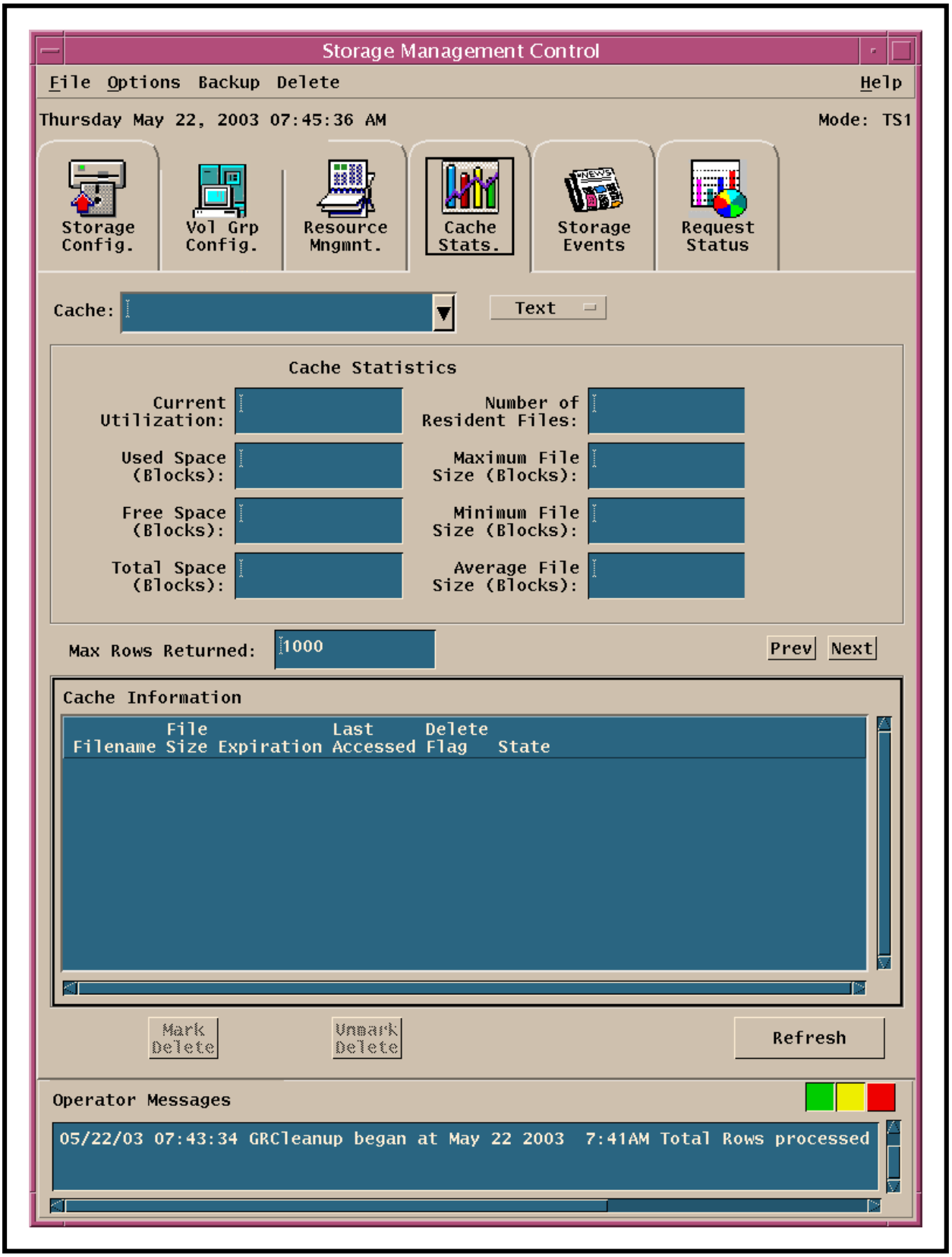

Figure 18. Storage Management Control GUI's Cache Stats. Tab

- The following information concerning the files in the selected cache is listed in the **Cache Information** table:
  - **Filename.**
  - **File Size.**
  - **Expiration** [date/time]**.**
  - **Last Accessed.**
  - **Delete Flag** [displays either **N** or **Y**]**.**
  - **State.**

NOTE: The only view currently accessible using the **Text** (view) option button is **Text**. The **Graphic** view is not currently available.

4 Observe cache statistics/information displayed on the **Cache Stats.** tab.

- As previously mentioned, cache statistics are displayed in the **Cache Statistics** area of the GUI and information concerning the files in the selected cache is listed in the **Cache Information** table.
- The **Refresh** button can be used to update the data on (refresh) the screen.
- The **Prev** and **Next** buttons provide means of displaying additional pages of data.
- The **Operator Messages** field at the bottom of the GUI displays messages concerning events (i.e., information, warnings, or errors) occurring in **Storage Management Control** GUI operations.
  - Error messages are described in Table 8 of the **Troubleshooting a DDIST, STMGT, or Order Manager GUI Failure** section (subsequent section of this lesson).

5 If deleting files, click on the row(s) corresponding to the file(s) to be deleted in the **Cache Information** table on the **Cache Stats.** tab.

- Multiple rows may be selected.

6 If deleting files, click on the **Mark Delete** button near the bottom of the **Cache Stats.** tab.

- **Y** is displayed in the **Delete Flag** field for the row in the **Cache Information** table.

7 If any file that should be left in the cache has been inadvertently marked **Delete**, first click on the row corresponding to the file then click on the **Unmark Delete** button near the bottom of the **Cache Stats.** tab.

- **N** is displayed in the **Delete Flag** field for the row in the **Cache Information** table.

8 If it becomes necessary to exit from the **Storage Management Control** GUI, select **File → Exit** from the pull-down menu.

Viewing Storage Management Event Log Information

The **Storage Events** tab (**Storage Management Control** GUI) provides the Distribution Technician with the ability to search the Event Log and obtain reports on events that have occurred in Storage Management. It is possible to review the following information concerning any particular Storage Management event:

- Number.
- Date.
- Level.
- Type.
- Message.

The following search criteria can be used individually or in combination to view entries in the Event Log:

- Date Interval.
- Event Type.
- Event Level.
- Message.

The procedure for viewing Storage Management Event Log information starts with the assumption that all applicable servers and the **Storage Management Control** GUI are currently running and the **Storage Config.** tab (Figure 11) is being displayed.

Viewing Storage Management Event Log Information

1 Click on the **Storage Management Control** GUI **Storage Events** tab.

- The **Storage Events** screen (Figure 19) is displayed.
- If Event Log entries are to be displayed on the basis of a particular….
  - Time period, perform Step 2. (If no time period is specified, log entries for the current day will be displayed.)
  - Event type, perform Step 3.

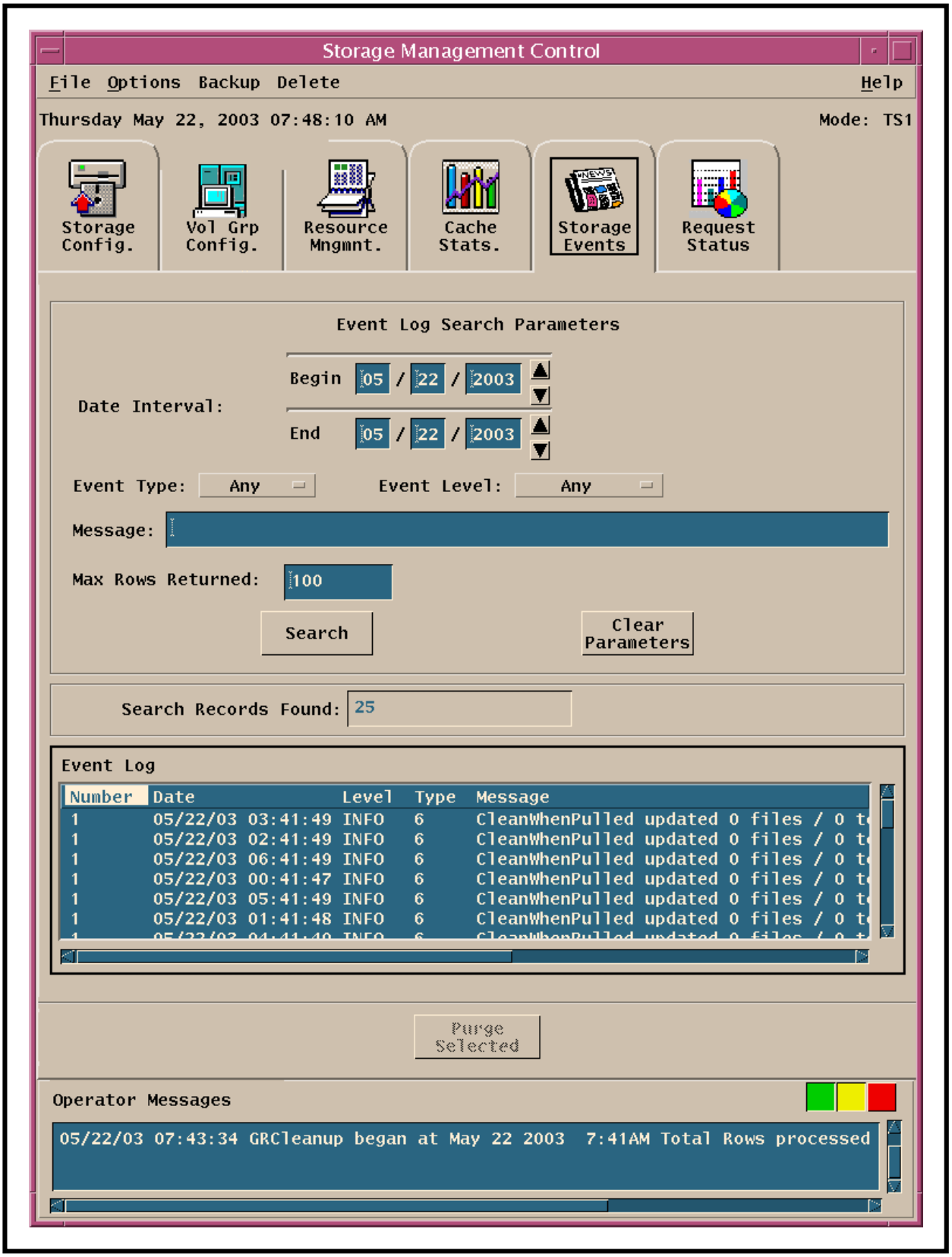

Figure 19. Storage Events Screen

- Event level, perform Step 4.
- Message, perform Step 5.

- Any of the preceding criteria (time period, event type, event level, or message) may be used individually or in combination to view entries in the Event Log.

2 To view Event Log entries for a particular **time period**, click in the appropriate **Date Interval: Begin**, and/or **Date Interval: End** field, and type the appropriate numerical values in ***MM/DD/YYYY*** format.

- The **Tab** key may be pressed to move from field to field.
- Another method of changing date settings (other than typing the numbers) is to click in each of the date fields in turn and click on the up/down buttons adjacent to the **Date Interval** fields until the correct date is indicated.

3 To view log entries for a particular **event type**, click and hold on the **Event Type** option button, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

- The selected event type is displayed on the **Event Type** option button.
- The following event types are displayed on the **Event Type** option button:
  - **Any.**
  - **Device.**
  - **Cache.**
  - **Software.**
  - **COTS.**
  - **Sybase.**
  - **Pulldisk.**
  - **Unknown.**

4 To view log entries for a particular **event level**, click and hold on the **Event Level** option button, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

- The selected event level is displayed on the **Event Level** option button.
- The following event levels are displayed on the **Event Level** option button:
  - **Any.**
  - **Information.**

- **Warning.**
- **Error.**
- **Severe.**
- **Fatal.**
- **Unknown.**

5 To view log entries for a particular **message** type the relevant message in the **Message** field.

6 Click on the **Search** button to search the event log for events that meet the specified criteria.

- The search results are displayed in the **Event Log** table of the **Storage Management Control** GUI **Storage Events** tab (Figure 19).

7 Observe event information displayed in the **Event Log** table.

- Log entries are displayed in the **Event Log** table of the GUI.
- Clicking on any of the column headers of the **Event Log** table causes the listed events to be sorted in order by the column selected.
  - For example, clicking on the **Message** column header causes the events to be listed in alphabetical order by message text.
- The **Operator Messages** field at the bottom of the GUI displays messages concerning events (i.e., information, warnings, or errors) occurring in **Storage Management Control** GUI operations.
  - Error messages are described in Table 8 of the **Troubleshooting a DDIST, STMGT, or Order Manager GUI Failure** section (subsequent section of this lesson).

8 To clear entries in the Event Log Search Parameter fields, click on the **Clear Parameters** button.

- Entries in the Event Log Search Parameter fields are cleared.

9 To purge entries from the Event Log, first click on the row corresponding to the event to be deleted in the **Event Log** table then click on the **Purge Selected** button.

- Multiple entries may be selected.
- Selected entries are deleted from the Event Log.

10 If a new Event Log search is to be performed on the basis of a particular….

- time period, return to Step 2.
- event type, return to Step 3.
- event level, return to Step 4.
- message, return to Step 5.

11 If it becomes necessary to exit from the **Storage Management Control** GUI select **File** → **Exit** from the pull-down menu.

Monitoring Storage Management Server Operations

Request Status

The **Request Status** tab (Figure 20) on the **Storage Management Control** GUI provides the Distribution Technician with the ability to monitor processing activity in all of the storage management servers for a given mode. The **Request Status Information** table lists the requests that are currently being serviced by storage management servers and those that have been completed within the last 24 hours. It is possible to review the following information concerning any particular storage management request:

- Operation [type of operation represented by the request].
- Request ID.
- Progress [stage of processing on which the request is currently working (may include a numeric progress indication)].
- Status.
- Priority.
- When Submitted [time and date when the request was received by the Storage Management server that is responsible for the request].
- Last Updated [time and date when the status was last updated for the request].

Using the **Request Status** tab the Distribution Technician can detect stalled requests or servers that appear to be idle.

Monitoring Storage Management Server Operations

The procedure for monitoring storage management server operations starts with the assumption that all applicable servers and the **Storage Management Control** GUI are currently running and the **Storage Config.** tab (Figure 11) is being displayed.

Monitoring Storage Management Server Operations

1 Click on the **Storage Management Control** GUI **Request Status** tab.

- The **Request Status** tab (Figure 20) is displayed.

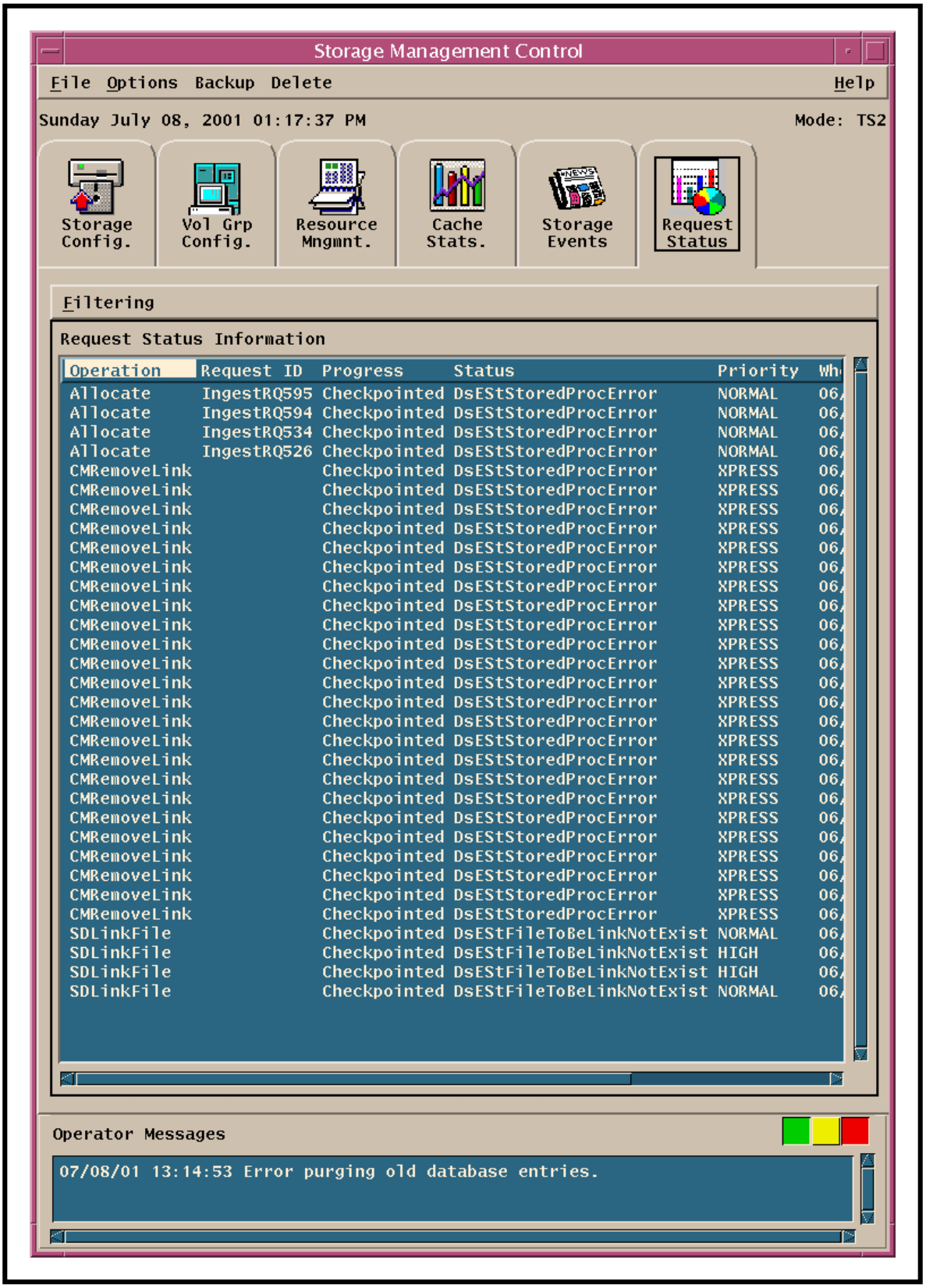

Figure 20. Request Status Tab (Storage Management Control GUI)

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

- The **Request Status Information** table displays the following information:
  - Operation.
  - Request ID.
  - Progress.
  - Status.
  - Priority.
  - When Submitted.
  - Last Updated.
- By default, all storage management server requests for the last 24 hours are shown in the **Request Status Information** table of the **Request Status** tab.
- Note that virtually all data inserted into or retrieved from the archive is controlled by storage management servers; consequently there may be a lot of activity on the **Request Status** tab.
  - Consequently, it may be useful to restrict the number of requests displayed by filtering them as described in the next step of this procedure.
- Clicking on any of the column headers of the **Request Status Information** table causes the listed requests to be sorted in order by the column selected.
  - For example, clicking on the **Last Updated** column header causes the requests to be listed in order from the least recently updated to the most recently updated.
- The **Operator Messages** field at the bottom of the GUI displays messages concerning events (i.e., information, warnings, or errors) occurring in **Storage Management Control** GUI operations.
  - Error messages are described in Table 8 of the **Troubleshooting a DDIST, STMGT, or Order Manager GUI Failure** section (subsequent section of this lesson).

3 If the list of Storage Management requests shown in the **Request Status Information** table needs to be filtered, make the appropriate selection from the following choices listed on the **Filtering** pull-down menu:

- **Server.**
  - Controls what activity is displayed by limiting the list to the requests being/having been serviced by a specific server.

  - Selecting **All** displays all requests throughout the Storage Management CSCI.
  - Other selections include the individual archive servers, cache manager servers, ftp servers, request manager server, and staging disk servers.

- **Operation.**
  - Allows the Distribution Technician to focus on a specific type of operation.
  - The list of operations is dynamically generated to reflect those operations for which requests are currently in queue, for example (among others):
    - All.
    - scp.
    - CMLink.
    - ArStore.
    - FtpPull.
    - FtpPush.

- **Processing State.**
  - Allows the Distribution Technician to differentiate among requests that are being actively processed; have been completed, either successfully or to a retryable error state; or have been suspended and are awaiting the outcome of another event.
  - The following selections are available:
    - All.
    - Processing.
    - Suspended.
    - Completed.

- **Submitter.**
  - Allows the Distribution Technician to see the status of requests submitted by a specific client process.
  - The list of possible clients is dynamically generated to reflect the list of clients with outstanding requests for example (among others):
    - All.
    - DSDD.

- SDSV.
- this.
- [ftp server].
- [archive server].
- [staging disk server].

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

5 Repeat Steps 3 and 4 as necessary to monitor Storage Management requests.

6 If it becomes necessary to exit from the **Storage Management Control** GUI select **File** → **Exit** from the pull-down menu.

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Launching the Order Manager GUI

Launching the Order Manager GUI

The **OM GUI** provides ECS operators with access to the Order Manager database. The GUI is based on web standards. It performs most of its functions by accessing the database directly, in contrast to most current ECS operator GUIs, which interface with servers. The GUI allows operators to view and modify requests that the Order Manager Server has placed on hold because they require operator intervention. In addition, operators can resubmit requests or portions of a request that failed.

For Synergy IV, the **OM GUI** incorporates many of the functions of the **Data Distribution Operator GUI** with the expectation that the **OM GUI** can provide an efficient, centralized interface. Note that the **Data Distribution Operator GUI** is still functional, as is the **ECS Data Order Tracking** GUI, which also shares a number of functions with the **OM GUI**.

New operator GUI security standards require the following two levels of permissions for the OM GUI:

- Full Capability.
- Limited Capability.

Full-capability operators have the ability to configure parameters and perform all other actions that can be accomplished with the **OM GUI**. Limited-capability operators are able to view a lot of information; however, on the limited-capability GUI some buttons and links have been disabled so it is not possible to perform certain actions or access certain pages.

This lesson provides instruction in the full-capability version of the **OM GUI**. The functions that are not available to limited-capability operators are identified in this document.

The Synergy IV **OM GUI** provides both full-capability and limited-capability operators with the ability to perform the following functions:

- Monitor for operator interventions.
- View completed interventions.
- View lists of all distribution requests, ftp push distribution requests or staging distribution requests.
- Filter distribution requests by combinations of order id, request id, status, destination, media type, user id, first name, last name, e-mail address, or creation time.
- View detailed distribution request information.
- View details of an ECS order.

- View the profile of a user associated with an ECS order.
- View suspended ftp push destinations.
- View details for suspended ftp push destinations including ftp push operations that caused the suspension and ftp push requests that are not in a terminal state.
- View bundling order information (link to the **Spatial Subscription Server GUI**).
- Monitor for operator alerts caused by ftp push operations, data pool file system errors, archive server errors, or archive tape errors.
- Monitor processing queue states.
- Monitor staging states.
- Monitor the current staging status by media type or ftp push destination.
- View OM server and OM database parameters.
- View settings for each media type.
- Get general and context-based help for all **OM GUI** functions.

In addition to the preceding actions, full-capability operators can perform the following actions:

- Modify request parameters associated with operator interventions.
- Perform the following actions with respect to distribution requests (as appropriate):
  - Resubmit.
  - Suspend.
  - Resume.
  - Cancel.
- Resume suspended ftp push destinations.
- Suspend/resume processing queue states.
- Suspend/resume staging states.
- Configure OM server and OM database parameters.
- Configure the aging parameters for each ECS priority level.
- Configure settings for each media type.
- Define and configure ftp push destinations, as well as the “policies” for those destinations.

For Synergy IV, the **OM GUI** is certified for use with **Netscape 7** (and higher) browsers and it is strongly recommended that Netscape 7-compatible browsers only be used when accessing the GUI. The **OM GUI** does **not** work properly with **Netscape 4.78** or earlier versions.

Launching the **OM GUI** starts with the assumption that the Distribution Technician has logged in to the ECS system.

Launching the Order Manager GUI

---

1 Access a terminal window logged in to a host (e.g., the Operations Workstation or Sun external server) that has access to the Netscape web browser.

- Examples of Operations Workstation host names include **e0acs03**, **g0acs02**, **l0acs01,** and **n0acs03**.
- Examples of Sun external server host names include **e0ins01**, **g0ins01**, **l0ins01,** and **n0ins01**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **netscape &** then press **Return/Enter**.

- It may be necessary to type the path as well as the netscape command (e.g., **/tools/bin/netscape &**).
- It may be necessary to respond to dialogue boxes, especially if the browser is already being used by someone else who has logged in with the same user ID.
- The Netscape web browser (Figure 21) is displayed.

3 If a bookmark has been created for the **OM GUI**, select the appropriate bookmark from those listed on the browser's **Bookmarks** button (or the **Communicator → Bookmarks** pull-down menu).

- The security login **Prompt** (Figure 22) is displayed.

4 If no bookmark has been created for the **OM GUI**, type **http://*host*:*port*/*path*/** in the browser's **Location (Go To)** field then press **Return/Enter**.

- For example:

  http://x0dps01.daac.ecs.nasa.gov:54321/cgi-bin/

- The security login **Prompt** (Figure 22) is displayed.

5 Type the appropriate user name in the **User Name** box of the security login **Prompt**.

6 Type the appropriate password in the **Password** box of the security login **Prompt**.

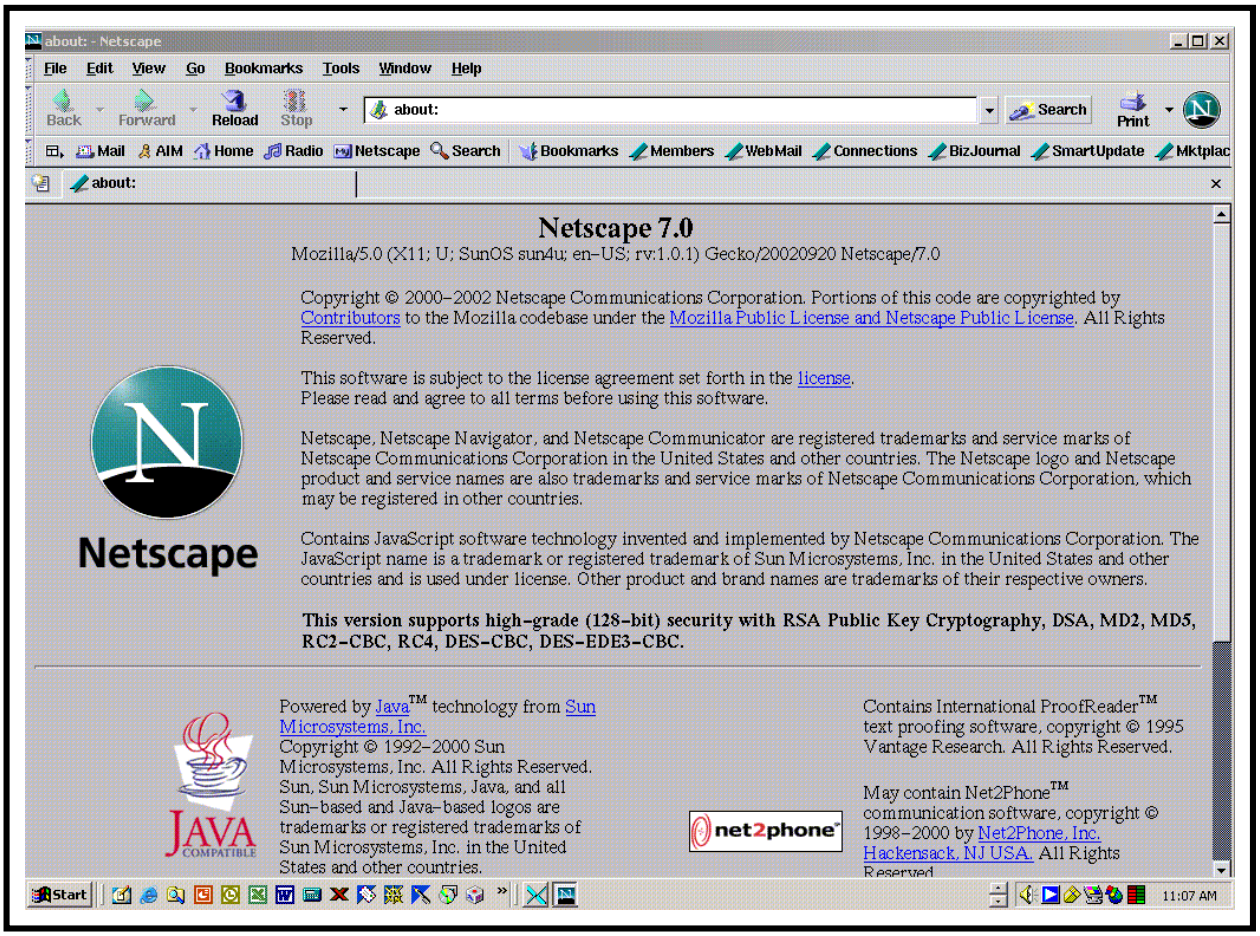

Figure 21. Netscape Web Browser

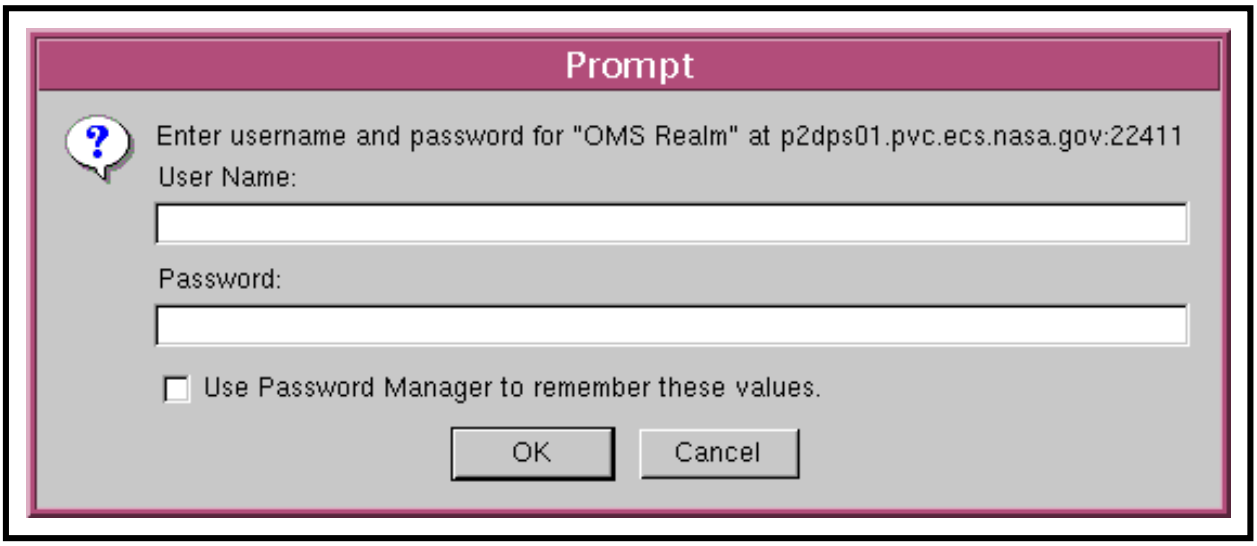

Figure 22. Security Login Prompt

NOTE: If the security login prompt reappears after the first time the user name and password have been entered (and the **OK** button has been clicked), it may not be due to a data entry problem. Try again to log in using the same user name and password. Sometimes it is necessary to enter the user name and password for the GUI more than once.

7 Click on the appropriate button from the following selections:

- **OK** - to complete the log-in and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **Order Manager Page** [**"Home" Page**] (Figure 23) is displayed.
- **Cancel** - to dismiss the dialogue box without logging in.
  - The dialogue box is dismissed.
  - The Netscape web browser (Figure 21) is displayed.

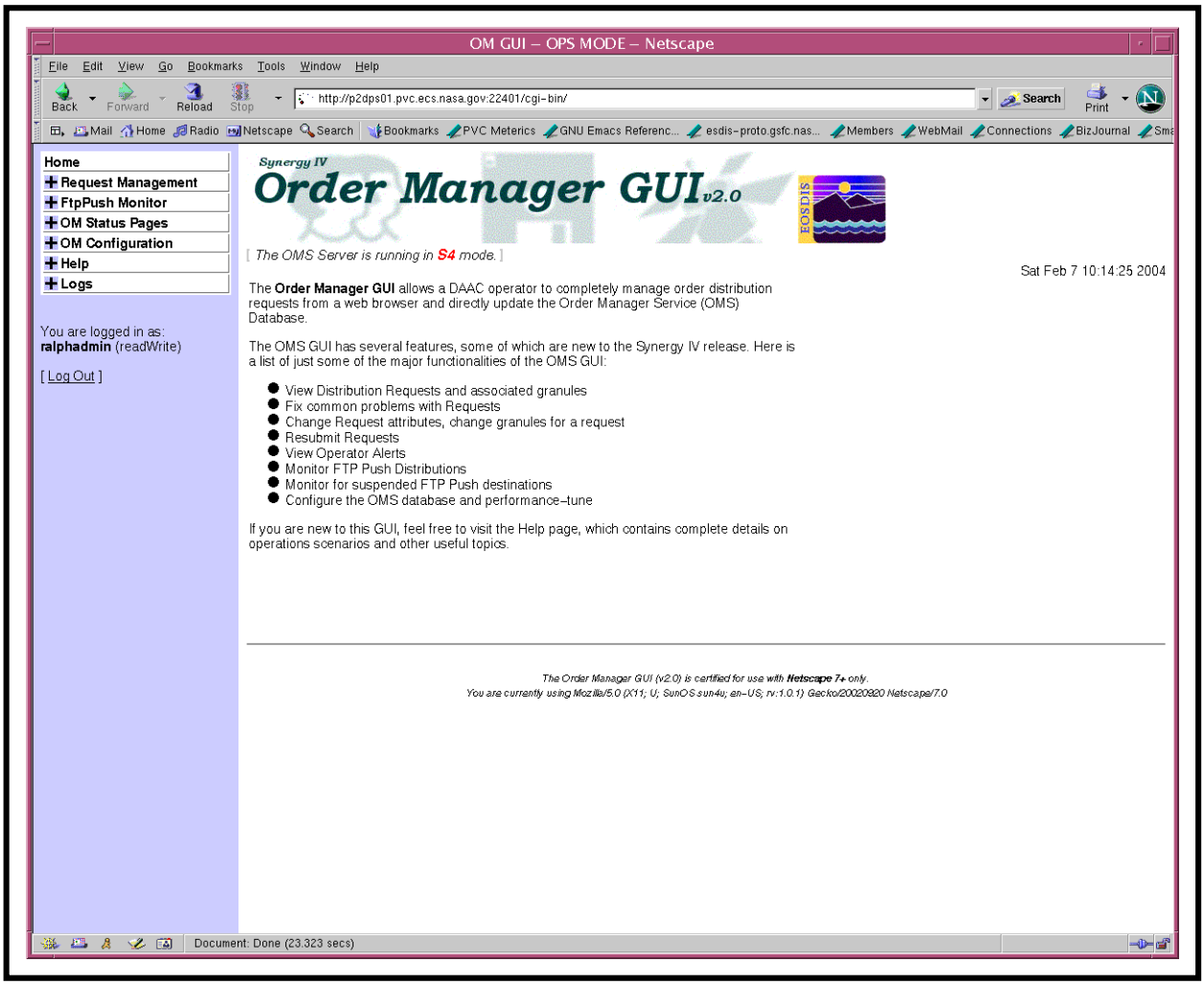

Figure 23. Order Manager Page [“Home” Page]

Monitoring/Controlling Order Manager Operations

Order Manager Activities

Order Manager activities in which the Distribution Technician is likely to be involved are performed using the following **OM GUI** pages:

- **Request Management.**
  - **Open Interventions.**
  - **Completed Interventions.**
  - **Distribution Requests.**
  - **FTP Push Distribution Requests.**
  - **Staging Requests.**
  - **Operator Alerts.**
- **FtpPush Monitor.**
  - **FTP Push Distribution Requests.**
  - **Suspended Destinations.**
- **OM Status Pages.**
  - **OM Queue Status.**
  - **Staging Status:**
    - **Media Type.**
    - **FTP Push Destination.**
- **OM Configuration.**
  - **Aging Parameters.**
  - **Server/Database.**
  - **Media**.
  - **FTP Push Policy**.
- **Help.**
  - **About HelpOnDemand.**

  - **Help.**

- **Logs.**
  - **OM GUI Log Viewer.**

The full-capability operator performs the following tasks when monitoring and controlling Order Manager operations using the **OM GUI**:

- **Viewing Open Intervention Information on the OM GUI**
- **Setting Refresh Options on OM GUI Pages**
- **Responding to an Open Intervention**
- **Monitoring/Controlling Distribution Request Information on the OM GUI**
- **Filtering Data Displayed on the Distribution Requests Pages**
- **Changing the Priority of a Distribution Request Using the OM GUI**
- **Suspending, Resuming, Canceling, or Resubmitting a Distribution Request Using the OM GUI**
- **Editing FtpPush Parameters**
- **Viewing Operator Alerts on the OM GUI**
- **Viewing Completed Intervention Information on the OM GUI**
- **Filtering Data Displayed on the Completed Interventions Page**
- **Viewing and Responding to Suspended FTP Push Distribution Destinations**
- **Viewing and Responding to Destination Details on the OM GUI**
- **Checking/Modifying OM Queue Status**
- **Checking Staging Status**
- **Checking/Modifying Aging Parameters**
- **Checking/Modifying OMS Server or Database Parameters**
- **Checking/Modifying Media Parameters**
- **Checking/Modifying FTP Push Policy Configuration**
- **Adding Destinations to the Frequently Used Destinations List**
- **Modifying Values Assigned to Parameters of Frequently Used Destinations**
- **Viewing the OM GUI Log**

Viewing Open Intervention Information on the OM GUI

The **Open Interventions** page (Figure 24) provides the full-capability operator with a means of viewing and responding to open interventions. (The limited-capability operator can view but cannot work on (respond to) open interventions.)

The procedure for viewing open intervention information on the **OM GUI** starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].

Viewing Open Intervention Information on the OM GUI

---

1 If it has not been expanded already, click on the **Request Management** link in the navigation frame of the **OM GUI**.

- The **Request Management** menu is expanded.

2 Click on the **Open Interventions** link in the navigation frame of the **OM GUI**.

- The **Open Interventions** page (Figure 24) is displayed.
- The **Listing** table has the following columns:
  - **Order Id.**
  - **Request Id.**
  - **Media.**
  - **Status.**
  - **Worked by.**
  - **Created.**
  - **Acknowledged.**
  - **Explanation(s).**

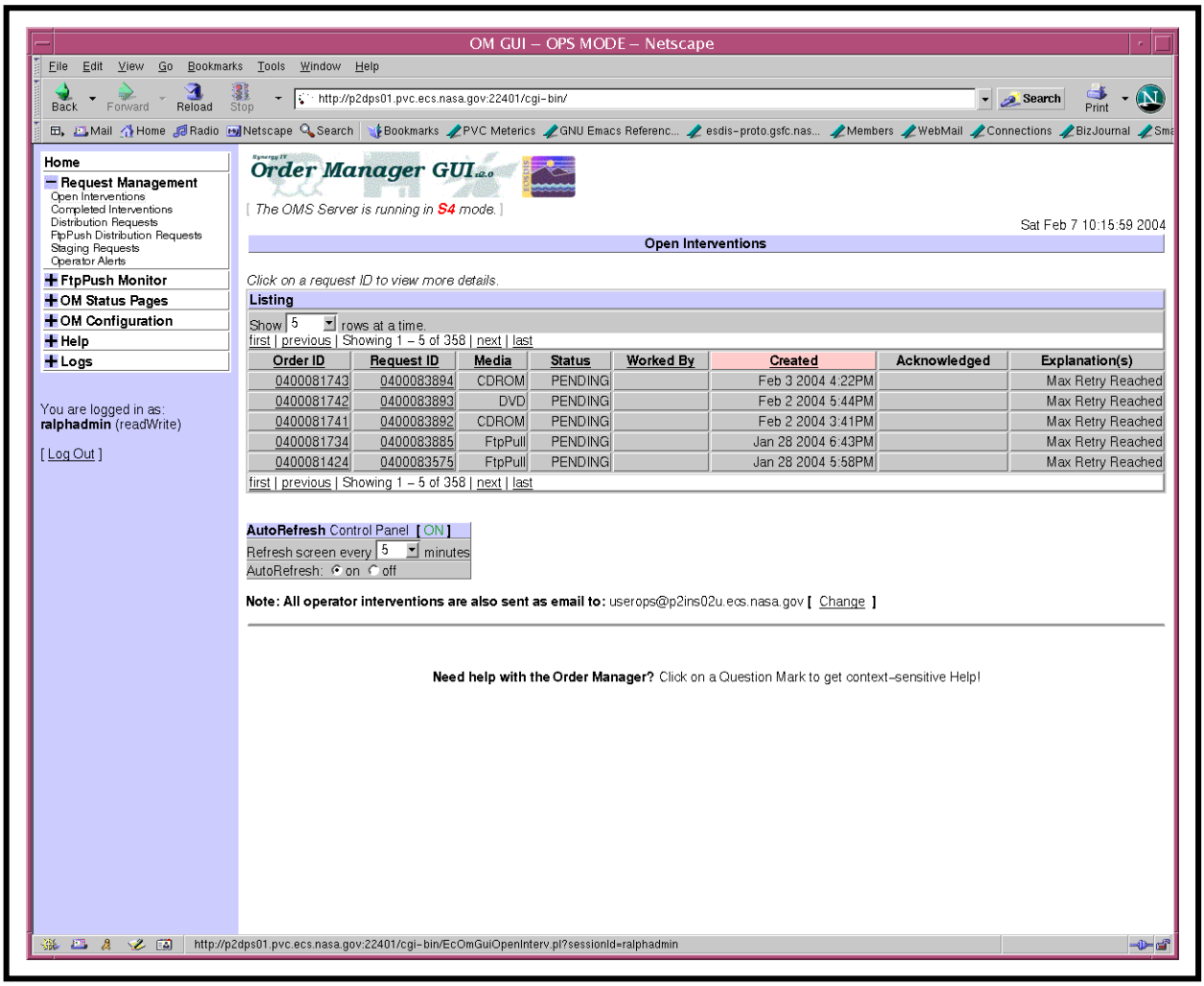

Figure 24. Open Interventions Page

3 Observe information displayed in the **Listing** table of the **Open Interventions** page.

- The **Show _____ rows at a time** window provides a means of selecting the maximum number of rows of data to be displayed at a time.
  - For example, if **Show _____ rows at a time** is being displayed, selecting **50** from the option button would result in the display of a page of data containing up to 50 rows of data.
- Clicking on a link (underlined word) in the column header row of the table causes table contents to be sorted on that column.
  - For example, clicking on the **Created** link causes the table to be organized by "Creation Time," with the most recent request requiring intervention in the top row of the table.

- Clicking on a specific Order ID brings up a screen containing more detailed data concerning that particular order.
  - The **ECS Order** page (Figure 25) displays the following types of data concerning the order:
    - **Request ID(s).**
    - **Order Type.**
    - **Order Source.**
    - **Receive Date.**
    - **Last Update.**
    - **Description.**
    - **Start Date.**
    - **User ID.**
    - **Status.**
    - **Ship Date.**
    - **Order Home DAAC.**
  - If the order is a bundling order (Order Type “Bundled Order” or “BO”), the **ECS Order** page (Figure 25) includes a link to the **Spatial Subscription Server GUI**.
  - Clicking on the Netscape browser **Back** button causes the **Open Interventions** page to be redisplayed.
- Clicking on a specific Request ID in the **Listing** table of the **Open Interventions** page brings up a screen containing detailed data concerning the intervention for that particular request (refer to Steps 3 and 4).
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.
- If **AutoRefresh** is **ON**, the **Open Interventions** page refreshes automatically as often as specified in the **Refresh screen every *x* minutes** window.
  - If a different refresh option is preferred, perform the procedure for **Setting Refresh Options on OM GUI Pages** (subsequent section of this lesson).
- To manually update (refresh) the data on the screen, click on the Netscape browser **Reload** button.

- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

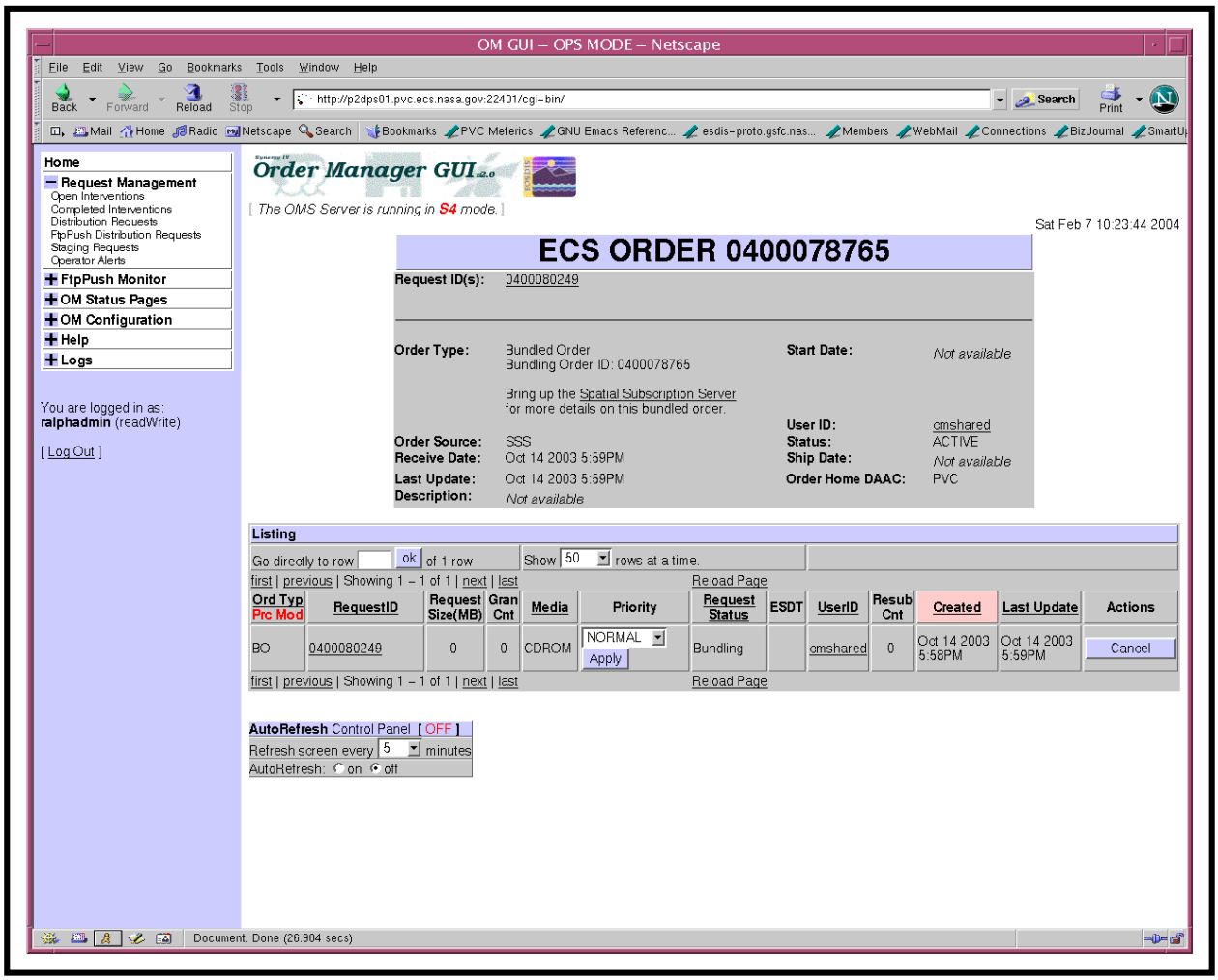

Figure 25. ECS Order Page (Bundling Order)

- The **first**, **previous**, **next**, and **last** links provide means of displaying additional pages of data.

4 Click on a specific Request ID in the **Listing** table of the **Open Interventions** page to bring up a screen containing detailed data concerning the intervention for that particular request.

- For example, clicking on Request ID **0400080905** brings up an **Open Intervention Detail** page (i.e., **Intervention for Request 0400080905**) (Figure 26).

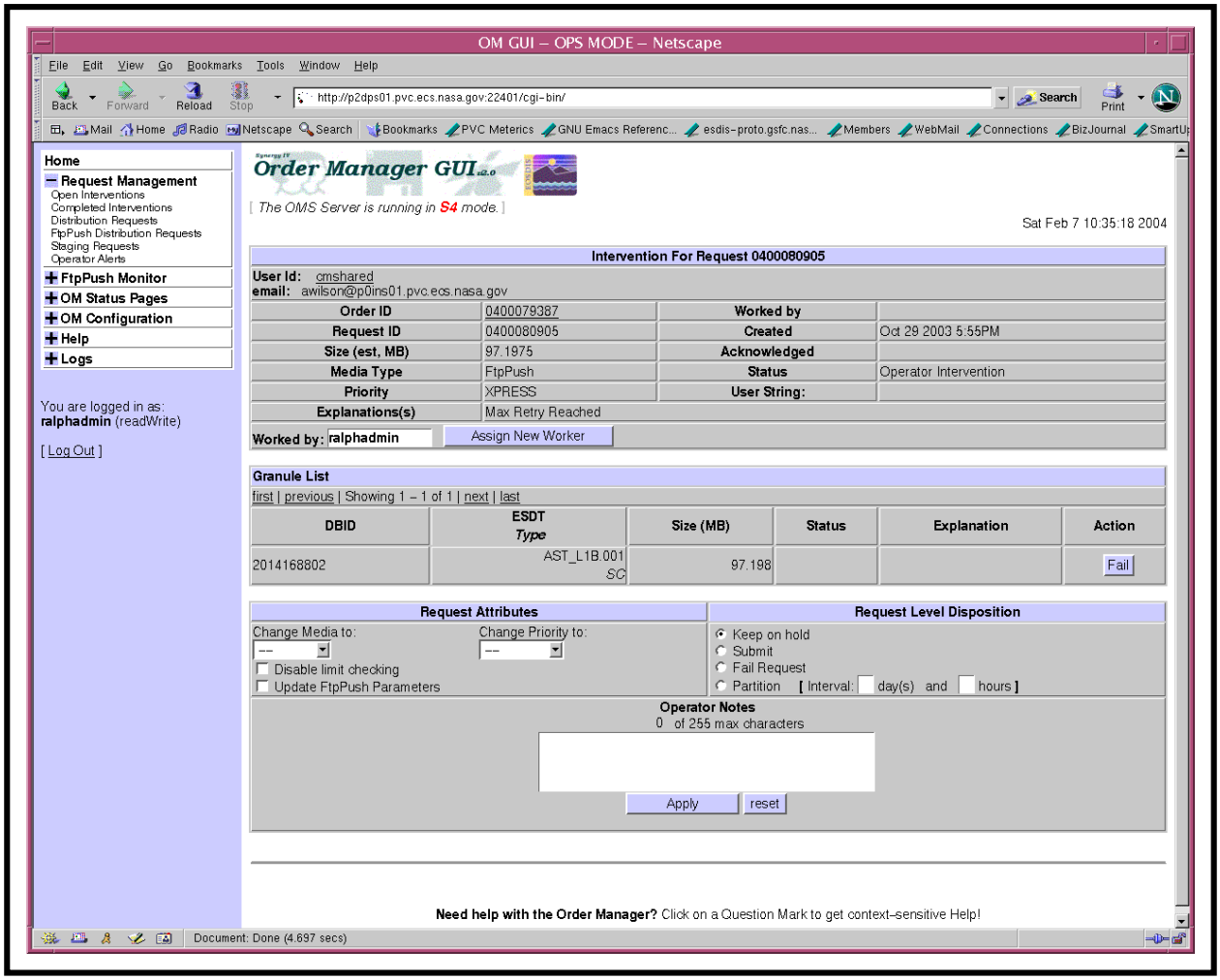

Figure 26. Open Intervention Detail (Intervention for Request X) Page

5 Observe information displayed on the **Open Intervention Detail** page (Figure 26).

- The following items are displayed on the **Open Intervention Detail** page (Figure 26).
  - **User ID.**
  - **email.**
  - **Order ID.**
  - **Request ID.**

- **Size (est, MB).**
- **Media Type.**
- **Priority.**
- **Explanation(s).**
- **Worked by.**
- **Created.**
- **Acknowledged.**
- **Status.**
- **User String:**
- **Worked by:** data entry field.
- **Assign New Worker** button or **Override Current Worker** button.
- **Granule List.**
  - **DBID**, text box (for entering new DBID), and **Apply** button (if applicable).
  - **ESDT *Type*.**
  - **Size (MB).**
  - **Status.**
  - **Explanation.**
  - **Action.**
  - **Fail** button(s) (if applicable).
- **Request Attributes.**
  - **Change Media to:** option button.
  - **Change Priority to:** option button.
  - **Disable limit checking** box.
  - **Update FtpPush Parameters** box (if applicable; i.e., if the current distribution medium is ftp push).
- **Request Level Disposition.**
  - **Keep on hold.**
  - **Submit.**

        - **Fail Request.**
        - **Partition**
        - (Partition) **Interval:** ***d*** **days** ***h*** **hours** boxes.
    - **OPERATOR NOTES**.
        - Text box (for entering comments).
    - **Apply** button.
    - **Reset** button.
- Clicking on the Netscape browser **Back** button causes the **Open Interventions** page to be redisplayed.

6 To work on the intervention being displayed on the **Open Intervention Detail** page, perform the procedure for **Responding to an Open Intervention** (subsequent section of this lesson).

7 To view the details of another open intervention first click on the Netscape browser **Back** button then return to Step 2.

- The **Open Intervention Detail** page (Figure 26) is dismissed.
- The **Open Interventions** page (Figure 24) is displayed.

8 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message “Are you sure you want to log out? This will close your browser.” is displayed.

9 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK -** to dismiss the dialogue box and complete the log-out.
    - The dialogue box is dismissed.
    - The Netscape browser is dismissed.
- **Cancel -** to dismiss the dialogue box without logging out.
    - The dialogue box is dismissed.
    - The **OM GUI** is displayed.

Setting Refresh Options on OM GUI Pages

Buttons at the bottom of **OM GUI** pages provide the Distribution Technician (whether full-capability or limited capability operator) with a means of setting refresh options.

The procedure for setting refresh options starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched.
- One of the following **OM GUI** pages is being displayed:
  - **Open Intervention.**
  - **Distribution Requests.**
  - **FTP Push Distribution Requests.**
  - **Staging Distribution Requests.**
  - **Operator Alerts.**
  - **OM Queue Status.**
  - **Staging Status by Media Type.**
  - **Staging Status by FTP Push Destination.**

Setting Refresh Options on OM GUI Pages

---

1 Observe the **AutoRefresh Control Panel** at the bottom of the **OM GUI** page.

- One of the following **AutoRefresh** statuses is displayed:
  - **ON.**
  - **OFF.**

2 If applicable, click on the appropriate radio button in the **AutoRefresh Control Panel** at the bottom of the **OM GUI** page.

- The following **AutoRefresh** options are available:
  - **on.**
    - It is useful to “auto refresh” when working with current orders/requests that are expected to change status at any time and it is desirable to see the new status right away.

- **off.**
    - It is useful to suspend refresh when a large volume of orders/requests is being processed and it is desirable to preserve the orders/requests displayed on the current screen.

3 To change the refresh rate (assuming **AutoRefresh** is **ON**), click on the **Refresh screen every *x* minutes** option button to display a menu of numbers of minutes then click on the desired selection.

- The following choices are available:
    - **1.**
    - **5.**
    - **10.**
    - **15.**
    - **30.**
    - **45.**
    - **60.**
- Selected number is displayed in the **Refresh screen every *x* minutes** window.

4 Return to the procedure that recommended setting refresh options on **OM GUI** pages.

Responding to an Open Intervention

The **Open Intervention Detail** page (Figure 26) provides the full-capability operator with a means of performing the following kinds of interventions (limited-capability operators are not allowed to work on open interventions):

- Select a different granule to replace a granule that is unavailable.
- Fail selected granule(s).
- Disable limit checking.
- Change the distribution medium for a request.
- Resubmit a request.
- Fail a request.
- Partition (divide) a request.

NOTE: The response to an intervention may require coordination between the Distribution Technician and a User Services representative, especially when

determining a more suitable type of distribution medium, selecting a replacement granule, or taking any other action that would require contacting the person who submitted the order. In fact, depending on the circumstances and DAAC policy it may be appropriate for User Services to assume responsibility for the eventual disposition of some interventions.

The procedure for responding to an open intervention starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].
- The **Open Intervention Detail** page (Figure 26) is being displayed on the **OM GUI**.
  - If the **Open Intervention Detail** page (Figure 26) is not being displayed on the **OM GUI**, go to the procedure for **Viewing Open Intervention Information on the OM GUI** (preceding section of this lesson).

Responding to an Open Intervention

---

1 Observe the information displayed in the **Worked by** column of the **Open Intervention Detail** page (Figure 26).

- If the **Open Intervention Detail** page (Figure 26) is not being displayed on the **OM GUI**, go to the procedure for **Viewing Open Intervention Information on the OM GUI** (preceding section of this lesson).
- If someone is already working on the intervention, that person is identified in the **Worked by:** field of the **Open Intervention Detail** page.
  - In general working on an intervention is left to the person who has already been signed up to work on it unless the change is coordinated with that person or they are going to be unavailable (e.g., due to illness or vacation).
- If necessary (e.g., due to illness, vacation, or prior coordination), it is possible to override the assignment of a person to work on an intervention.

2 To assign oneself to work on the intervention, verify that the **Worked by:** text entry box on the **Open Intervention Detail** page contains the appropriate name or user ID.

- By default the login name appears in the **Worked by:** text entry box on the **Open Intervention Detail** page.
- If necessary, in the **Worked by:** text entry box on the **Open Intervention Detail** page type ***name*** or ***userID***.
- If necessary, overwrite the ID of the previously assigned person.

3 To continue the process of assigning oneself to work on the intervention, click on the **Assign New Worker** or **Override Current Worker** button (as applicable).

4 If no granule in the request is to be "failed" or if all granules in the request are to be "failed," skip Steps 5 through 10 and go to Step 11.

5 If a granule is to be replaced (e.g., because of an "Invalid UR/Granule Not Found" entry in the **Explanation** column of the **Granule List**), first type the Database ID (DBID) of the replacement granule in the **DBID** text box.

- The DBID for a replacement granule can be determined by doing a search using the EDG.

6 To continue the process of specifying a replacement granule, click on the **Apply** button associated with the DBID.

- A dialogue box is displayed to confirm the change to the granule.

7 To continue the process of specifying a replacement granule, click on the appropriate button from the following selections:

- **OK** - to confirm the specification of a replacement granule and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **Open Intervention Detail** page (Figure 26) is displayed.
- **Cancel** - to dismiss the dialogue box without specifying a replacement granule.
  - The dialogue box is dismissed.
  - The **Open Intervention Detail** page (Figure 26) is displayed.

8 If a granule is to be "failed" (e.g., because of an "Invalid UR/Granule Not Found" entry in the **Explanation** column of the **Granule List**), click on the **Fail** button in **Action** column of the row for the granule in the **Granule List**.

- A dialogue box is displayed to confirm the change to the granule.

NOTE: **"**Failing" a granule is a permanent action and cannot be canceled after having been confirmed.

9 To continue the process of failing a granule, click on the appropriate button from the following selections:

- **OK** - to confirm the failure of the granule and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **Open Intervention Detail** page (Figure 26) is displayed.

- **Cancel** - to dismiss the dialogue box without failing the granule.
  - The dialogue box is dismissed.
  - The **Open Intervention Detail** page (Figure 26) is displayed.

10 Repeat Steps 5 through 9 (as necessary) to replace or fail any additional granules.

11 If limit checking should be disabled, click on the **Disable limit checking** box.

- If the **Disable limit checking** attribute is selected and subsequently applied, the request size limit checking is disabled.
- The **Disable limit checking** option makes it possible to override the standard media capacity limits for a particular media type and is most likely to be applied to a non-physical media type (i.e., ftp push, ftp pull, or scp).
- The **Disable limit checking** option can be used to bypass the request size checks if the request was either too small or too large.

12 If the distribution medium should be changed, click on the option button associated with the **Change Media to:** box to display a menu of media then click on the desired selection.

- The following choices are available:
  - **- -.**
  - **FtpPull.**
  - **FtpPush.**
  - **CDROM.**
  - **DLT.**
  - **DVD.**
  - **8MM.**
  - **scp.**
- Selected medium is displayed in the **Change Media to:** box.

13 If the priority of the request should be changed, click on the option button associated with the **Change Priority to:** box to display a menu of priorities then click on the desired selection.

- The following choices may be available (the current priority will not be listed):
  - **- -.**
  - **LOW.**

- **NORMAL.**
- **HIGH.**
- **VHIGH.**
- **XPRESS.**

- Selected priority is displayed in the **Change Priority to:** box.

14 If the ftp push parameters should be changed, click on the **Update FtpPush Parameters** box.

- The **Update FtpPush Parameters** option appears when applicable (i.e., when the current distribution medium for the request is ftp push).
  - The **Update FtpPush Parameters** option provides a means of editing the existing ftp push information when the intervention is closed.

15 If a note should be entered concerning the request (e.g., the reason for making a particular type of intervention), type the applicable text in the **OPERATOR NOTES** text box.

16 To select the disposition for the request click on the appropriate button from the following selections:

- **Keep on hold** - to delay applying any intervention action (keep the intervention open) and dismiss the **Open Intervention Detail** page.
  - Placing an intervention on hold does not allow changing the request's attributes, but saves the operator notes and allows opening the intervention at a later time (essentially, the intervention is being "saved").
- **Submit** - to apply the intervention actions (if any) specified in the **Granule List** and **Request Attributes** sections of the **Open Intervention Detail** page and dismiss the **Open Intervention Detail** page.
- **Fail Request** - to fail the entire request (including all granules) and dismiss the **Open Intervention Detail** page.
- **Partition** - to start the process of partitioning a request that exceeds maximum request size.

17 If the **Partition** button was selected in the preceding step and distribution of the granules should be spread over a period of time, type the appropriate values in the **day(s)** and/or **hours** text box(es) to specify the time period.

NOTE: There are **Apply** and **Reset** buttons at the bottom of the **Open Intervention Detail** page. The **Reset** button does not cancel any changes made to the request or changes made to the DBIDs (changed or failed). It simply resets the form buttons for the **Request Level Disposition** section to their original states.

18 Click on the **Apply** button.

- A **Close Confirmation** page (Figure 27) is displayed.
  - The **Close Confirmation** page displays the actions to be taken; for example, the following types of actions may be listed:
    - **Disposition** [e.g., keep on hold, submit, fail, or partition].
    - **Limit Checking Disabled** [yes, no, or blank].

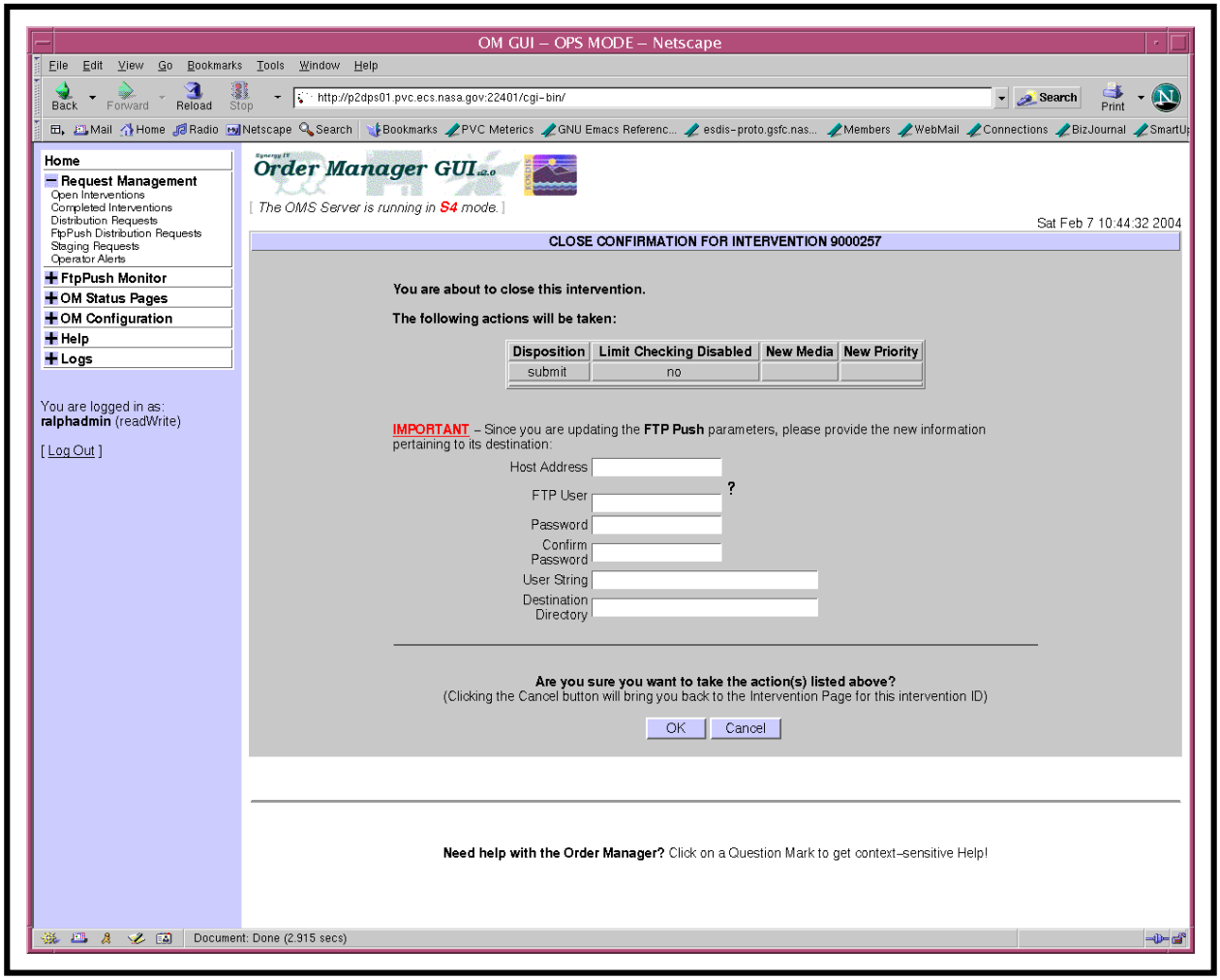

Figure 27. Close Confirmation (CLOSE CONFIRMATION FOR INTERVENTION X) Page

- **New Media** [no, yes: (type), or blank].
- **New Priority** [no, yes: (type), or blank].

- If the intervention involved changing the medium from an electronic medium to a physical medium, text boxes for entering the following types of shipping information are displayed on the **Close Confirmation** page (as shown in Figure 27):
  - **Address 1**.
  - **Address 2**.
  - **Address 3**.
  - **City**.
  - **State/Province**.
  - **Country**.
  - **Zip/Postal Code**.
- If the intervention involved changing the medium to ftp push or updating the ftp push parameters, text boxes for the following ftp push parameters are displayed on the **Close Confirmation** page:
  - **Ftp node** [Destination host name].
  - **Ftp Address** [FTP user name].
  - **Password**.
  - **Confirm Password**.
  - **User String** [message to be sent to the user].
- **Destination Directory** [full path].
- If it was necessary to fail a request or granule(s) within a request, partition a request, or modify the granules in a request, the **Close Confirmation** page includes options for either appending additional text to the default e-mail message to be sent to the requester or choosing not to send an e-mail message to the requester.
  - An **Additional e-mail text** text box for appending text (if desired) to the standard e-mail text is displayed on the **Close Confirmation** page (as shown in Figure 28).
  - A **Don't send e-mail** box to suppress the sending of an e-mail message is displayed on the **Close Confirmation** page.

19 If the intervention involved changing the medium from an electronic medium to a physical medium, type appropriate values in the following text boxes:

- **Address 1.**

- **Address 2.**
- **Address 3.**
- **City.**
- **State/Province.**
- **Country.**
- **Zip/Postal Code.**

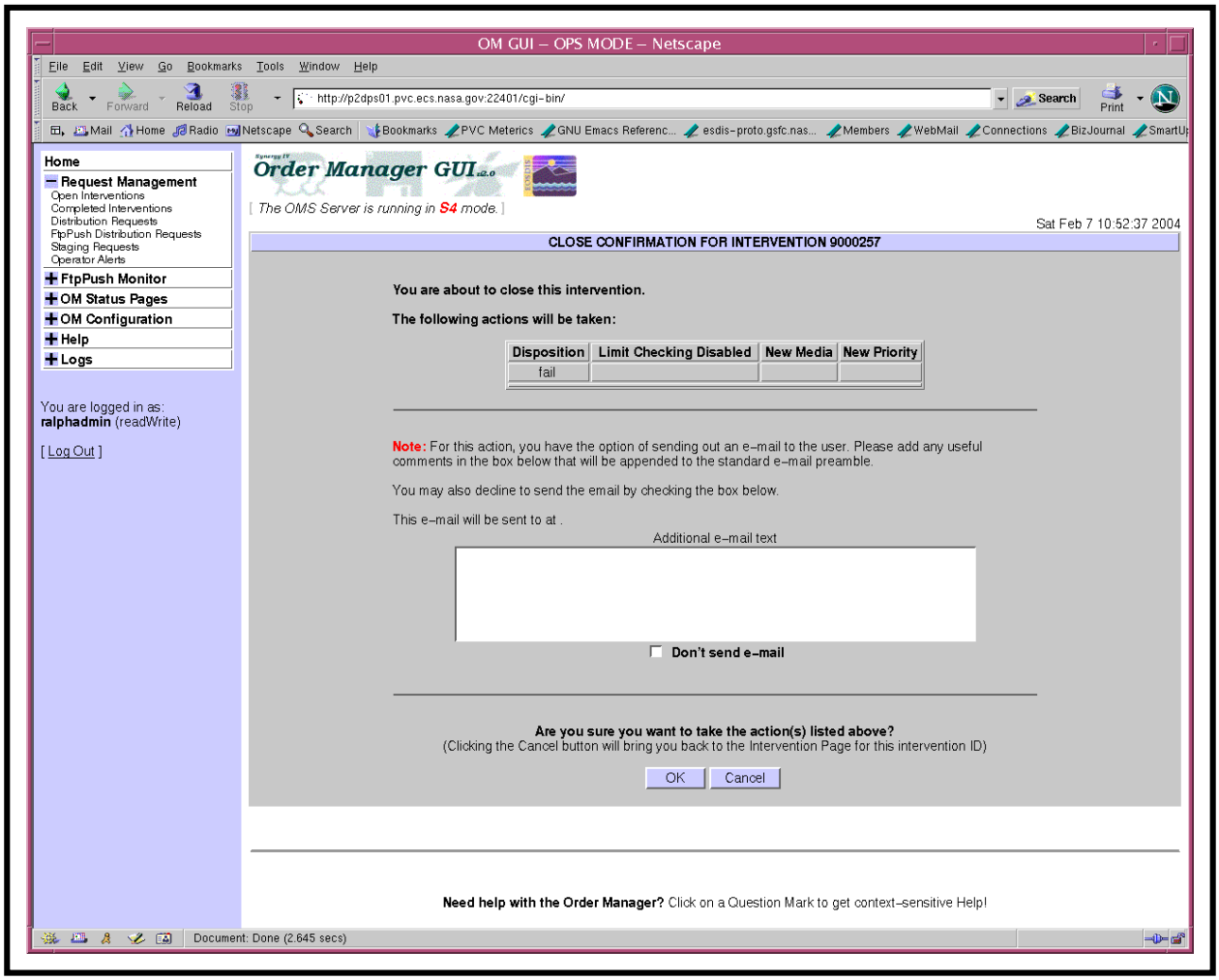

Figure 28. Close Confirmation Page Showing Additional E-Mail Text Box

20 If the intervention involved changing the medium to ftp push or updating the ftp push parameters, perform the procedure for **Editing FtpPush Parameters** (subsequent section of this lesson).

21 If the intervention involved failing a request or granule(s) within a request, partitioning a request, or modifying the granules in a request, and additional text is to be appended to the corresponding standard e-mail text, type the appropriate text in the **Additional e-mail text** text box on the **Close Confirmation** page.

22 If the intervention involved failing a request or granule(s) within a request, partitioning a request, or modifying the granules in a request, and no e-mail message is to be sent, click on the **Don't send e-mail** box on the **Close Confirmation** page to suppress the sending of an e-mail message indicating request/granule failure.

- Unless the **Don't send e-mail** box is checked, an e-mail message indicating request/granule failure will be sent to the requester.

23 Click on the appropriate button from the following selections:

- **OK** - to apply the specified intervention actions (if any) and dismiss the **Close Confirmation** page.
  - The **Close Confirmation** page is dismissed.
  - An **Intervention Closed** page (Figure 29) is displayed
- **Cancel** - to dismiss the **Close Confirmation** page without applying the specified intervention actions.
  - The **Close Confirmation** page is dismissed.
  - A warning dialogue box (Figure 30) is displayed with the message "WARNING: The disposition and actions you have taken for this intervention will be lost. Continue?"

24 If a warning dialogue box is displayed with the message "WARNING: The disposition and actions you have taken for this intervention will be lost. Continue?" click on the appropriate button from the following selections:

- **OK** - to dismiss the warning dialogue box and the **Close Confirmation** page and return to the **Open Intervention Detail** page (Figure 26).
- **Cancel** – to dismiss the warning dialogue box and return to the **Close Confirmation** page (Figure 27).

25 To exit from the **Intervention Closed** page (Figure 29), click on the **OK** button.

- The **Intervention Closed** page (Figure 29) is dismissed.
- The **Open Interventions** page (Figure 24) is displayed.

26 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message “Are you sure you want to log out? This will close your browser.” is displayed.

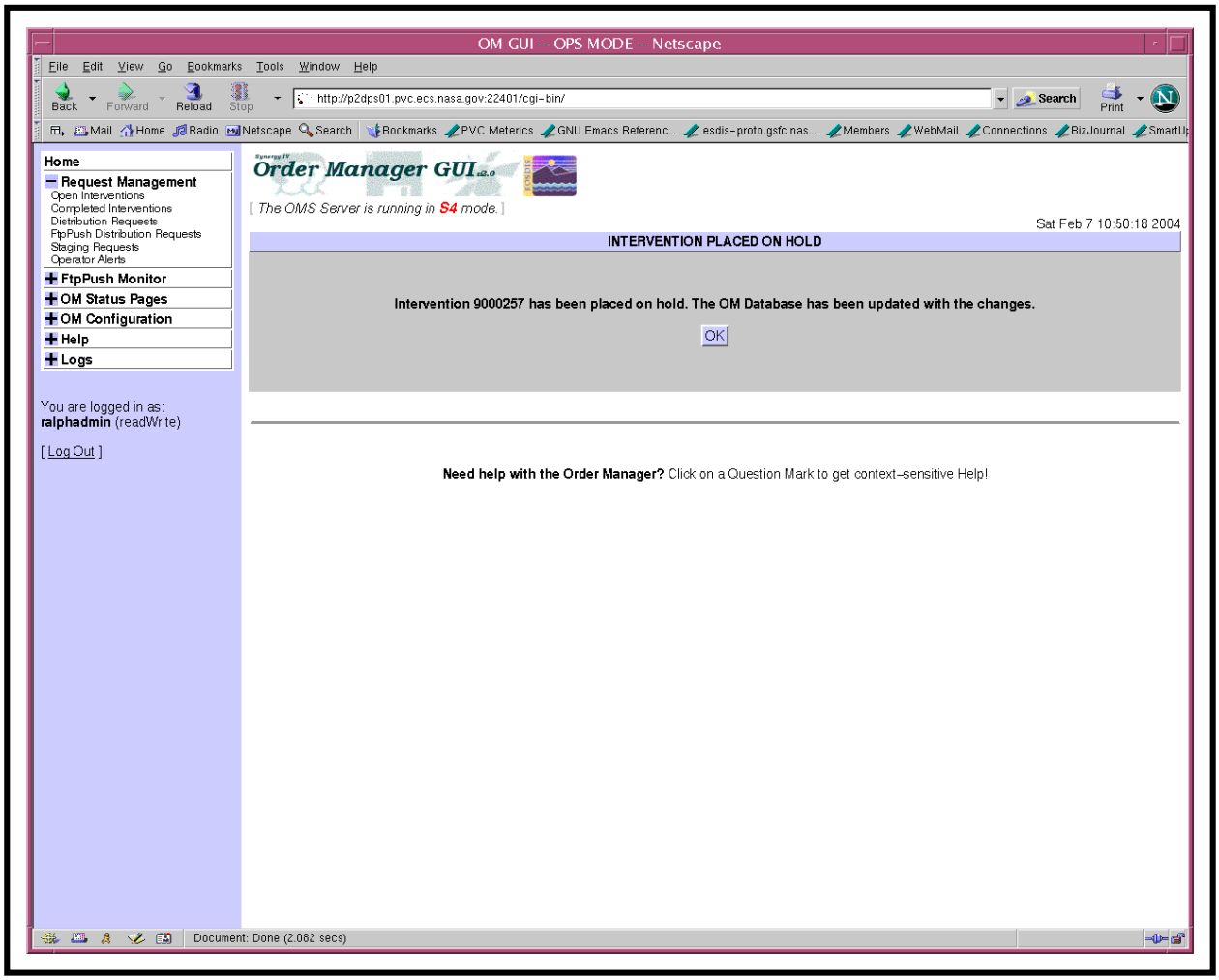

Figure 29. Intervention Disposition Page

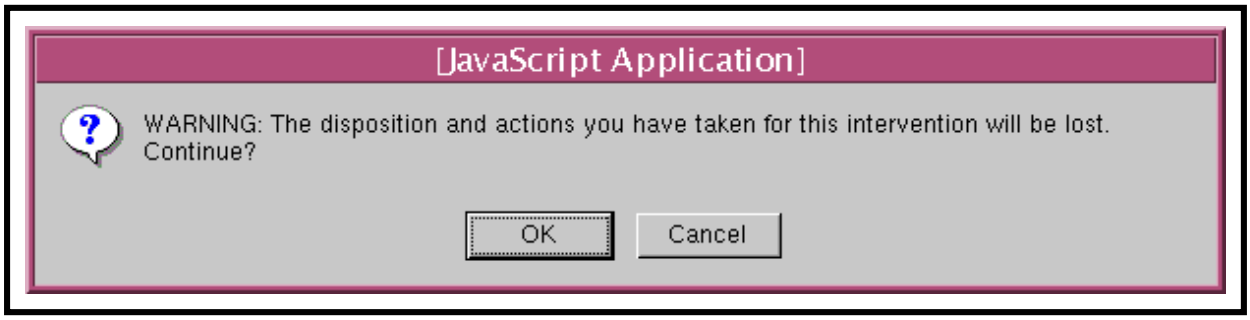

Figure 30. Continue Question Dialogue Box

27 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Monitoring/Controlling Distribution Request Information on the OM GUI

The following three **OM GUI** pages provide the full-capability operator with a means of viewing distribution request information on the **OM GUI** and a means of taking actions with respect to distribution requests:

- **Distribution Requests** page (Figure 31).
- **Staging Distribution Requests** page (Figure 32).
- **FtpPush Distribution Requests** page (Figure 33).

The pages allow the full-capability operator to take the following kinds of actions with respect to distribution requests:

- Change the priority of a distribution request while granules for the request still need to be staged or while granules for the request still need to be pushed.
- Resubmit a request in a terminal state (e.g., aborted, cancelled, terminated, or shipped).

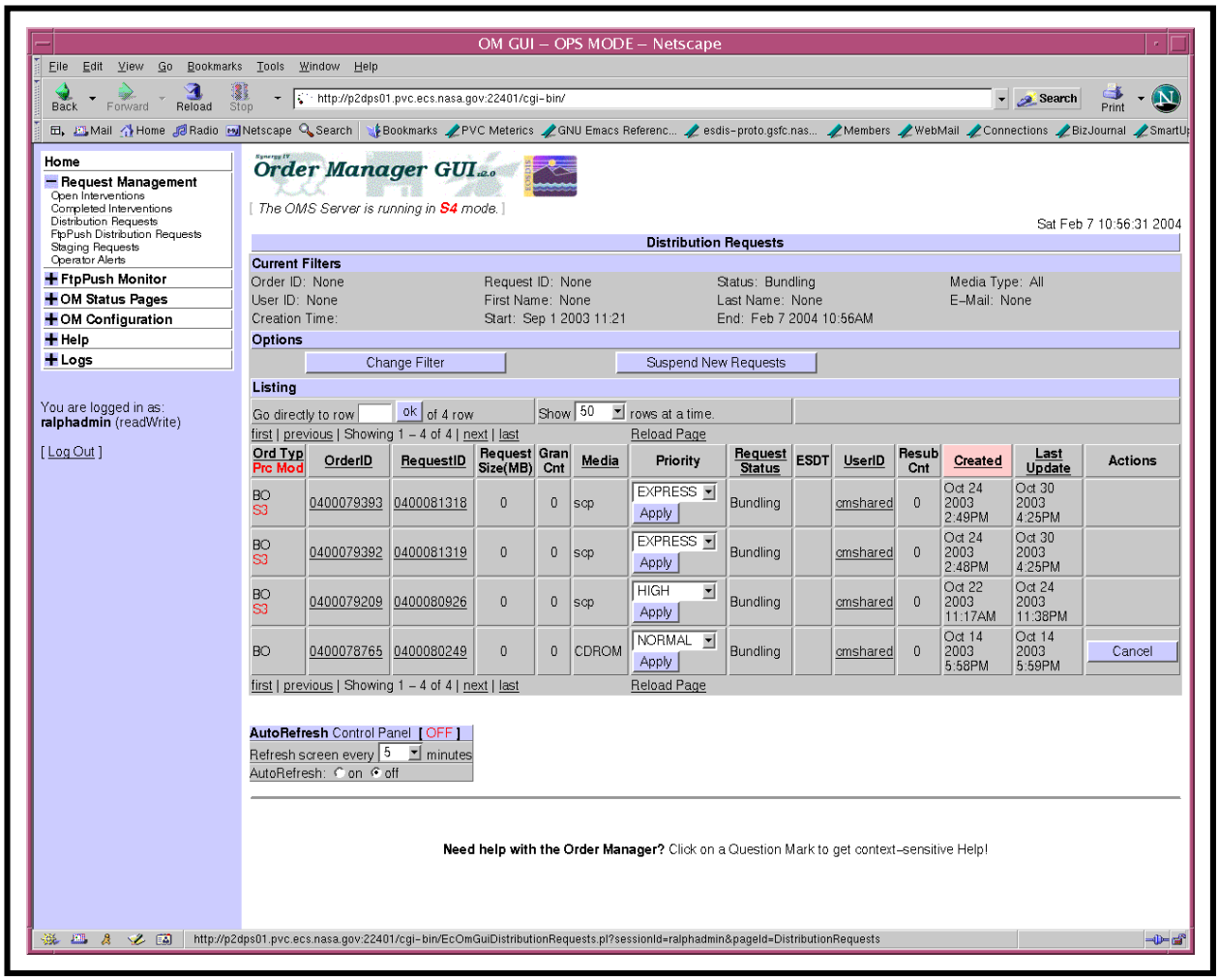

Figure 31. Distribution Requests Page

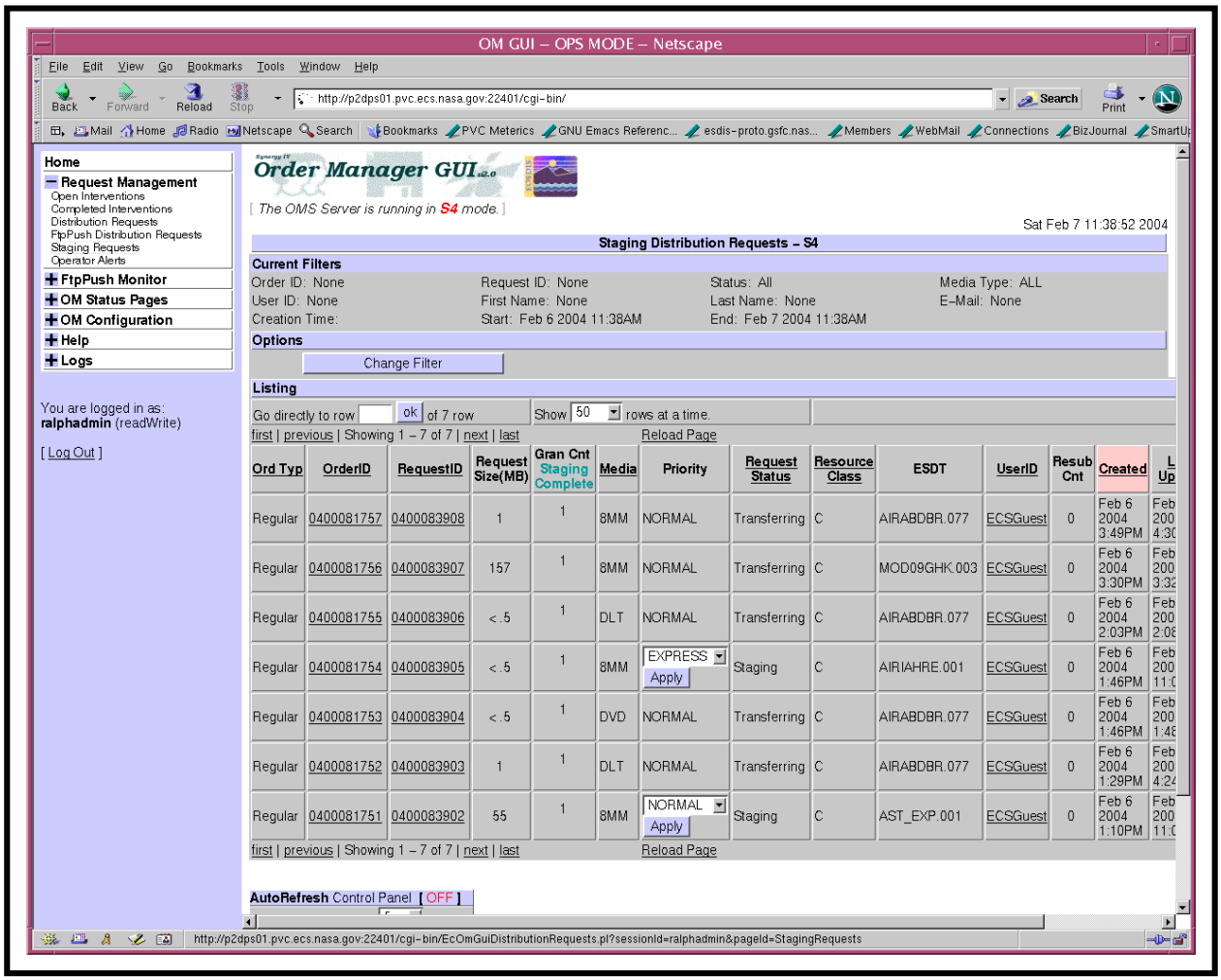

Figure 32. Staging Distribution Requests Page

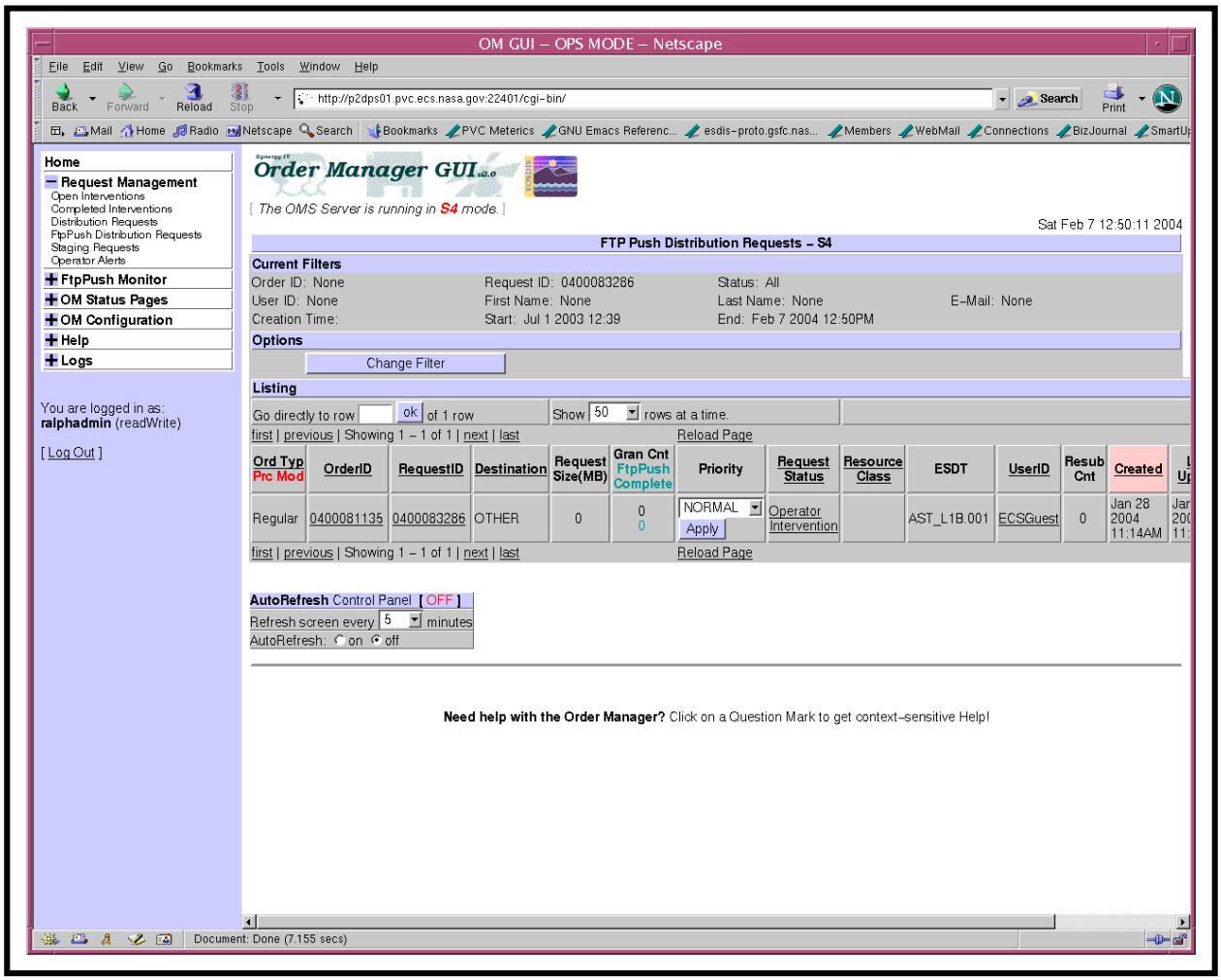

Figure 33. FtpPush Distribution Requests Page

- Suspend a request that still needs to be staged or while granules for the request still need to be pushed.
- Resume a request that was suspended by the OM GUI operator or while the processing of new requests by the OMS is suspended.
- Cancel a request that is not in a terminal state and while granules for the request still need to be staged or pushed.

The limited-capability operator can use the **Distribution Requests** page to view distribution request information but is not allowed to take action on distribution requests.

The procedure for monitoring/controlling distribution request information on the **OM GUI** starts with the following assumptions:

- All applicable servers are currently running.

- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].

Monitoring/Controlling Distribution Request Information on the OM GUI

---

1 If it has not been expanded already, click on the **Request Management** link in the navigation frame of the **OM GUI**.

- The **Request Management** menu is expanded.

2 Click on the **Distribution Requests** link in the navigation frame of the **OM GUI**.

- The **Distribution Requests** page (Figure 31) is displayed.
- The **Current Filters** area of the **Distribution Requests** page describes how the current listing of distribution requests has been filtered.
  - It is important to check the filter settings when opening any of the distribution requests pages because changes to the filter settings tend to persist, even from one session to another.
  - To filter the **Distribution Requests Listing** in a different way, perform the procedure for **Filtering Data Displayed on the Distribution Requests Pages** (subsequent section of this lesson).
- The **Options** area of the **Distribution Requests** page has the following buttons:
  - **Change Filter** [refer to the procedure for **Filtering Data Displayed on the Distribution Requests Pages** (subsequent section of this lesson)].
  - Either **Suspend New Requests** or **Resume New Requests** (as applicable) [refer to Steps 6 and 7].
- The **Listing** table has the following columns:
  - **Ord Typ/Prc Mod** [Order Type/Processing Mode]
    - Order types include “Regular” and “BO” (Bundling Order).
    - Processing mode is either “S3” (Synergy III) or “S4” (Synergy IV). Processing mode appears only when the request mode is different from the current OMS mode.
  - **OrderID.**
  - **RequestID.**
  - **Request Size (MB).**
  - **Gran Cnt** [Granule Count].

- **Media.**
- **Priority.**
- **Request Status.**
- **ESDT.**
- **UserID.**
- **Resub Cnt** [Resubmit Count].
- **Created.**
- **Last Update.**
- **Actions** [Actions (e.g., Resubmit, Cancel, Suspend, or Resume) for which the request is eligible.].

3 Observe information displayed in the **Listing** table of the **Distribution Requests** page.

- The **Show _____ rows at a time** window provides a means of selecting the maximum number of rows of data to be displayed at a time.
  - For example, if **Show _____ rows at a time** is being displayed, selecting **50** from the option button would result in the display of a page of data containing up to 50 rows of data.
- Clicking on a link in the column header row of the table causes table contents to be sorted on that column.
  - For example, clicking on the **Created** link causes the table to be organized by date, with the most recent distribution request in the top row of the table.
- Clicking on a specific Order ID or Request ID brings up a screen containing more detailed data concerning that particular order or request.
  - For example, clicking on Order ID **0400078765** brings up an **ECS Order** page (i.e., **ECS ORDER 0400078765 -** Figure 25) that displays the following types of data concerning the order:
    - **Request ID(s).**
    - **Order Type.**
    - **Order Source.**
    - **Receive Date.**
    - **Last Update.**
    - **Description.**
    - **Start Date.**

- **User ID.**
- **Status.**
- **Ship Date.**
- **Order Home DAAC.**

– If the order is a bundling order (Order Type “Bundled Order” or “BO”), the **ECS Order** page (Figure 25) includes a link to the **Spatial Subscription Server GUI**.

– Clicking on the Netscape browser **Back** button causes the **Request Management** page **Distribution Requests** page to be redisplayed.

– For example, clicking on Request ID **0400083900** brings up a **Distribution Request Detail** page (i.e., **DISTRIBUTION REQUEST 0400083900 -** Figure 34) that displays the following types of data concerning the request:

- **UserID.**
- **E-mail.**
- **Request Size (MB).**
- **# Granules.**
- **# Granules Staged.**
- **# Granules FTP Pushed.**
- **Receive Date/Time.**
- **Start Date/Time.**
- **Last Update.**
- **End Date/Time.**
- **OrderId.**
- **Order Type.**
- **Ext. RequestId.**
- **Priority.**
- **Request Status.**
- **Destination.**
- **Edit FtpPush Parameters** [button].
- **Resubmit Count.**

- **Media Type.**

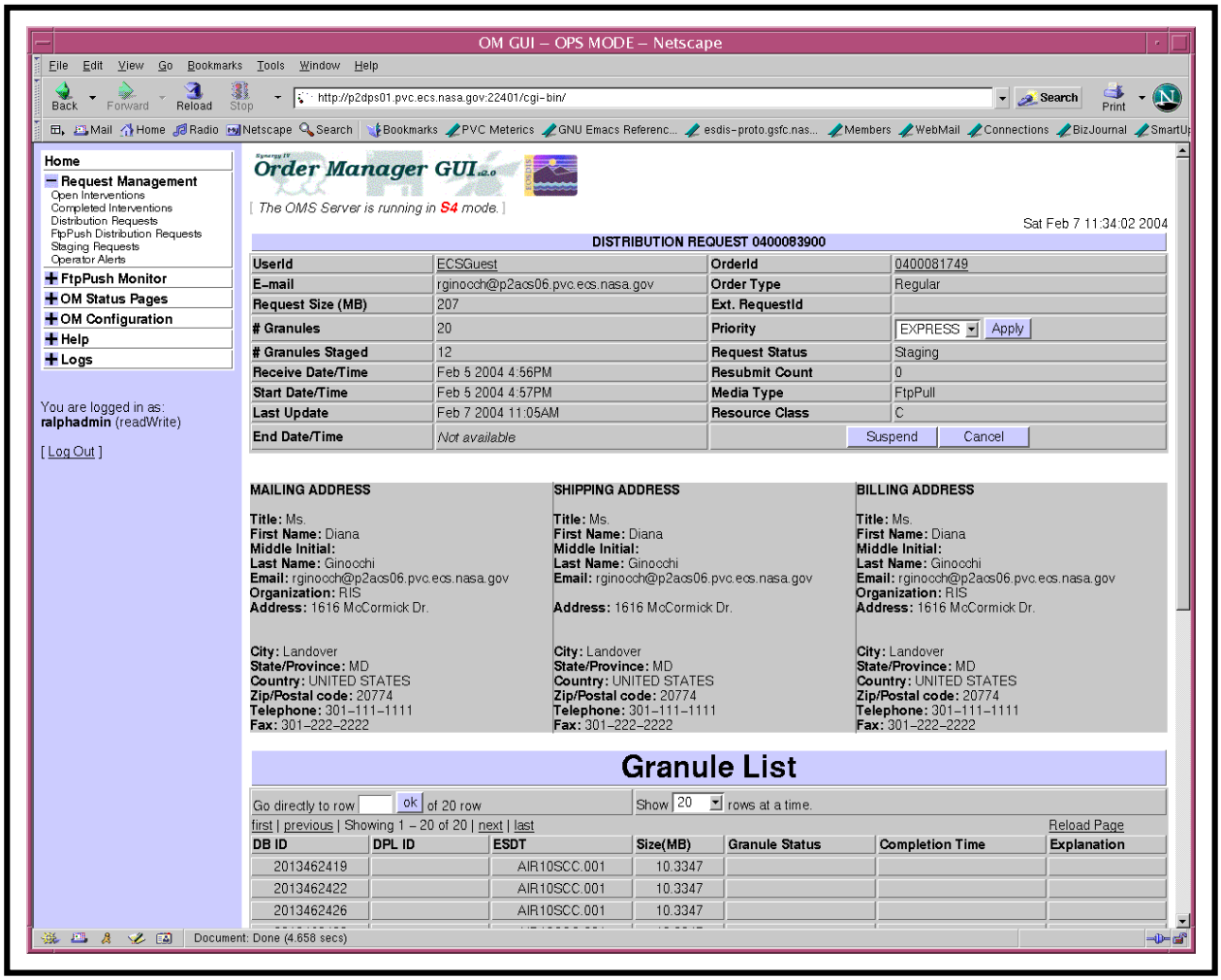

Figure 34. Distribution Request Detail (DISTRIBUTION REQUEST X) Page

- **Resource Class.**
- [Action button(s) (e.g., **Resubmit**, **Cancel**, **Suspend**, and/or **Resume**)].
- **Mailing Address: Title; First Name; Middle Name; Last Name; Email; Organization; Address; City; State/Province; Country; Zip/Postal code; Telephone; Fax.**
- **Shipping Address: Title; First Name; Middle Name; Last Name; Email; Address; City; State/Province; Country; Zip/Postal code; Telephone; Fax.**

        - **Billing Address: Title; First Name; Middle Name; Last Name; Email; Organization; Address; City; State/Province; Country; Zip/Postal code; Telephone; Fax.**
        - **Granule List: DB ID; DPL ID; ESDT; Size (MB); Granule Status; Completion Time; Explanation.**

- Clicking on a specific User ID brings up a screen that shows user profile information for that user, including the following types of data:
    - **Contact Information.**
        - **Name.**
        - **E-Mail Address.**
        - **Organization.**
        - **User ID.**
        - **User Verification Key.**
        - **Affiliation.**
        - **Project.**
        - **Home DAAC.**
        - **Primary area of study.**
    - **Account Information.**
        - **Date created.**
        - **Expiration date.**
        - **Privilege level.**
        - **NASA user.**
        - **Access privilege.**
        - **V0 Gateway user type.**
        - **V0 Gateway category.**
    - **Contact Address.**
        - **Address.**
        - **City.**
        - **State/Province.**
        - **Country.**

        - **Zip/Postal code.**
        - **Telephone.**
        - **Fax.**
    - **DAR [Data Acquisition Request] Information**
        - **Aster category.**
        - **DAR expedited data.**
    - **Shipping Address.**
        - **Title.**
        - **First Name.**
        - **Middle Initial.**
        - **Last Name.**
        - **Email.**
        - **Address.**
        - **City.**
        - **State/Province.**
        - **Country.**
        - **Zip/Postal code.**
        - **Telephone.**
        - **Fax.**
    - **Billing Address.**
        - [Same fields as **Shipping Address**]
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.
- If **AutoRefresh** is **ON**, the **Distribution Requests** page refreshes automatically as often as specified in the **Refresh screen every *x* minutes** window.
    - If a different refresh option is preferred, perform the procedure for **Setting Refresh Options on OM GUI Pages** (preceding section of this lesson).
- To manually update (refresh) the data on the screen, click on the **Reload Page** link.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

- The **first**, **previous**, **next**, and **last** links provide means of displaying additional pages of data.
- The **Go directly to row…** window provides a means of displaying a page of data starting with a particular row of the table.
  - For example, if **Go directly to row _____ of 415 rows** is being displayed, typing **315** in the window and clicking on the **ok** button would result in the display of a page of data containing rows 315 through 364.

4 If the list of distribution requests shown in the **Listing** table of the **Distribution Requests** page needs to be filtered (e.g., a request to be viewed is not listed in the table), perform the procedure for **Filtering Data Displayed on the Distribution Requests Pages** (subsequent section of this lesson).

5 Observe information displayed in the **Listing** table of the **Distribution Requests** page.

6 To suspend all new distribution requests (when applicable), click on the **Suspend New Requests** button in the **Options** area of the **Distribution Requests** page.

- The **Suspend New Requests** button changes to a **Resume New Requests** button when new requests have been suspended.
- The **Suspend New Requests** button should be visible only when new requests are not already being suspended.

7 To resume processing of new requests (when applicable), click on the **Resume New Requests** button in the **Options** area of the **Distribution Requests** page.

- The **Resume New Requests** button changes to a **Suspend New Requests** button when new requests have been resumed.
- The **Resume New Requests** button should be visible only when new requests are currently being suspended.

8 To change the priority of a distribution request (when applicable), perform the procedure for **Changing the Priority of a Distribution Request Using the OM GUI** (subsequent section of this lesson).

9 To either suspend a distribution request or resume processing of a suspended request (when applicable), perform the procedure for **Suspending, Resuming, Canceling, or Resubmitting a Distribution Request Using the OM GUI** (subsequent section of this lesson).

10 To cancel a distribution request (when applicable), perform the procedure for **Suspending, Resuming, Canceling, or Resubmitting a Distribution Request Using the OM GUI** (subsequent section of this lesson).

11 To review and/or respond to an open intervention for a particular distribution request first click on the **Open Intervention** link in the **Request Status** column for the request in the **Listing** table.

12 To review and/or respond to an open intervention go to the procedure for **Viewing Open Intervention Information on the OM GUI** (preceding section of this lesson).

13 To reprocess a distribution request that has failed, been cancelled, or been shipped (when applicable), perform the procedure for **Suspending, Resuming, Canceling, or Resubmitting a Distribution Request Using the OM GUI** (subsequent section of this lesson).

14 To edit ftp push parameters for a particular distribution request (when applicable), perform the procedure for **Editing FtpPush Parameters** (subsequent section of this lesson).

15 To view operator alerts, perform the procedure for **Viewing Operator Alerts on the OM GUI** (subsequent section of this lesson).

16 To view the **Staging Distribution Requests** page, first (if it has not been expanded already) click on the **FtpPush Monitor** link in the navigation frame of the **OM GUI**.

- The **FtpPush Monitor** menu is expanded (as applicable).

17 To view the **Staging Distribution Requests** page click on the **Staging Requests** link in the navigation frame of the **OM GUI**.

- The **Staging Distribution Requests** page (Figure 32) is displayed.
- The **Staging Distribution Requests** page displays the same types of information (for each request in the list) and has the same kinds of links as the **Distribution Requests** page; however, the **Staging Distribution Requests** page has a couple of differences:
  - The **Resource Class** column shows each request's archive resource demand in terms of one of the following values:
    - **C** [Cheap].
    - **M** [Moderate].
    - **E** [Expensive].
  - Sorting the table by **Resource Class** (by clicking on the **Resource Class** column header) provides a convenient way to determine which request(s) is (are) having the most significant effects on archive resources. That may lead to suspending or canceling certain requests.
  - The **Gran Cnt/Staging Complete** column shows the number of granules associated with the request and the number of granules that have completed staging.

18 To view the **FtpPush Distribution Requests** page, first (if it has not been expanded already) click on either **Request Management** or the **FtpPush Monitor** link in the navigation frame of the **OM GUI**.

- The **Request Management** or **FtpPush Monitor** menu is expanded (as applicable).

19 To view the **FtpPush Distribution Requests** page click on the **FtpPush Distribution Requests** link in the navigation frame of the **OM GUI**.

- The **FtpPush Distribution Requests** page (Figure 33) is displayed.
- The **FtpPush Distribution Requests** page displays the same types of information (for each request in the list) and has the same kinds of links as the **Distribution Requests** page; however, there are several differences:
  - There is no **Media** column (all requests use the same type of medium – ftp push).
  - The **Destination** column shows the name of the destination.
  - The **Gran Cnt/FtpPush Complete** column shows the number of granules associated with the request and the number of granules that have completed ftp push.
  - The **Resource Class** column shows each request's archive resource demand (as on the **Staging Distribution Requests** page).
- To filter the list of distribution requests shown in the **Listing** table of the **FtpPush Distribution Requests** page perform the procedure for **Filtering Data Displayed on the Distribution Requests Pages** (subsequent section of this lesson).

20 If there is an **OM GUI** failure, perform the applicable procedure(s) in the **Troubleshooting DDIST and Order Manager GUI Problems** section of this lesson.

21 Repeat Steps 3 through 20 as necessary to monitor distribution requests.

22 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

23 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.

- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Filtering Data Displayed on the Distribution Requests Pages

The **Change Filter** buttons in the **Options** area of the **Distribution Requests** page (Figure 31), **Staging Distribution Requests** page (Figure 32), or the **FtpPush Distribution Requests** page (Figure 33) provide the Distribution Technician (whether full-capability or limited capability operator) with a means of filtering data displayed on the screen.

The procedure for filtering data displayed on the **Distribution Requests** pages starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched.
- The **Distribution Requests** page (Figure 31), **Staging Distribution Requests** page (Figure 32), or the **FtpPush Distribution Requests** page (Figure 33) is being displayed.

Filtering Data Displayed on the Distribution Requests Pages

NOTE: By default, distribution requests are filtered by "creation time" within the last 24 hours, all statuses, and all media types. However, changes made to the filter settings tend to persist, even from one session to another. To restore the default filtering criteria click on the **Apply Defaults** button in the filter pop-up window.

NOTE: The session ID provides a means of tracking which GUI pages are accessed and what filter options are used during a particular session. Such data is especially important when several operators are using the OM GUI in the same mode at the same time. For example, an individual operator's previously selected filter options can be retrieved from the session data so the filter options do not have to be reentered every time the same type of search is performed.

1 Click on the **Change Filter** button in the **Options** area of the **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page.

- A **Distribution Requests Filters** pop-up window (Figure 35) is displayed.

- The **Distribution Requests Filters** pop-up window contains fields for changing various filters.
  - The **Distribution Requests Filters**, **Staging Distribution Requests Filters**, and **FtpPush Distribution Requests Filters** pop-up windows are similar except the **FtpPush Distribution Requests Filters** pop-up window has no **Media Type Select List** window (because all requests on the page are ftp push requests).

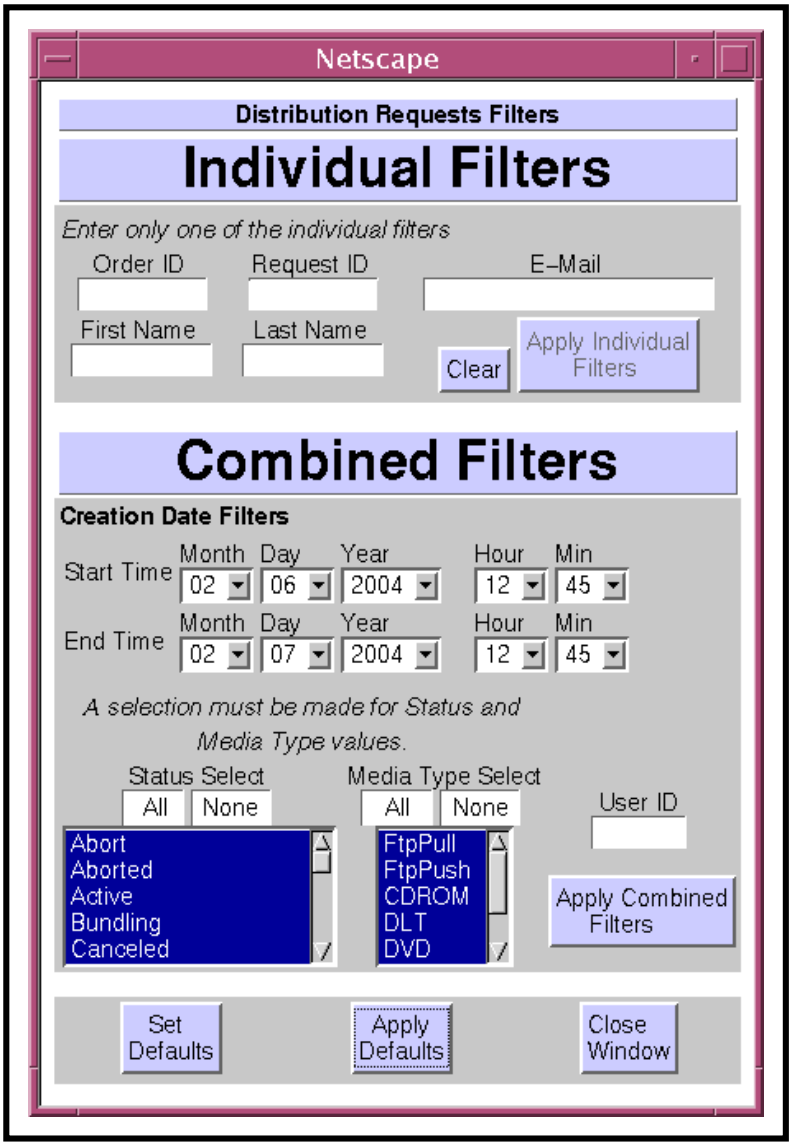

Figure 35. Distribution Requests Filters Pop-Up Window

NOTE: The pop-up window may not open enough to display all of the features of the filters. If the three buttons (i.e., **Set Defaults**, **Apply Defaults**, and **Close Window**) at the bottom of the window are not visible, click and hold on one of the bottom corners of the window and pull down with the mouse to expand the window and reveal the buttons.

2 If the distribution request(s) associated with a particular Individual Filter only should be displayed on the **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page, type the ***value*** of the Order ID, Request ID, E-Mail, First Name, or Last Name in the appropriate text box.

- The following text boxes are available for Individual Filters:
  - **Order ID.**
  - **Request ID.**
  - **E-Mail.**
  - **First Name.**
  - **Last Name.**
- If a value is entered in one of the text boxes in the preceding list, the other four text boxes are disabled.
  - To clear a field in which a value has been entered and enable all fields, either delete the entered value or click on the **Clear** button.

3 If a value was entered in one of the text boxes in Step 2, click on the **Apply Individual Filters** button.

- The **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page refreshes.
- Only requests that meet the specified filter criteria appear in the **Listing** table.

NOTE: Whenever Combined Filters are applied, Status and Media Type options must be specified (except for the **FtpPush Distribution Requests** page filter, which has no Media Type filter because ftp push is assumed).

4 If the relevant distribution request(s) has (have) creation time outside the range indicated in the **Start Month**, **Start Day**, **Start Year**, **Start Hour**, **Start Minute**, **End Month**, **End Day**, **End Year**, **End Hour**, and **End Minute** boxes, as necessary click on each date/time option button to display a drop-down list of month, day, year, hour, or minute options then click on the desired selection.

- Selected number is displayed in each date/time box.
- Filtering by “Creation Time” may be combined with other filtering options (refer to Steps 5 through 8).

5 If distribution requests with particular status(es) only should be displayed on the **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page, click on the desired status(es) in the **Status Select List** window to highlight or unhighlight them (while holding down either the **Shift** key or the **Ctrl** key if highlighting multiple selections).

- To quickly deselect all highlighted statuses, click on the **Status Select – None** button (clears all selections so individual statuses can be selected).
- To quickly select all statuses, click on the **Status Select – All** button (all items are highlighted).
- The following choices are available:
  - **Abort.**
  - **Aborted.**
  - **Active.**
  - **Bundling.**
  - **Canceled.**
  - **Cancelled.**
  - **Expired.**
  - **Not Found.**
  - **Operator Intervention.**
  - **Partitioned.**
  - **Pending.**
  - **Prep for Distribution.**
  - **Queued.**
  - **SDSRV Staging.**
  - **Shipped.**
  - **Subset Staging.**
  - **Staging.**
  - **Subsetting.**
  - **Terminated.**
  - **Transferring.**

  - **Waiting for Shipment.**

- Selected status(es) is (are) highlighted in the **Status Select List** window; undesired status(es) is (are) not highlighted in the **Status Select List** window.
- To quickly deselect all highlighted statuses, click on the **Status Select – None** button.
- To quickly select all statuses, click on the **Status Select – All** button.
- A vertical scroll bar allows viewing data that are not readily visible in the **Status Select List** window.
- Filtering by "Status" may be combined with other filtering options (refer to Steps 4 through 8).
  - Whenever Combined Filters are applied, Status and Media Type options must be specified (except for the **FtpPush Distribution Requests** page filter, which requires no Media Type because ftp push is assumed).
- If all filtering criteria have been selected, go to Step 8.

6 If distribution requests for particular type(s) of medium only should be displayed on the **Distribution Requests** page or the **Staging Distribution Requests** page, click on the desired medium/media in the **Media Type Select List** window to highlight or unhighlight them (while holding down either the **Shift** key or the **Ctrl** key if highlighting multiple selections).

- To quickly deselect all highlighted media, click on the **Media Type Select – None** button (clears all selections so individual media can be selected).
- To quickly select all media, click on the **Media Type Select – All** button (all items are highlighted).
- The following Media Type choices are available:
  - **FtpPull.**
  - **FtpPush.**
  - **CDROM.**
  - **DLT.**
  - **DVD.**
  - **8MM.**
  - **scp** [secure copy distribution].
- Selected medium/media is (are) highlighted in the **Media Type Select List** window; undesired medium/media is (are) not highlighted in the **Media Type Select List** window.

- A vertical scroll bar allows viewing data that are not readily visible in the **Media Type Select List** window.
- Filtering by "Media Type" may be combined with other filtering options (refer to Steps 4 through 8).
  - Whenever Combined Filters are applied, Status and Media Type options must be specified (except for the **FtpPush Distribution Requests** page filter, which requires no Media Type because ftp push is assumed).
- If all filtering criteria have been selected, go to Step 8.

7 If the distribution requests associated with a particular User ID only should be displayed on the **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page, type the ***UserID*** in the **User ID** text box.

8 If value(s) was (were) specified for any of the filters in Steps 4 through 7, click on the **Apply Combined Filters** button.

- The **Distribution Requests** page, **Staging Distribution Requests** page, or the **FtpPush Distribution Requests** page refreshes.
- Only requests that meet the specified filter criteria appear in the **Listing** table.

9 When all relevant filtering criteria have been applied (as described in Steps 2 through 8), click on the **Close Window** button.

- The **Distribution Requests Filters** window is dismissed.

10 Return to the procedure that recommended filtering data displayed on the **Distribution Requests** pages.

Changing the Priority of a Distribution Request Using the OM GUI

The procedure for **Changing the Priority of a Distribution Request Using the OM GUI** is performed as part of the procedure for **Monitoring/Controlling Distribution Request Information on the OM GUI** (preceding section of this lesson). The priority of an S4 (Synergy IV) request can be changed while granules for the request still need to be staged or pushed.

The **Priority** column in the **Distribution Requests** table of the **Distribution Requests** page (Figure 31), **Staging Distribution Requests** page (Figure 32), the **FtpPush Distribution Requests** page (Figure 33) or the **Destination Details** page (Figure 36 or Figure 37) on the **OM GUI** allows the full-capability operator to change the priority of distribution requests that are in a state that allows the priority to be changed. The **Priority** line of the **Distribution Request Details** page (Figure 34) provides the full-capability operator with an alternative means of changing the priority of the particular distribution request.

The limited-capability operator is not allowed to change the priority of distribution requests.

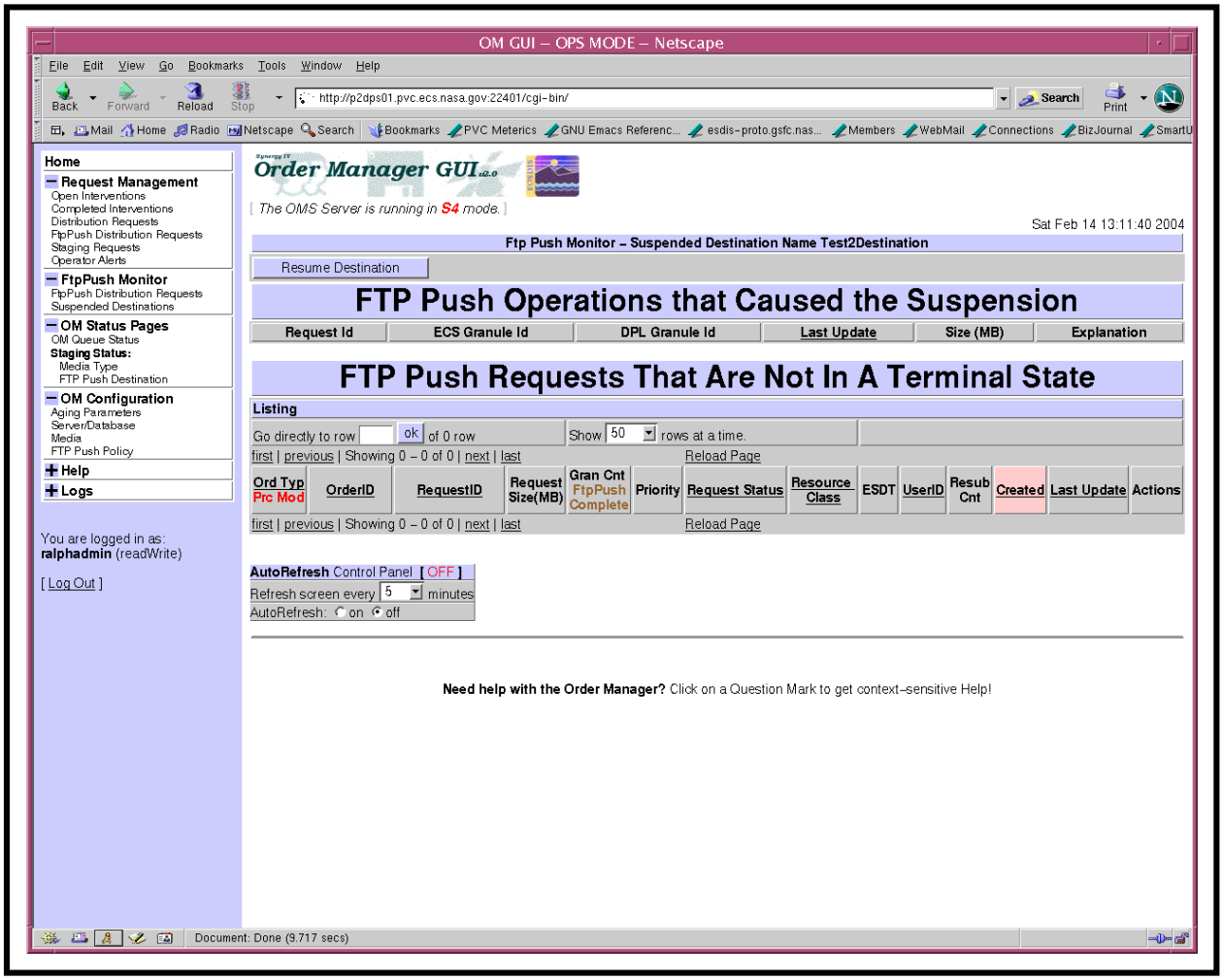

Figure 36. Destination Details Page (Ftp Push Monitor – Suspended Destination Name Test2Destination)

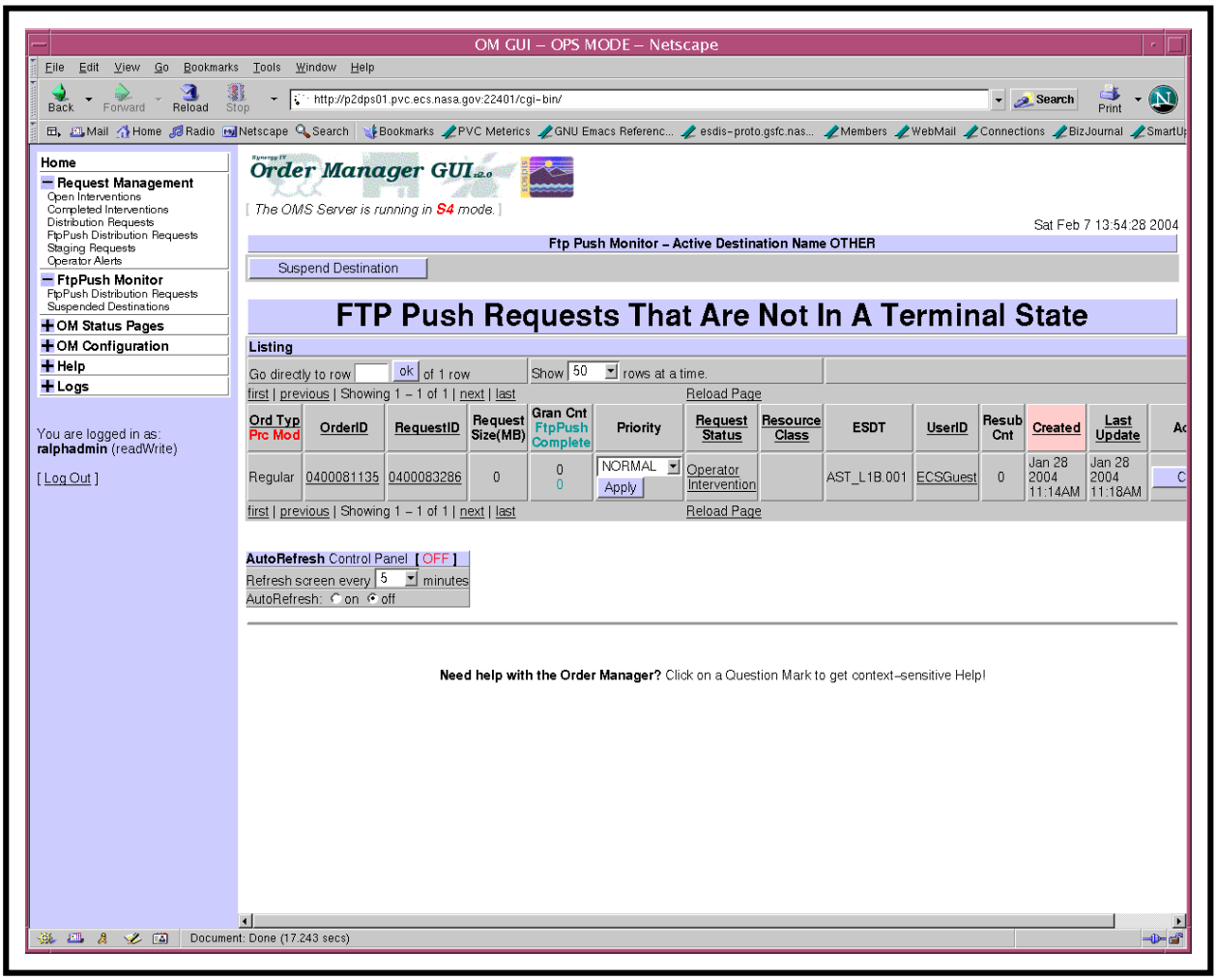

Figure 37. Destination Details Page (Ftp Push Monitor – Active Destination Name OTHER)

The procedure for changing the priority of a distribution request starts with the following assumptions:

- All applicable servers are currently running.
- The **Distribution Requests** page (Figure 31), **Staging Distribution Requests** page (Figure 32), the **FtpPush Distribution Requests** page (Figure 33), or the **Destination Details** page (Figure 36 or Figure 37) is being displayed on the **OM GUI**.

Changing the Priority of a Distribution Request Using the OM GUI

1 If the list of distribution requests shown in the **Distribution Requests** table needs to be filtered to include the distribution request for which the priority is to be changed, perform the procedure for **Filtering Data Displayed on the Distribution Requests Pages** (preceding section of this lesson).

2 Click on the option button in the **Priority** column of the row associated with the request to display a menu of priorities then click on the desired selection.

- Selected priority is displayed in the **Priority** column.
- An alternative is to bring up the relevant **Distribution Request Detail** page (by clicking on the Request ID in the **Distribution Requests** table), click on the option button on the **Priority** line to display a menu of priorities, then click on the desired selection.

3 To implement the priority change click on the **Apply** button adjacent to the text box displaying the desired priority.

- "Priority changed" is displayed in the **Priority** column for the row associated with the request.

4 Repeat the preceding steps as necessary to change the priority of additional distribution requests.

5 Return to the procedure for **Monitoring/Controlling Distribution Request Information on the OM GUI**.

Suspending, Resuming, Canceling, or Resubmitting a Distribution Request Using the OM GUI

The **Action** column in the **Distribution Requests** table of the **Distribution Requests** page (Figure 31), **Staging Distribution Requests** page (Figure 32), the **FtpPush Distribution Requests** page (Figure 33), or the **Destination Details** page (Figure 36 or Figure 37) on the **OM GUI** provides the full-capability operator with a means of taking the following kinds of actions with respect to distribution requests:

- Suspend a request that still needs to be staged or while granules for the request still need to be pushed.
- Resume a request that was suspended by the **OM GUI** operator or while the processing of new requests by the OMS is suspended.
- Cancel a request that is not in a terminal state and while granules for the request still need to be staged or while granules for the request still need to be pushed.

- Resubmit a request in a terminal state (e.g., aborted, cancelled, terminated, or shipped).

The **Distribution Request Details** page (Figure 34) provides the full-capability operator with an alternative means of taking the preceding kinds of actions with respect to a particular distribution request.

The limited-capability operator is not allowed to suspend, resume, cancel, or resubmit distribution requests.

The procedure for **Suspending, Resuming, Canceling, or Resubmitting a Distribution Request Using the OM GUI** is performed as part of the procedure for **Monitoring/Controlling Distribution Request Information on the OM GUI** (preceding section of this lesson). The procedure starts with the following assumptions:

- All applicable servers are currently running.
- The **Distribution Requests** page (Figure 31), **Staging Distribution Requests** page (Figure 32), the **FtpPush Distribution Requests** page (Figure 33), or the **Destination Details** page (Figure 36 or Figure 37) is being displayed on the **OM GUI**.

Suspending, Resuming, Canceling, or Resubmitting a Distribution Request Using the OM GUI

NOTE: If a distribution request is to be canceled or if a completed distribution request is to be resubmitted, proper justification and authorization are necessary. Canceling or resubmitting requests may require coordination between the Distribution Technician and a User Services representative, especially when changing the type of distribution medium, specifying a replacement granule, or taking any other action that would require the approval of the person who submitted the order. In fact, depending on the circumstances and DAAC policy it may be appropriate for User Services to assume responsibility for canceling or resubmitting some requests.

1 If the list of distribution requests shown in the **Distribution Requests** table needs to be filtered to include the distribution request on which action is to be taken, perform the procedure for **Filtering Data Displayed on the Distribution Requests Pages** (preceding section of this lesson).

2 To suspend, resume, cancel, or resubmit a distribution request, click on the appropriate button in the **Action** column for the row associated with the request.

- The following choices are among those that may be available (buttons are available only for actions that are appropriate for the request):
  - **Suspend** [request that still needs to be staged or granules for the request still need to be pushed].
    - A **Suspend Request** dialogue box (Figure 38) is displayed.
  - **Resume** [request that was suspended by the OM GUI operator or while the processing of new requests by the OMS is suspended].
    - A **Resume Request Confirmation** dialogue box (Figure 39) is displayed.
  - **Cancel** [request that is not in a terminal state and while granules for the request still need to be staged or while granules for the request still need to be pushed].
    - A **Cancel Request Confirmation** dialogue box (Figure 40) is displayed.
  - **Resubmit** [request in a terminal state (e.g., aborted, cancelled, terminated, or shipped)].
    - A **Resubmit Request Confirmation** dialogue box (Figure 41) is displayed.
- An alternative is to bring up the relevant **Distribution Request Detail** page (by clicking on the Request ID in the **Distribution Requests** table), then click on the appropriate button.

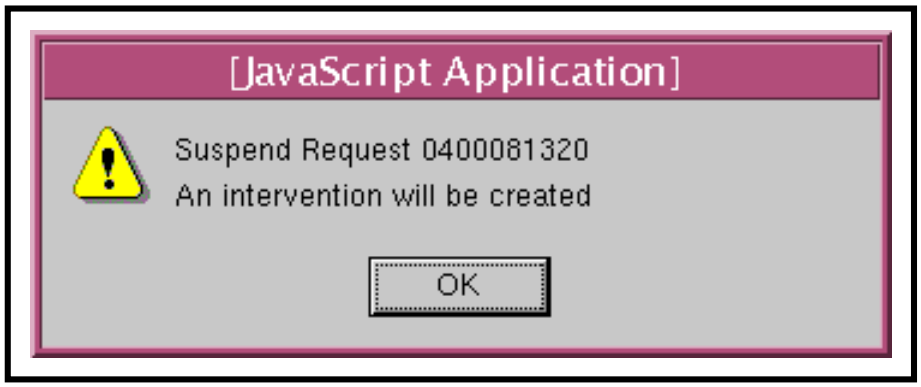

Figure 38. Suspend Request Dialogue Box

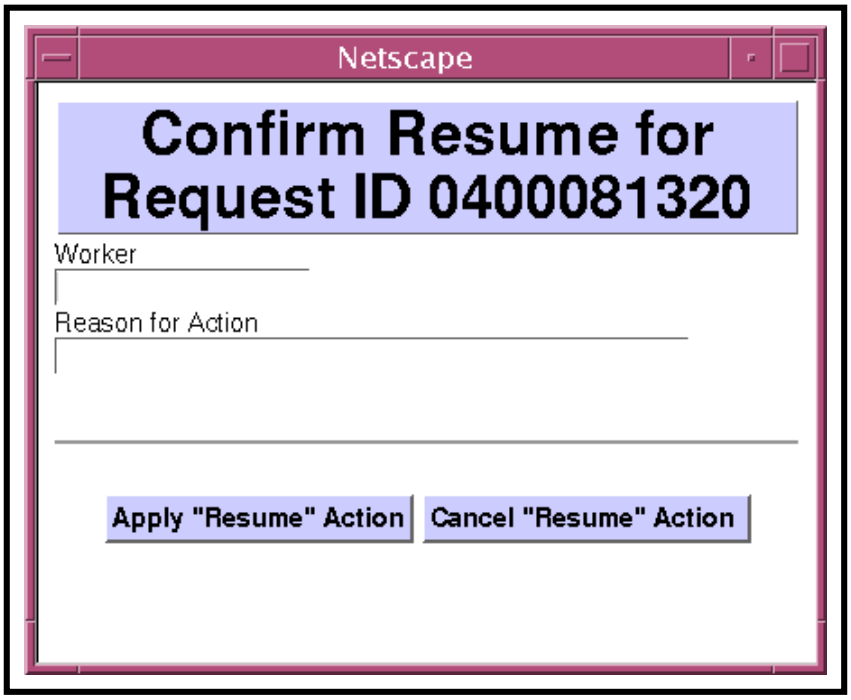

Figure 39. Resume Request Confirmation Dialogue Box

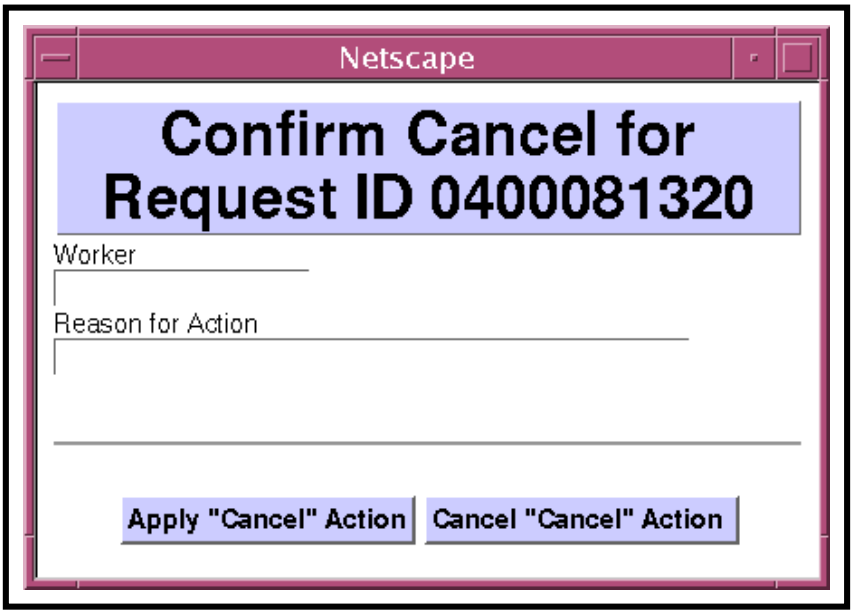

Figure 40. Cancel Request Confirmation Dialogue Box

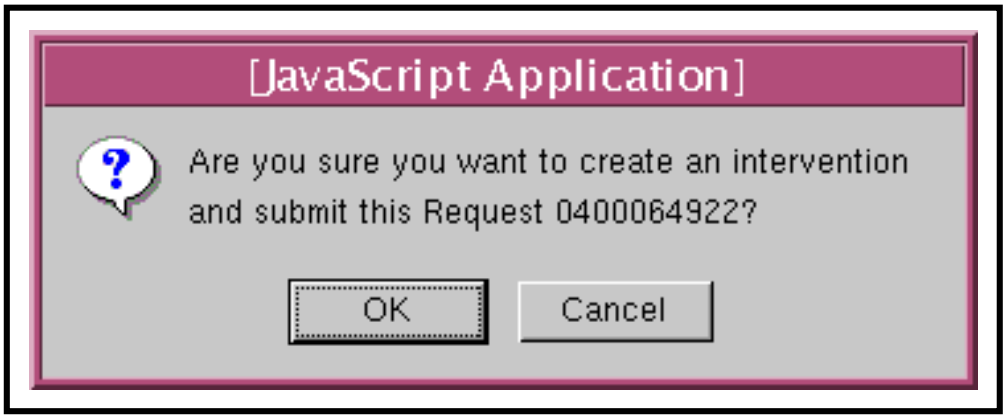

Figure 41. Resubmit Request Confirmation Dialogue Box

3 If a **Suspend Request** dialogue box (Figure 38) is displayed, click on the **OK** button:

- The dialogue box is dismissed.
- The initial page [i.e., the **Distribution Requests** page (Figure 31), **Staging Distribution Requests** page (Figure 32), the **FtpPush Distribution Requests** page (Figure 33), or the **Destination Details** page (Figure 36 or Figure 37)] is displayed.
- "Suspended" is displayed in the **Action** column for the row associated with the request.

NOTE: The **Resume Request Confirmation** dialogue box or **Cancel Request Confirmation** dialogue box may not open enough to display the buttons at the bottom of the window. If the **Apply…Action** and **Cancel…Action** buttons at the bottom of the window are not visible, click and hold on one of the bottom corners of the window and pull down with the mouse to expand the window and reveal the buttons.

4 If a **Resume Request Confirmation** dialogue box (Figure 39) or **Cancel Request Confirmation** dialogue box (Figure 40) is displayed, type either ***name*** or ***userID*** in the **Worker** text box.

- ***name*** or ***userID*** refers to either the name or user ID of the person making the request to resume or cancel the request.

5 If a **Resume Request Confirmation** dialogue box (Figure 39) or **Cancel Request Confirmation** dialogue box (Figure 40) is displayed, type ***reason*** in the **Reason for Action** text box.

- ***reason*** is the justification for resuming or canceling the request.

6 If a **Resume Request Confirmation** dialogue box (Figure 39) or **Cancel Request Confirmation** dialogue box (Figure 40) is displayed, click on the appropriate button from the following selections:

- **Apply** [**"Resume"** or **"Cancel"**] **Action -** to apply the specified action and dismiss the dialogue box.
  - The action (i.e., "resume" or "cancel" as applicable) is applied.
  - The dialogue box is dismissed.
  - The initial page [i.e., the **Distribution Requests** page (Figure 31), **Staging Distribution Requests** page (Figure 32), the **FtpPush Distribution Requests** page (Figure 33), or the **Destination Details** page (Figure 36 or Figure 37)] is displayed.
  - The action (i.e., "Resumed" or "Canceled") is displayed in the **Action** column for the row associated with the request.
- **Cancel** [**"Resume"** or **"Cancel"**] **Action -** to dismiss the dialogue box without applying the specified action.
  - The dialogue box is dismissed.
  - The initial page [i.e., the **Distribution Requests** page (Figure 31), **Staging Distribution Requests** page (Figure 32), the **FtpPush Distribution Requests** page (Figure 33), or the **Destination Details** page (Figure 36 or Figure 37)] is displayed.

7 If a **Resubmit Request Confirmation** dialogue box (Figure 41) is displayed, first click on the appropriate button from the following selections:

- **OK -** to create an open intervention and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **Open Intervention Detail** (**Intervention for Request *x***) page (Figure 26) is displayed.
- **Cancel -** to dismiss the dialogue box without resubmitting the request.
  - The dialogue box is dismissed.
  - The initial page [i.e., the **Distribution Requests** page (Figure 31), **Staging Distribution Requests** page (Figure 32), the **FtpPush Distribution Requests** page (Figure 33), or the **Destination Details** page (Figure 36 or Figure 37)] is displayed.

8 If a **Resubmit Request Confirmation** dialogue box (Figure 41) was displayed and **OK** was clicked in response to the **Resubmit Request Confirmation** dialogue box, perform the procedure for **Responding to an Open Intervention** (preceding section of this lesson).

9 Repeat the preceding steps as necessary to act on additional distribution requests.

10 Return to the procedure for **Monitoring/Controlling Distribution Request Information on the OM GUI**.

Editing FtpPush Parameters

The procedure for **Editing FtpPush Parameters** is performed as part of other procedures (e.g., **Responding to an Open Intervention** or **Monitoring/Controlling Distribution Request Information on the OM GUI**).

The **Edit FtpPush Parameters** button on the **Distribution Request Details** page (Figure 34) provides the full-capability operator with a means of editing the FtpPush parameters for a particular distribution request. The limited-capability operator is not allowed to edit FtpPush parameters for distribution requests using the **OM GUI**.

The procedure for editing the FtpPush parameters of a distribution request starts with the following assumptions:

- All applicable servers are currently running.
- The **Distribution Requests** page (Figure 31), **Staging Distribution Requests** page (Figure 32), the **FtpPush Distribution Requests** page (Figure 33), or the **Destination Details** page (Figure 36 or Figure 37) is being displayed on the **OM GUI**.

Editing FtpPush Parameters

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1 If the list of distribution requests shown in the **Distribution Requests** table needs to be filtered to include the distribution request for which the FtpPush parameters are to be changed, perform the procedure for **Filtering Data Displayed on the Distribution Requests Pages** (preceding section of this lesson).

2 If the **Edit FtpPush Parameters** page is not already open, click on the applicable Request ID in the **Distribution Requests** table.

- The corresponding **Distribution Request Detail** page (Figure 34) is displayed.

3 If the **Edit FtpPush Parameters** page is not already open, click on the **Edit FtpPush Parameters** button on the **Distribution Request Detail** page.

- The **Edit FtpPush Parameters** page (Figure 42) is displayed.

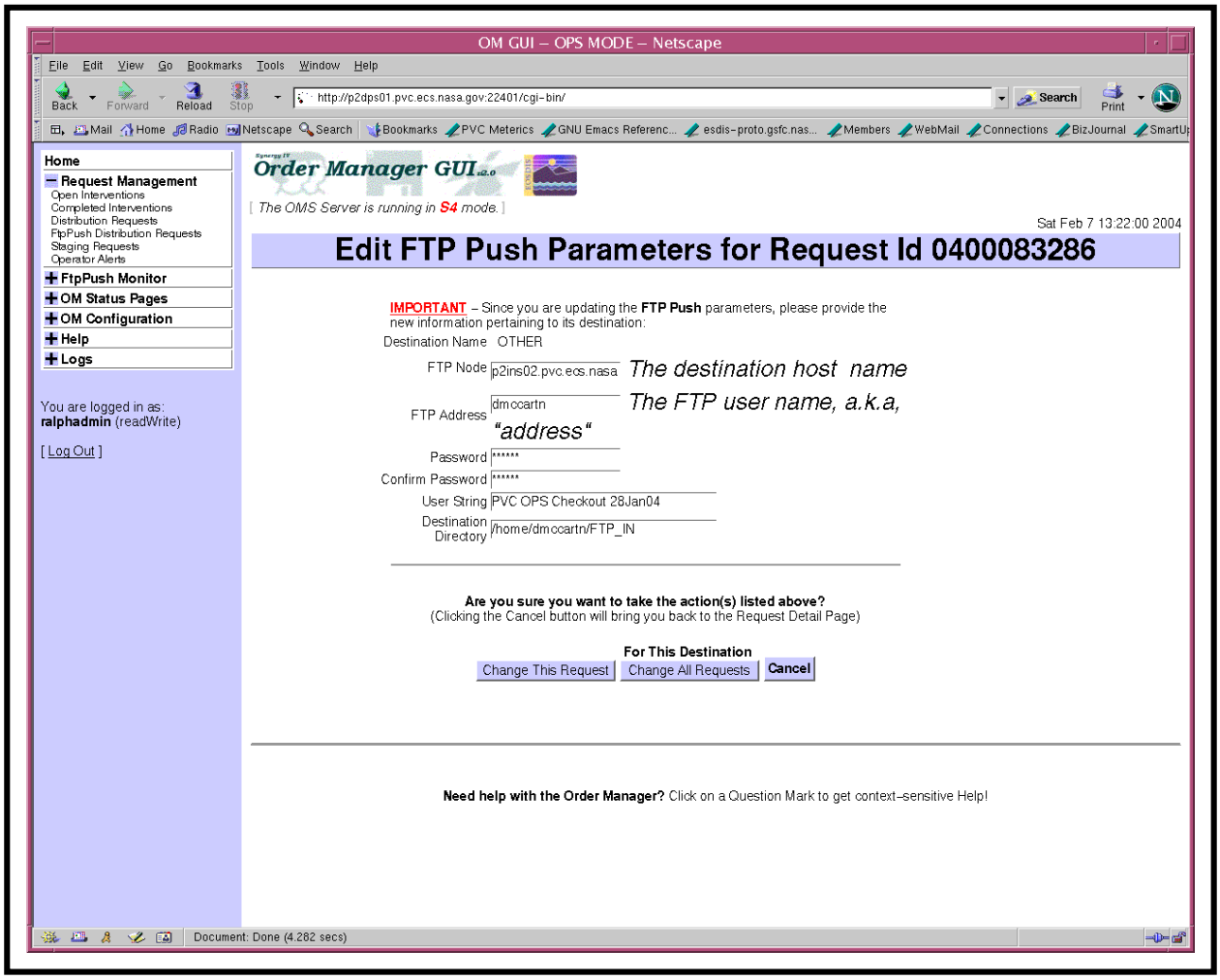

Figure 42. Edit FtpPush Parameters Page

4 Type appropriate values in the following text boxes (as necessary):

- **Ftp node** [Destination host name].
- **Ftp Address** [FTP user name].
- **Password**.
- **Confirm Password**.
- **User String** [message to be sent to the user].

- **Destination Directory** [full path].

5 Click on the appropriate button from the following selections:

- **Change This Request** - to apply the specified FtpPush parameters to the current request only and dismiss the **Edit FtpPush Parameters** page.
  - The **Edit FtpPush Parameters** page is dismissed.
- **Change All Requests** - to apply the specified FtpPush parameters to all requests for the listed destination and dismiss the **Edit FtpPush Parameters** page.
  - The **Edit FtpPush Parameters** page is dismissed.
- **Cancel** - to cancel all changes to FtpPush parameters and dismiss the **Edit FtpPush Parameters** page.
  - The **Edit FtpPush Parameters** page is dismissed.

6 Return to the procedure that recommended editing the FtpPush parameters.

Viewing Operator Alerts on the OM GUI

"Alerts" are non-fatal warnings or errors that do not cause an Operator Intervention, but do provide valuable information concerning distribution resources. An example might be a suspended FTP Push destination.

The **Operator Alerts** page (Figure 43) provides the Distribution Technician (whether full-capability or limited capability operator) with a means of viewing operator alerts. The following types of operator alerts can be displayed:

- FTP Push Destination Alerts (problems with the destination not sufficient to cause an Operator Intervention).
- Data Pool File System Alerts.
- Archive Server Alerts.
- ECS Server Alerts (warnings about SDSRV or PDS errors).

The procedure for viewing operator alerts on the **OM GUI** starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched.

1 If it has not been expanded already, click on the **Request Management** link in the navigation frame of the **OM GUI**.

- The **Request Management** menu is expanded.

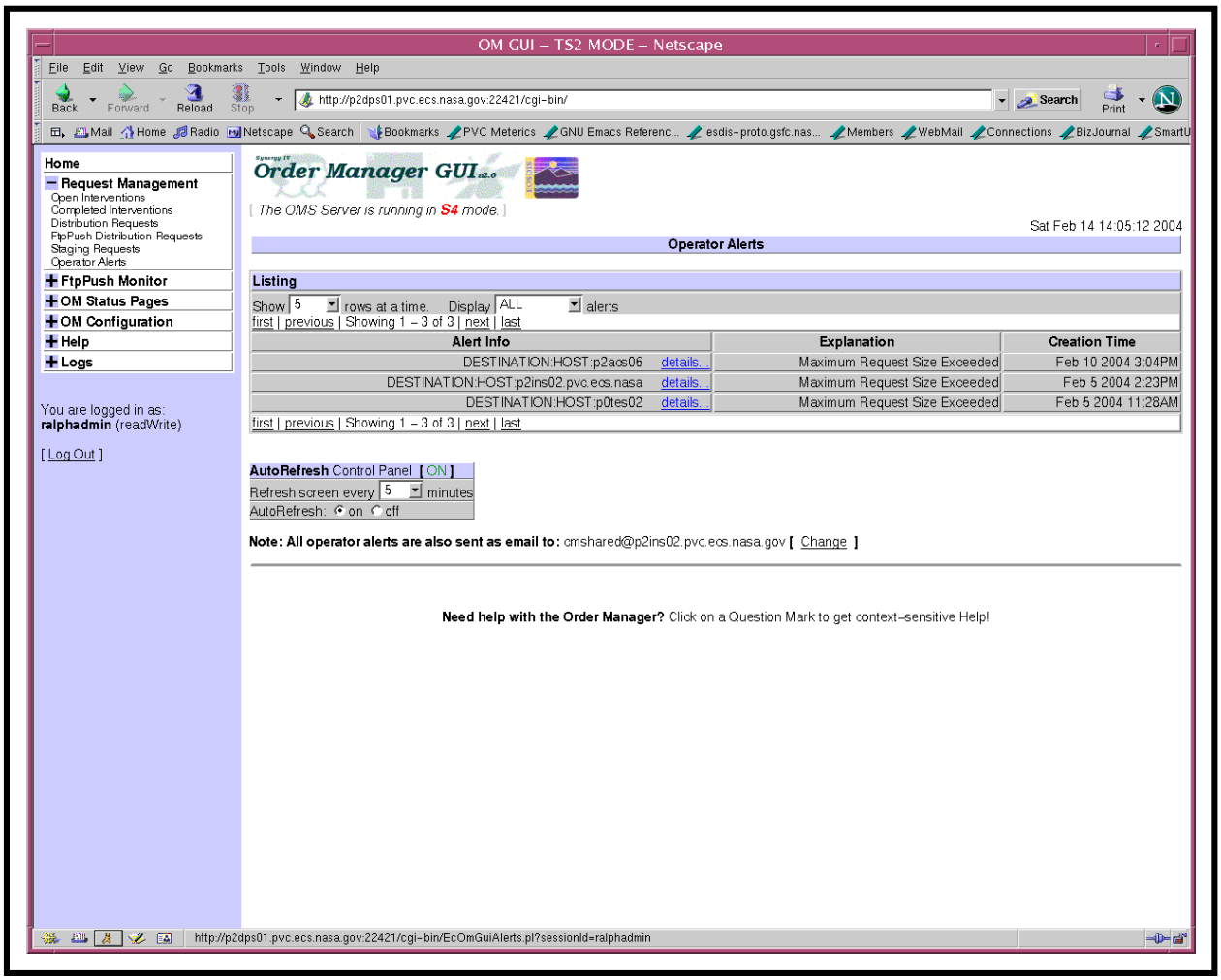

Figure 43. Operator Alerts Page

2 Click on the **Operator Alerts** link in the navigation frame of the **OM GUI**.

- The **Operator Alerts** page (Figure 43) is displayed.

- The **Listing** table has the following columns:
  - **Alert Info**.
  - **Explanation.**
  - **Creation Time**.

3 Observe information displayed in the **Listing** table of the **Operator Alerts** page.

- The following types of operator alerts are displayed on the **Operator Alerts** page:
  - **FTP Push Destination Alerts** (problems with the destination not sufficient to cause an Operator Intervention).
  - **Data Pool File System Alerts.**
  - **Archive Server Alerts.**
  - **ECS Server Alerts** (warnings about SDSRV or PDS errors).
- By default all types of alerts are displayed in the **Listing** table on the **Operator Alerts** page.
- To filter the **Listing** table in a different way, click on the option button associated with the **Display _____ alerts** box then click on the desired selection.
  - The following choices are available:
    - **ALL.**
    - **Archive.**
    - **Data Pool.**
    - **FTP Push.**
    - **PDS.**
    - **SDSRV.**
  - The selected filter is displayed in the **Display _____ alerts** box.
  - The **Operator Alerts** page is refreshed and the filter is applied, so the specified type(s) of alert(s) is (are) displayed in the **Listing** table on the **Operator Alerts** page.
- The list of alerts is sorted in ascending order by date (i.e., the oldest Alerts appear first).

- The **Show _____ rows at a time** window provides a means of selecting the maximum number of rows of data to be displayed at a time.
  - For example, if **Show _____ rows at a time** is being displayed, selecting **50** from the option button would result in the display of a page of data containing up to 50 rows of data.
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.
- If **AutoRefresh** is **ON**, the **Operator Alerts** page refreshes automatically as often as specified in the **Refresh screen every *x* minutes** window.
  - If a different refresh option is preferred, perform the procedure for **Setting Refresh Options on OM GUI Pages** (preceding section of this lesson).
- To manually update (refresh) the data on the screen, click on the Netscape browser **Reload** button.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.
- The **first**, **previous**, **next**, and **last** links provide means of displaying additional pages of data (if applicable).
- The following message is displayed at the bottom of the **Operator Alerts** page: **Note: All operator alerts are also sent as email to: *address***.
  - To change the e-mail address for receiving operator alerts, click on the **Change** link adjacent to the message and change the value of the **Global Configured Email** parameter (for details refer to the procedure for **Checking/Modifying OMS Server or Database Parameters**).

4 To view detailed information concerning the cause and/or requests affected by the alert, click on the corresponding **details** link in the **Alert Info** column.

- A page describing the alert (e.g., Figure 44) is displayed.

NOTE: Unlike an operator intervention, no specific action can be taken to close an alert. The Order Manager Server automatically clears each alert when the condition(s) that caused it go to a satisfactory state.

5 Repeat Steps 3 and 4 as necessary to view operator alerts.

6 Return to the procedure for **Monitoring/Controlling Distribution Request Information on the OM GUI** (if applicable).

7 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message “Are you sure you want to log out? This will close your browser.” is displayed.

8 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.

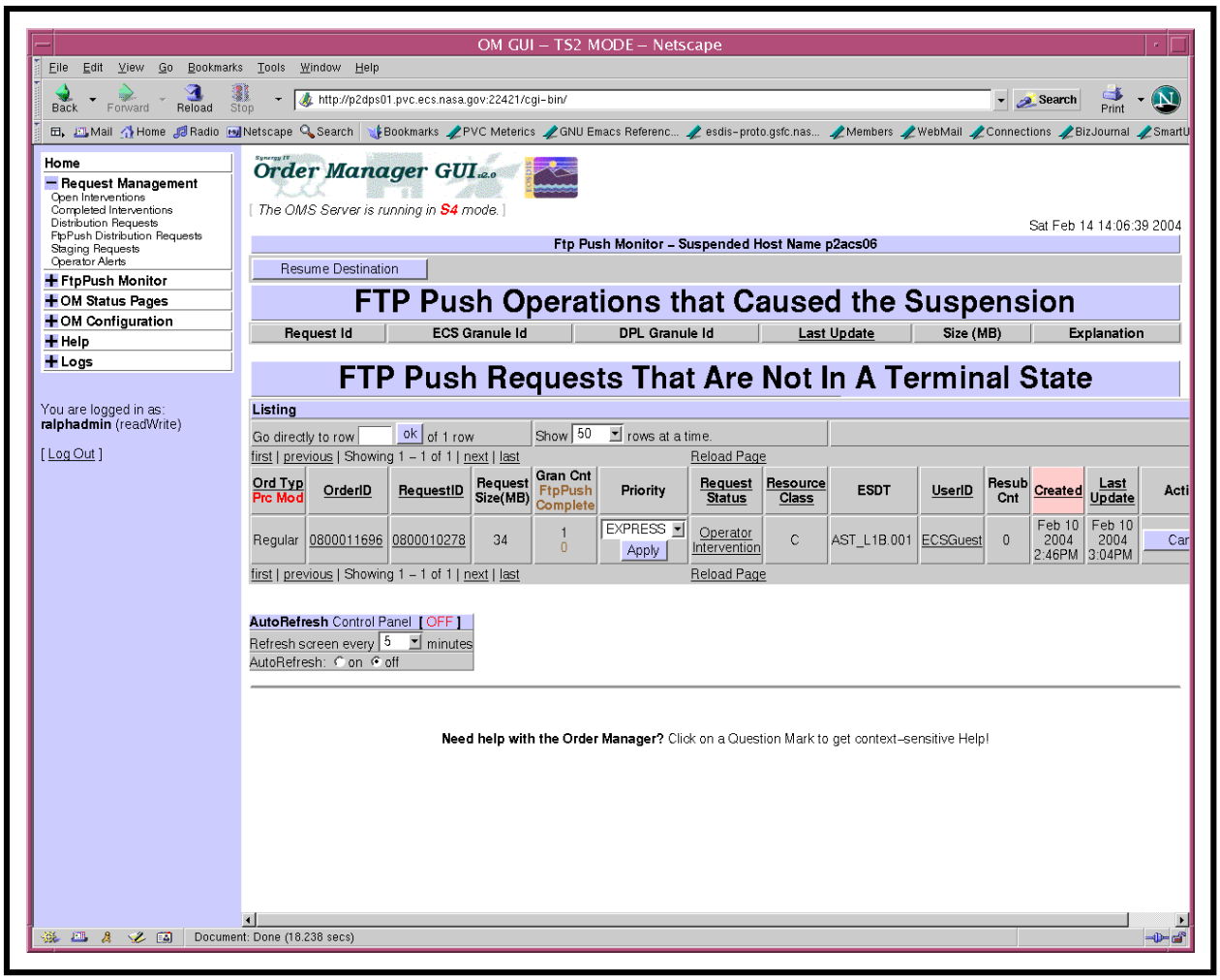

Figure 44. Suspended Host Detail Page

- The Netscape browser is dismissed.

- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Viewing Completed Intervention Information on the OM GUI

The **Completed Interventions** page (Figure 45) provides the Distribution Technician (whether full-capability or limited capability operator) with a means of viewing completed intervention information on the OM GUI.

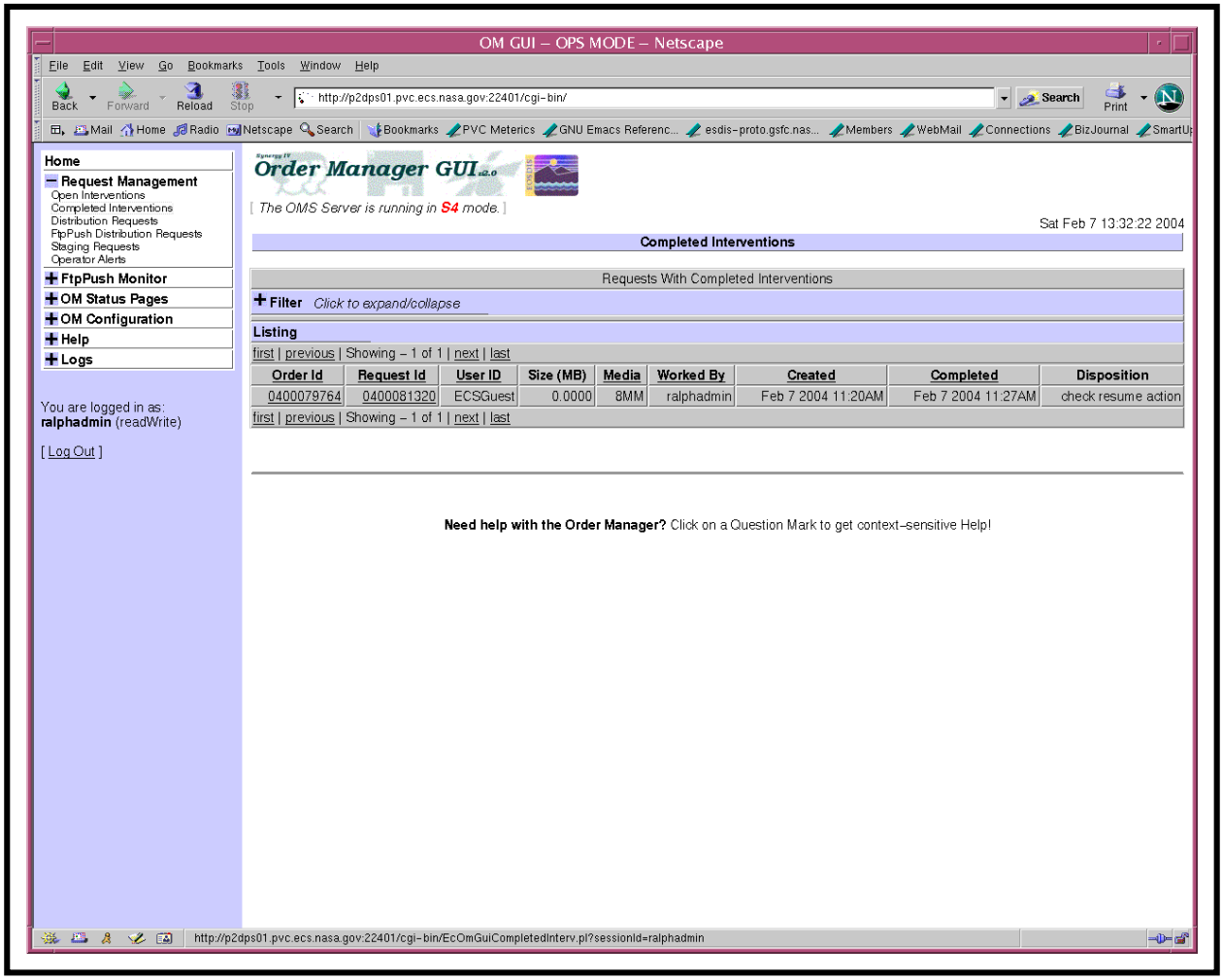

Figure 45. Completed Interventions Page

The procedure for viewing completed intervention information on the OM GUI starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].

Viewing Completed Intervention Information on the OM GUI

---

1 If it has not been expanded already, click on the **Request Management** link in the navigation frame of the **OM GUI**.

- The **Request Management** menu is expanded.

2 Click on the **Completed Interventions** link in the navigation frame of the **OM GUI**.

- The **Completed Interventions** page (Figure 45) is displayed.
- The **Listing** table has the following columns:
  - **Order Id.**
  - **Request Id.**
  - **User ID.**
  - **Size (MB).**
  - **Media.**
  - **Worked by.**
  - **Created.**
  - **Completed.**
  - **Disposition.**

3 Observe information displayed in the **Listing** table of the **Completed Interventions** page.

- By default, data concerning up to 50 requests with completed interventions (and "completion time" within the last 24 hours) are displayed at a time.
  - It is important to check the filter settings when opening the **Completed Interventions** page because changes to the filter settings tend to persist, even from one session to another.
  - To filter the **Completed Interventions Listing** in a different way, perform the procedure for **Filtering Data Displayed on the Completed Interventions Page** (subsequent section of this lesson).

- Clicking on a link in the column header row of the table causes table contents to be sorted on that column.
  - For example, clicking on the **Worked By** link causes the table to be organized alphabetically by the IDs of the people who worked on the interventions in the list.
- Clicking on a specific Order ID or Request ID brings up a screen containing more detailed data concerning that particular order or request.
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.
- To manually update (refresh) the data on the screen, click on the Netscape browser **Reload** button.
- The Netscape browser **Edit** → **Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.
- The **first**, **previous**, **next**, and **last** links provide means of displaying additional pages of data.

4 If the desired request with completed intervention is not listed in the **Listing** table of the **Completed Interventions** page, perform the procedure for **Filtering Data Displayed on the Completed Interventions Page** (subsequent section of this lesson).

5 If request filtering was necessary, return to Step 3.

6 Click on a specific Request ID in the **Requests with Completed Interventions** table of the **Request Management** page **Requests with Completed Interventions** screen to bring up a screen containing more detailed data concerning that particular request.

- For example, clicking on Request ID **0400011698** brings up a **Completed Intervention Detail** (i.e., **Completed Intervention for Request 0400011698**) page (Figure 46).

7 Observe information displayed on the **Completed Intervention Detail** (**Completed Intervention for Request *x***) page.

- The following items are displayed on the **Completed Intervention Detail** page.
  - **User Id.**
  - **email.**
  - **Priority.**
  - **Order ID.**
  - **Size (est, MB).**
  - **Media.**

- **Worked by.**
- **Created.**
- **Acknowledged.**
- **Disposition.**
- **Explanation.**
- **Granule List: DBID, ESDT, Granule Type, Size (MB), Status, Explanation.**
- **OPERATOR NOTES.**

- Use the Netscape browser **Back** button to redisplay the **Completed Interventions** page.

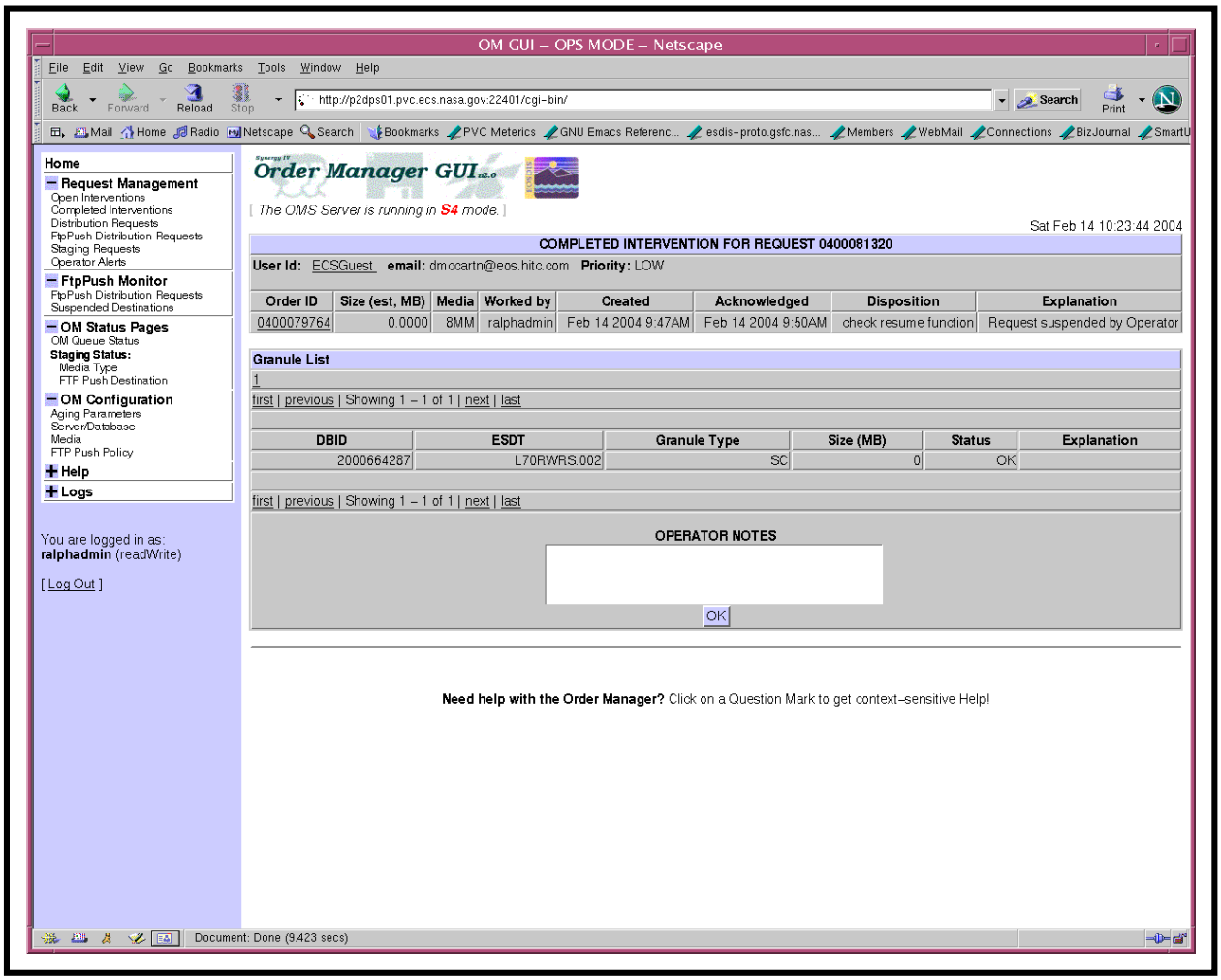

Figure 46. Completed Intervention Detail (Completed Intervention for Request X) Page

8 Return to Step 3 to view information concerning another completed intervention (if applicable).

9 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

10 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.

- The Netscape browser is dismissed.

- **Cancel -** to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Filtering Data Displayed on the Completed Interventions Page

Features at the top of the **Completed Interventions** page provide the Distribution Technician (whether full-capability or limited capability operator) with a means of filtering data displayed on the **Completed Interventions** page. By default, data concerning up to 50 requests with completed interventions (and "completion time" within the last 24 hours) are displayed at a time.

NOTE: The session ID provides a means of tracking which GUI pages are accessed and what filter options are used during a particular session. Such data is especially important when several operators are using the OM GUI in the same mode at the same time. For example, an individual operator's previously selected filter options can be retrieved from the session data so the filter options do not have to be reentered every time the same type of search is performed.

The procedure for filtering data displayed on the **Completed Interventions** page starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].
- The **Completed Interventions** page (Figure 45) is being displayed.

Filtering Data Displayed on the Completed Interventions Page

NOTE: By default, completed interventions are filtered by "completion time," providing access to all interventions completed within the last 24 hours. However, changes made to the filter settings tend to persist, even from one session to another. To restore the default filtering criteria click on the **Reset** button in the **Filter** area near the top of the **Completed Interventions** page.

NOTE: Completed interventions are not permanently available on the **Completed Interventions** page. If filtering does not cause data concerning the desired intervention(s) to be displayed, check the **Delete Complete Interventions After** parameter to see if the window of opportunity has already closed. (For detailed instructions refer to the procedure for **Checking/Modifying OM Configuration Parameters**.)

1 If the filters on the **Completed Interventions** page are not visible, click on the **Filter** link.

- The filters are displayed on the **Completed Interventions** page (as shown in Figure 47).

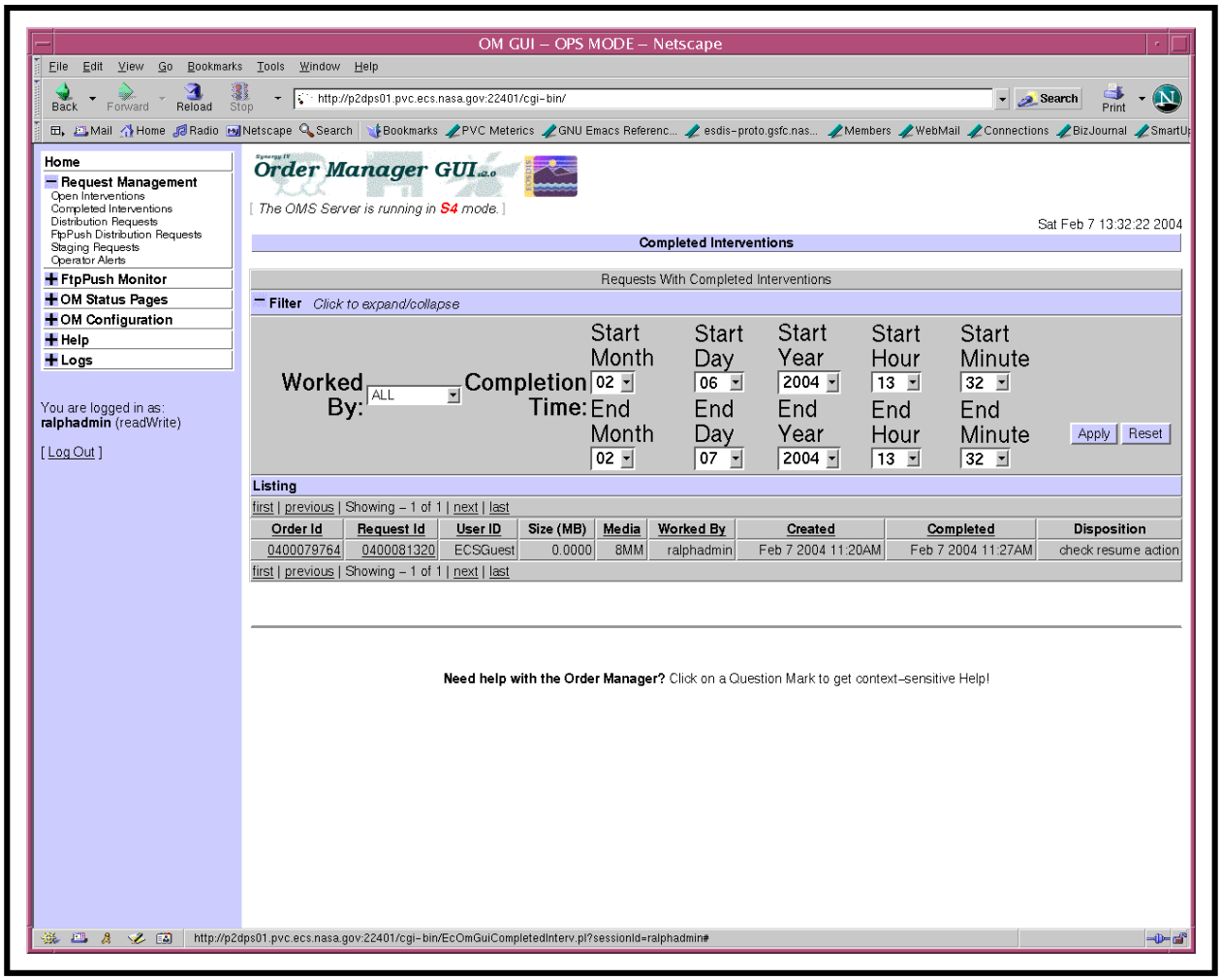

Figure 47. Completed Interventions Page (Filters Expanded)

2 If interventions "worked by" a particular individual only should be displayed on the **Completed Interventions** page, click on the **Worked by:** option button to display a menu of individuals then click on the desired selection.

- In addition to a list of individuals, the **Worked by:** option button has an **ALL** option.
- Selected individual (or "**ALL**") is displayed on the **Worked by:** option button.

- Filtering by the individual who worked on interventions may be combined with filtering by “Completion Time” (refer to Step 3).
- If “Completion Time” filtering criteria are not going to be selected, go to Step 4.

3 If the intervention(s) to be viewed has (have) “Completion Time” outside the range indicated in the **Start Month**, **Start Day**, **Start Year**, **Start Hour**, **Start Minute**, **End Month**, **End Day**, **End Year**, **End Hour**, and **End Minute** boxes, as necessary click on each date/time option button to display a drop-down list of month, day, year, hour, or minute options then click on the desired selection.

- Selected number is displayed in each date/time box.

4 When all relevant filtering criteria have been selected (as described in Steps 2 and 3), click on the **Apply** button.

- The **Completed Interventions** page refreshes.
- Only requests that meet the specified filter criteria appear in the **Listing** table on the **Completed Interventions** page.

5 Return to the procedure for **Viewing Completed Intervention Information on the OM GUI**.

Viewing and Responding to Suspended FTP Push Distribution Destinations

The **Suspended Destinations** page (Figure 48) provides the full-capability operator with a means of viewing suspended FTP push destinations and a means of taking the following kinds of actions with respect to suspended FTP push destinations:

- Resume suspended destinations.
- Suspend active destinations.
- View details of active or suspended destinations.

The limited-capability operator can use the **Suspended Destinations** page to view suspended FTP push destinations but is not allowed to take action on (e.g., resume) suspended FTP push destinations.

The procedure for viewing and responding to suspended FTP push distribution destinations on the **OM GUI** starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched.

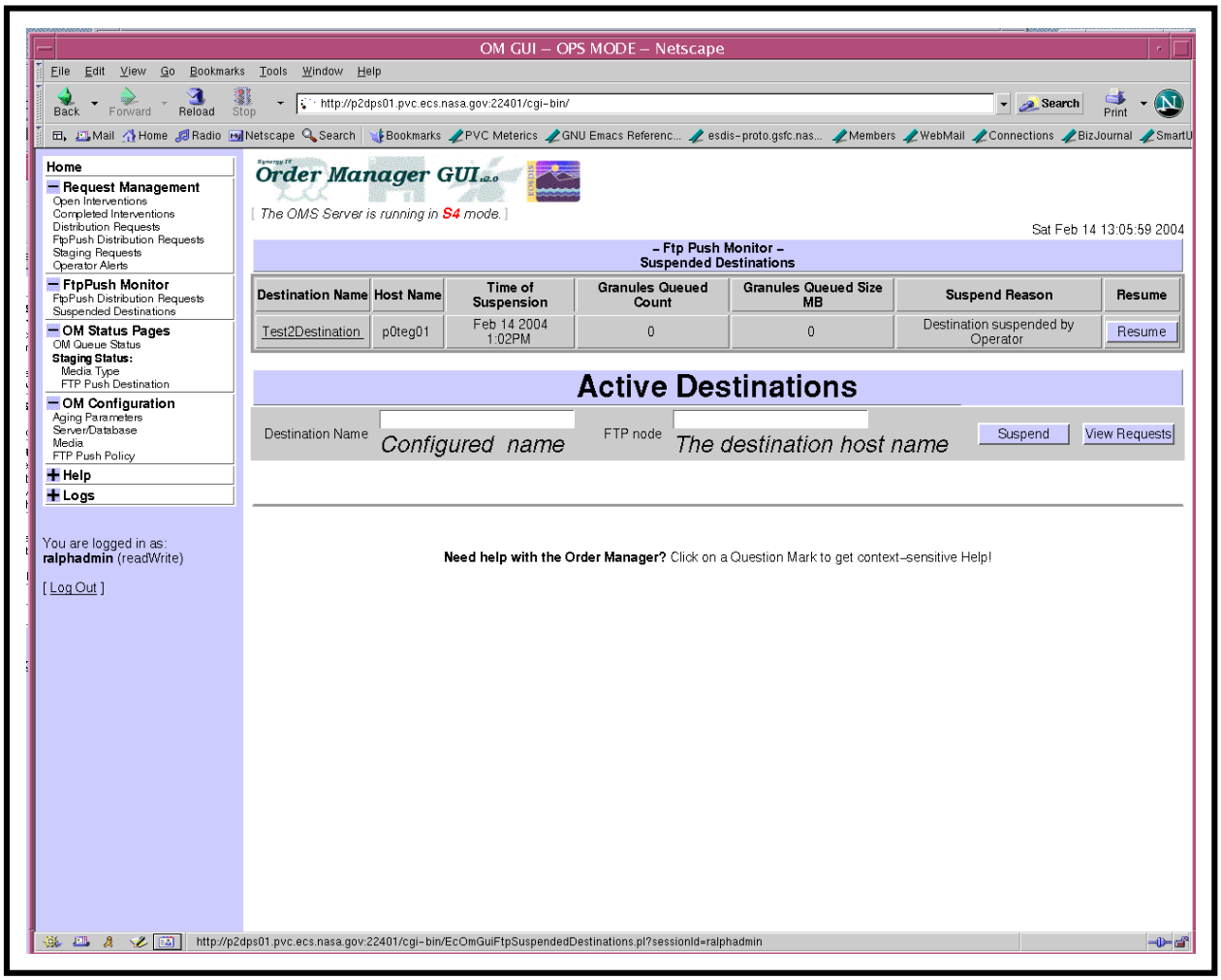

Figure 48. Suspended Destinations Page

Viewing and Responding to Suspended FTP Push Distribution Destinations

1 If it has not been expanded already, click on the **FtpPush Monitor** link in the navigation frame of the **OM GUI**.

- The **FtpPush Monitor** menu is expanded.

2 If the **Suspended Destinations** page (Figure 48) is not already being displayed, click on the **Suspended Destinations** link in the navigation frame of the **OM GUI**.

- The **Suspended Destinations** page (Figure 48) is displayed.

3 Observe information displayed on the **Suspended Destinations** page.

- The **Suspended Destinations** page has the following columns:
  - **Destination Name**.
  - **Host Name.**
  - **Time of Suspension** (if applicable, date and time when the destination was suspended).
  - **Granules Queued Count** (number of granules that are queued).
  - **Granules Queued Size MB** (total size in MB of all granules that are queued).
  - **Suspend Reason** (why the destination was suspended).
  - **Resume** (buttons for resuming the destination).
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.
- To manually update (refresh) the data on the screen, click on the Netscape browser **Reload** button.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

4 To resume a suspended destination, click on the **Resume** button in the destination's **Resume** column.

- The destination is resumed.
- The **Suspended Destinations** page refreshes and the resumed destination is no longer on the list of suspended destinations.

5 To start the process of either suspending an active destination or viewing destination details (for an active or suspended destination), first type either the ***name*** in the **Destination Name** text field or the destination ***hostname*** in the **FTP Node** text field.

6 To suspend an active destination (after making the appropriate entry in either the **Destination Name** text field or the **FTP Node** text field), click on the **Suspend** button in the **Active Destination** area.

- The destination is suspended.
- The **Suspended Destinations** page refreshes and the suspended destination is included in the list of suspended destinations.
- An alternative is to suspend the active destination from the **Destination Details** page – go to Step 7.

7 To view ftp push requests associated with either an active destination or a suspended destination (after making the appropriate entry in either the **Destination Name** text field or the **FTP Node** text field), click on the **View Requests** button in the **Active Destination** area.

- The **Destination Details** page (Figure 36 or Figure 37) is displayed.
  - The following types of data are displayed in the **FTP Push Operations that Caused the Suspension** area (if applicable):
    - **Request Id.**
    - **ECS Granule Id.**
    - **DPL Granule Id.**
    - **Last Update.**
    - **Size (MB).**
    - **Explanation.**
  - The following types of data are displayed in the **FTP Push Requests That Are Not In A Terminal State** area:
    - **Ord Typ/Prc Mod.**
    - **OrderID.**
    - **RequestID.**
    - **Request Size (MB).**
    - **Gran Cnt/FtpPush Complete.**
    - **Priority.**
    - **Request Status.**
    - **Resource Class.**
    - **ESDT.**
    - **UserID.**
    - **Resub Cnt.**
    - **Created.**
    - **Last Update.**
    - **Actions.**

- To respond to conditions indicated on the **Destination Details** page refer to the procedure for **Viewing and Responding to Destination Details on the OM GUI**.

8 Repeat Steps 3 through 7 as necessary to view and respond to information concerning suspended FtpPush distribution destinations on the **OM GUI**.

9 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

10 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Viewing and Responding to Destination Details on the OM GUI

The **Destination Details** page (e.g., **Ftp Push Monitor – Active Destination Name OTHER** – Figure 37) provides the full-capability operator with a means of viewing detailed data concerning a particular destination and a means of taking the following kinds of actions:

- Suspend an active destination.
- Resume a suspended destination.
- Change the priority of a distribution request associated with the FtpPush destination while granules for the request still need to be staged or while granules for the request still need to be pushed.
- Suspend a request that still needs to be staged or while granules for the request still need to be pushed.
- Resume a request that was suspended by the **OM GUI** operator or while the processing of new requests by the OMS is suspended.
- Cancel a request that is not in a terminal state and while granules for the request still need to be staged or while granules for the request still need to be pushed.

The limited-capability operator can use the **Destinations Detail** page to view detailed data concerning a particular destination but is not allowed to take action on ftp push requests for any destination.

The procedure for viewing and responding to destination details on the **OM GUI** starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched.
- The **Destination Details** page (Figure 36 or Figure 37) is being displayed.

Viewing and Responding to Destination Details on the OM GUI

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1 If the **Destination Details** page (Figure 36 or Figure 37) is not already being displayed, perform the procedure for **Viewing and Responding to Suspended FTP Push Distribution Destinations** (previous section of this lesson) to display the page.

- The **Destination Details** page (Figure 36 or Figure 37) is displayed.

2 Observe information displayed on the **Active Destinations Detail** page.

- The following types of data are displayed in the **FTP Push Operations that Caused the Suspension** area (if applicable):
  - **Request Id.**
  - **ECS Granule Id.**
  - **DPL Granule Id.**
  - **Last Update.**
  - **Size (MB).**
  - **Explanation.**
- The following types of data are displayed in the **FTP Push Requests That Are Not In A Terminal State** area:
  - **Ord Typ/Prc Mod.**
  - **OrderID.**
  - **RequestID.**
  - **Request Size (MB).**
  - **Gran Cnt/FtpPush Complete.**
  - **Priority.**

  - **Request Status.**
  - **Resource Class.**
  - **ESDT.**
  - **UserID.**
  - **Resub Cnt.**
  - **Created.**
  - **Last Update.**
  - **Actions.**
- Clicking on a link in the column header row of the table causes table contents to be sorted on that column.
  - For example, clicking on the **RequestID** link causes the table to be organized in numerical order by Request ID.
- Clicking on a specific Order ID or Request ID brings up a screen containing more detailed data concerning that particular order or request.
- Clicking on a specific User ID brings up a screen that shows user profile information for that user.
- The **Show _____ rows at a time** window provides a means of selecting the maximum number of rows of data to be displayed at a time.
  - For example, if **Show _____ rows at a time** is being displayed, selecting **50** from the option button would result in the display of a page of data containing up to 50 rows of data.
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.
- If **AutoRefresh** is **ON**, the **Distribution Requests** page refreshes automatically as often as specified in the **Refresh screen every *x* minutes** window.
  - If a different refresh option is preferred, perform the procedure for **Setting Refresh Options on OM GUI Pages** (preceding section of this lesson).
- To manually update (refresh) the data on the screen, click on the **Reload Page** link.
- The Netscape browser **Edit** → **Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.
- The **first**, **previous**, **next**, and **last** links provide means of displaying additional pages of data.

- The **Go directly to row…** window provides a means of displaying a page of data starting with a particular row of the table.
  - For example, if **Go directly to row _____ of 415 rows** is being displayed, typing **315** in the window and clicking on the **ok** button would result in the display of a page of data containing rows 315 through 364.

3 To suspend an active destination (if applicable) click on the **Suspend Destination** button.

- The destination is suspended.
- The **Suspend Destination** button becomes a **Resume Destination** button.

4 To resume a suspended destination, click on the **Resume Destination** button.

- The destination is resumed.
- The **Resume Destination** button becomes a **Suspend Destination** button.

5 To change the priority of a particular distribution request (when applicable) perform the procedure for **Changing the Priority of a Distribution Request Using the OM GUI** (preceding section of this lesson).

6 To either suspend a particular distribution request or resume processing of a suspended request (when applicable) perform the procedure for **Suspending, Resuming, Canceling, or Resubmitting a Distribution Request Using the OM GUI** (preceding section of this lesson).

7 To cancel a particular distribution request (when applicable) perform the procedure for **Suspending, Resuming, Canceling, or Resubmitting a Distribution Request Using the OM GUI** (preceding section of this lesson).

8 To review and/or respond to an open intervention for a particular distribution request first click on the **Open Intervention** link in the **Request Status** column for the request in the **Listing** table.

9 To review and/or respond to an open intervention go to the procedure for **Viewing Open Intervention Information on the OM GUI** (preceding section of this lesson).

10 Repeat Steps 2 through 9 as necessary to view and respond to destination details.

11 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message “Are you sure you want to log out? This will close your browser.” is displayed.

12 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK -** to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Checking/Modifying OM Queue Status

The **OM Queue Status** page (Figure 49) provides the full-capability operator with a means of checking and modifying OM queue status. The **OM Queue Status** page allows the full-capability operator to monitor and change the current status of request queues for all media as well as the request queues for PDS, SDSRV, e-mail, and staging. (The limited-capability operator can monitor but cannot change the status of queues.) In addition, the **OM Queue Status** page allows both full-capability and limited-capability operators to determine the status ("up" or "down") of the Order Manager Server.

The procedure for checking/modifying OM queue status starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].

Checking/Modifying OM Queue Status

---

1 If it has not been expanded already, click on the **OM Status Pages** link in the navigation frame of the **OM GUI**.

- The **OM Status Pages** menu is expanded.

2 If the **OM Queue Status** page (Figure 49) is not already being displayed, click on the **OM Queue Status** link in the navigation frame of the **OM GUI**.

- The **OM Queue Status** page (Figure 49) is displayed.

- If the **OM Queue Status** page is not displayed within a minute, it is likely that the OM Server is not operating properly.
  - For example, it may have stalled while trying to process requests that it could not process.
- The **OM Queue Status** page has the following columns:
  - **ALL QUEUES.**
  - **PDS.**
  - **SDSRV.**
  - **EMAIL.**
  - **STAGING.**

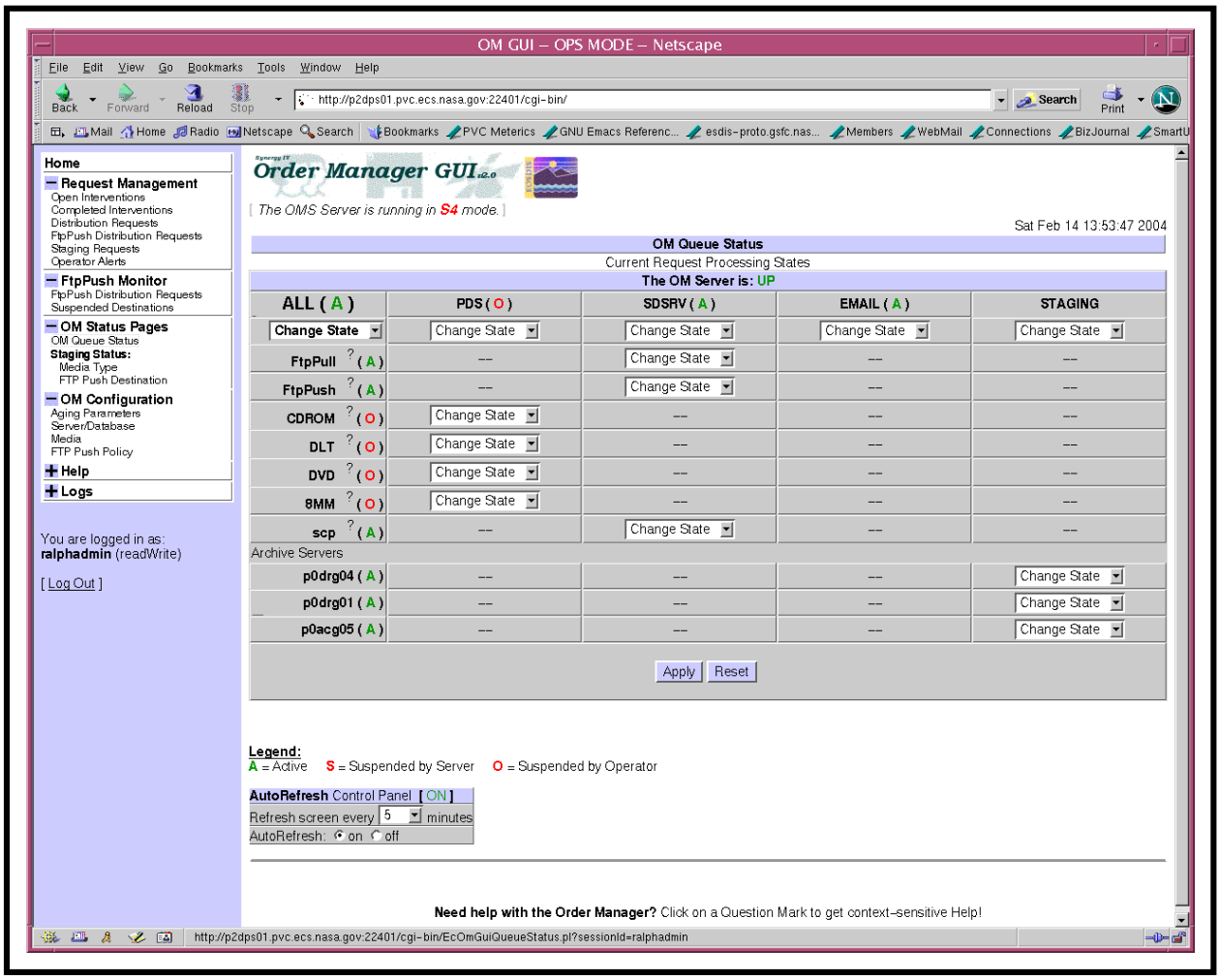

Figure 49. OM Queue Status Page

3 Observe information displayed in the **Current Request Processing States** table.

- Directly under the **Current Request Processing States** header, one of the following statements is displayed:
  - **The OM Server is: UP** [indicates that the OM Server is currently operating].
  - **The OM Server is: DOWN** [indicates that the OM Server is not currently operating].

NOTE: The status of the OM Server is determined by a program called "Sweeper," which makes an attempt to connect with the OM Server. If a connection cannot be made, it is assumed that the OM Server is down. If Sweeper was not installed correctly, either the error screen is displayed with a Sweeper error message or the Sweeper error message is displayed right on the **OM Queue Status** page itself. This does not necessarily mean that the OM Server is down.

- The column header line of the **Current Request Processing States** table includes codes that indicate the status of the request queues for the following four groupings:
  - **PDS.**
  - **SDSRV.**
  - **EMAIL.**
  - **STAGING.**
- The code in parentheses next to each entity indicates the corresponding request queue status, specifically:
  - **A** – Active.
  - **S** – Suspended by server.
  - **O** – Suspended by operator.
  - Although rare, if a state is simply not available from the Order Manager Database, it is listed as **ERROR: State not available**.
- The left-hand column of the **Current Request Processing States** table includes codes that indicate the status of the request queues for the following types of queues:
  - **FtpPull.**
  - **FtpPush.**
  - **CDROM.**
  - **DLT.**
  - **DVD.**
  - **8MM.**
  - **scp** [secure copy distribution].
  - Archive servers.
- Option buttons are available for full-capability operators to change the request queue states.
- If **AutoRefresh** is **ON**, the **OM Queue Status** page refreshes automatically as often as specified in the **Refresh screen every *x* minutes** window.
  - If a different refresh option is preferred, perform the procedure for **Setting Refresh Options on OM GUI Pages** (preceding section of this lesson).
- To manually update (refresh) the data on the screen, click on the Netscape browser **Reload** button.

- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

4 If it is necessary to either activate or suspend all request queues (and there is authorization to do so), click on the **ALL QUEUES Change State** option button to display a menu of states then click on the desired selection.

- The following states are available:
  - **Activate All.**
  - **Suspend All.**

5 If it is necessary to change the state of a group of request queues or an individual request queue (and there is authorization to do so), click on the corresponding **Change State** option button to display a menu of states then click on the desired selection.

- The following states are available:
  - **Activate** [or **Activate All**].
  - **Suspend** [or **Suspend All**].

6 Repeat Step 5 as necessary to indicate a change of state for additional request queues.

7 If applicable, when the appropriate settings have been made on the **Change State** option buttons, click on the appropriate button from the following selections:

- **Apply** - to apply the modification of states to the queues.
  - An **OM Queue Status Change Confirmation** dialogue box (Figure 50) is displayed.
- **Reset** - to change the states displayed on all request queue **Change State** option buttons back to **Change State**.
  - The states displayed on all request queue **Change State** option buttons change back to **Change State**.

8 If an **OM Queue Status Change Confirmation** dialogue box (Figure 50) is displayed, click on the appropriate button from the following selections:

- **OK** - to apply the modification of states to the queues and dismiss the dialogue box.
  - The specified modification(s) of state(s) is (are) applied to the queue(s).
  - The dialogue box is dismissed.
  - The **OM Queue Status** page refreshes and displays the modified state(s).

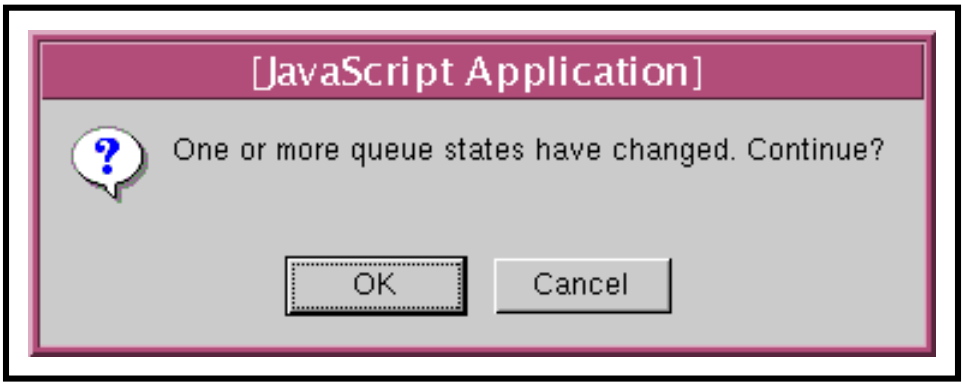

Figure 50. OM Queue Status Change Confirmation Dialogue Box

- **Cancel** - to cancel the specified modification(s) of state(s) to the queue(s) and dismiss the dialogue box.
  - No changes are made to the states of the queues.
  - The dialogue box is dismissed.

9 To check staging status perform the procedure for **Checking Staging Status** (subsequent section of this lesson).

10 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

11 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Checking Staging Status

The two **Staging Status** pages provide the Distribution Technician (whether full-capability or limited capability operator) with means of checking staging status in either of two ways; i.e., by….

- **Media Type.**
- **FTP Push Destination.**

The **Staging Status** pages allow the Distribution Technician to monitor the number of granules and data volume currently in staging. The staging information is arranged in the following four categories:

- Granules waiting for staging.
- Granules in staging.
- Granules that have been staged but not yet shipped.
- Granules that have been staged and shipped.

In addition to the preceding granule information, the data low and high water marks are shown on the **Staging Status** pages:

- **DHWM** – The Data High Water Mark is the maximum volume of data in staging or already staged but not yet shipped. If the data volume and number of requests is above the DHWM, it is assumed the media devices have plenty of work to keep them busy.
- **DLWM** – The Data Low Water Mark is the minimum volume of data that should be in staging or already staged but not yet shipped. If the data volume is below the DLWM, the media devices may soon become idle.

In general it is a good idea to keep the amount of work that is in staging or staged just below the high water mark of each output queue. This achieves a good balance among ftp output connections (or in the case of physical media, their various output devices).

The data high water marks can be exceeded in the interest of optimizing the use of the archive drives or to get high priority work through distribution quickly. For example, an idle archive would be dispatched even if it means exceeding the DHWM.

The DLWM is used mainly for dispatching high-priority work. Since it is a good idea to keep the queues at their high water marks, generally the output queues should be fairly full. As a result, a high-priority request might have to wait until some of the data gets worked off and the queue falls below that high water mark. But high-priority requests should go through at a fast pace.

The procedure for checking staging status starts with the following assumptions:

- All applicable servers are currently running.

- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].

Checking Staging Status

---

1 If it has not been expanded already, click on the **OM Status Pages** link in the navigation frame of the **OM GUI**.

- The **OM Status Pages** menu is expanded.

2 To display staging status by media type, click on the **Media Type** link in the navigation frame of the **OM GUI**.

- The **Staging Status by Media Type** page (Figure 51) is displayed.

3 To display staging status by FtpPush destination, click on the **FTP Push Destination** link in the navigation frame of the **OM GUI**.

- The **Staging Status by FTP Push Destination** page (Figure 52) is displayed.

4 Observe information displayed in the table on the **Staging Status** page.

- Each **Staging Status** page (i.e., **by Media Type** or **by FTP Push Destination**) has the following columns:
  - [Media or FtpPush destinations (as applicable)]**.**
  - **DHWM.**
  - **DLWM.**
  - **Waiting for Staging** [granule count and volume in MB].
  - **In Staging** [granule count and volume in MB].
  - **Staged and NOT Shipped** [granule count and volume in MB].
  - **Staged, Shipped & In DPL** [granule count and volume in MB].
- Whenever there is little question mark next to a button or text field (e.g., **System Totals**), clicking on the question mark opens a dialogue box that describes the item.
  - The “HelpOnDemand” feature provides context-sensitive help for each page, particularly for controls or parameters that may not be entirely self-descriptive.
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.

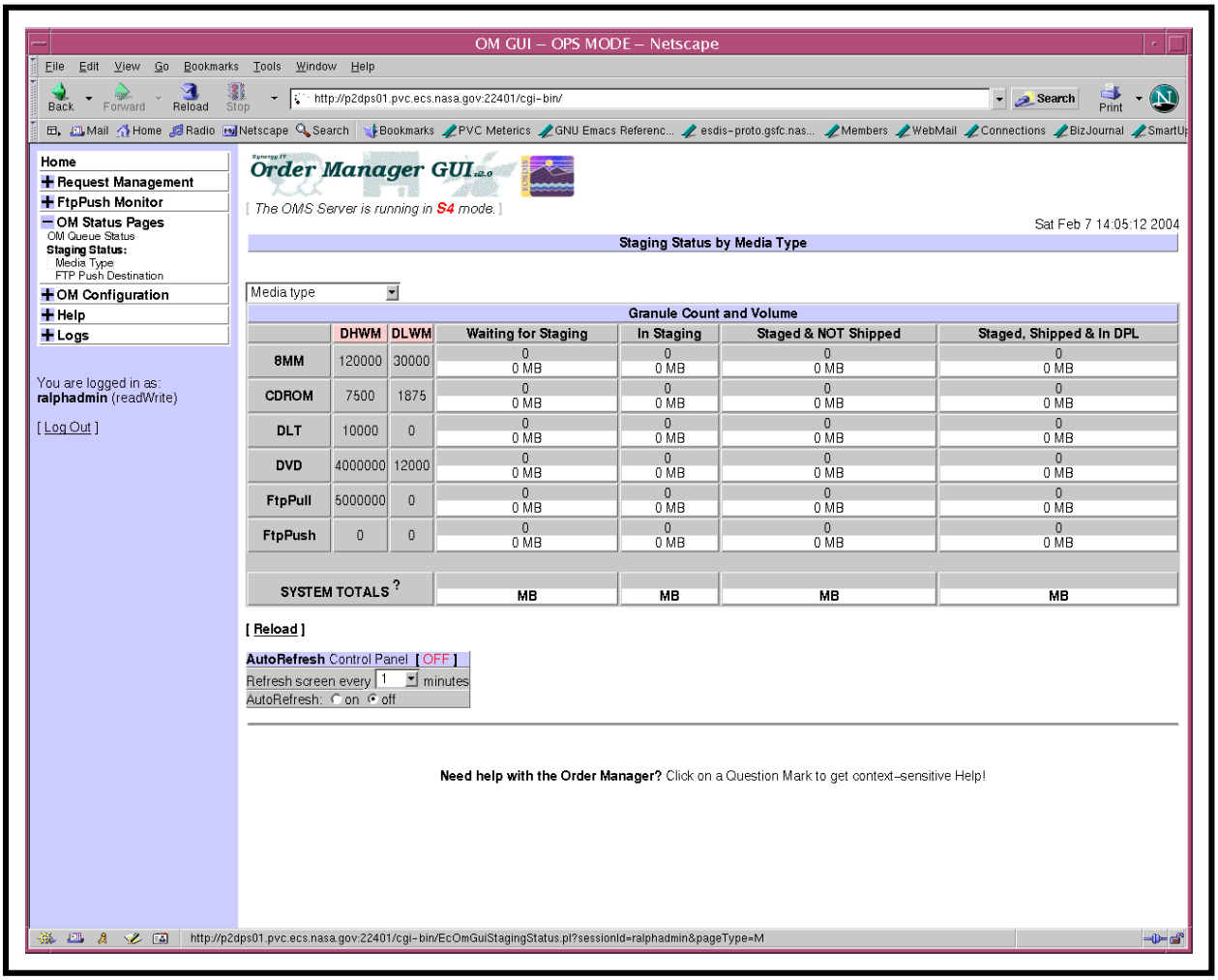

Figure 51. Staging Status by Media Type Page

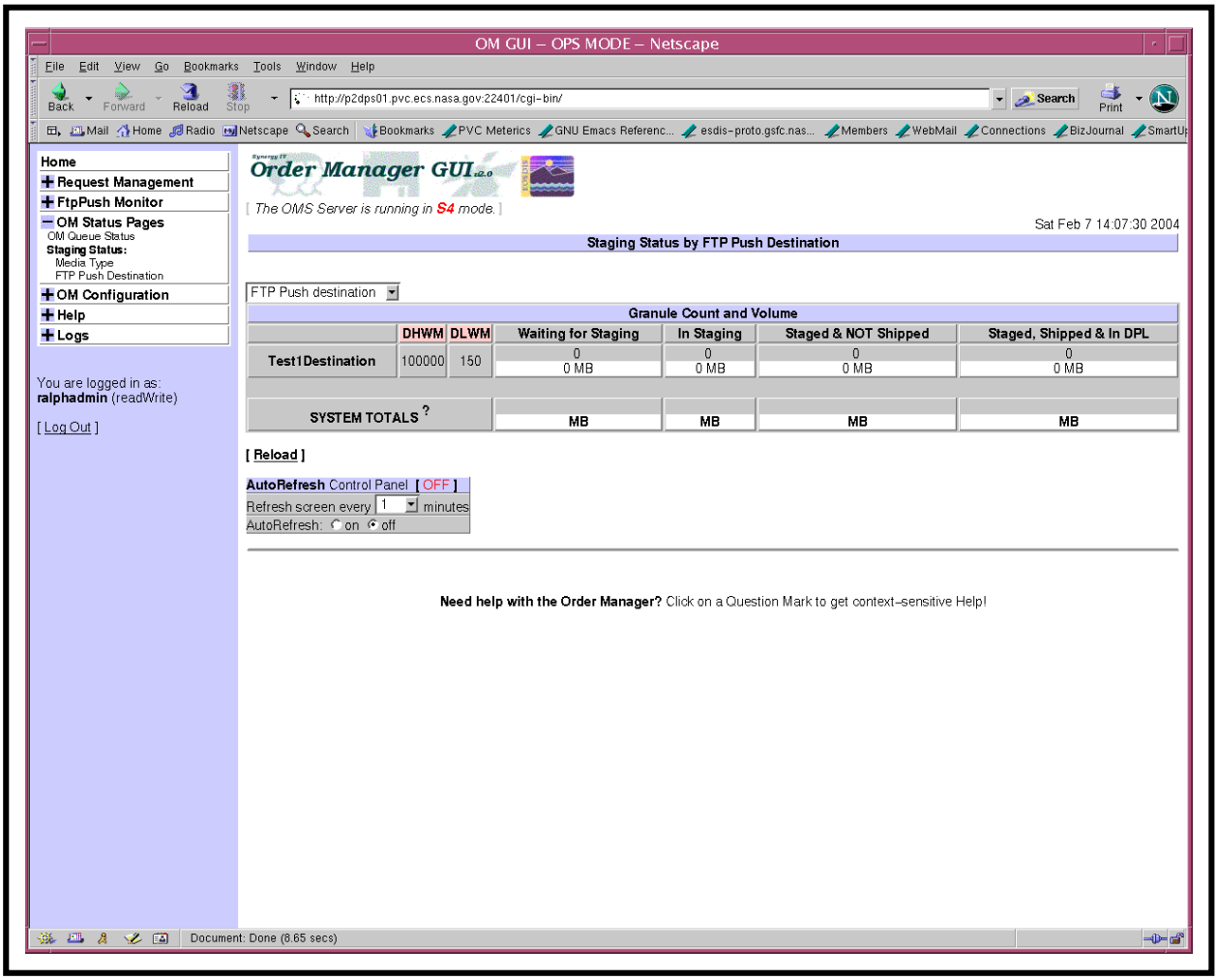

Figure 52. Staging Status by FTP Push Destination Page

- If **AutoRefresh** is **ON**, the **Staging Status by Media Type** or **Staging Status by FTP Push Destination** page refreshes automatically as often as specified in the **Refresh screen every *x* minutes** window.
  - If a different refresh option is preferred, perform the procedure for **Setting Refresh Options on OM GUI Pages** (preceding section of this lesson).
- To manually update (refresh) the data on the screen, click on the **Reload** link.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

5 Repeat Steps 2 through 4 as necessary to view staging status.

6 To check or modify OM queue status return to the procedure for **Checking/Modifying OM Queue Status** (preceding section of this lesson).

7 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

8 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Checking/Modifying OM Configuration Parameters

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

- **Aging Parameters.**
- **OM Server Parameters.**
- **OM Database Parameters.**
- **Media Parameters.**
- **FTP Push Policy.**

The limited-capability operator can use the **OM Configuration** page to view the values assigned to OM configuration parameters but is not allowed to change any parameters.

Checking/Modifying Aging Parameters

The **Aging Parameters** page (Figure 53) provides the full-capability operator with a means of checking and modifying aging parameters. The limited-capability operator can check but is not allowed to change any aging parameters.

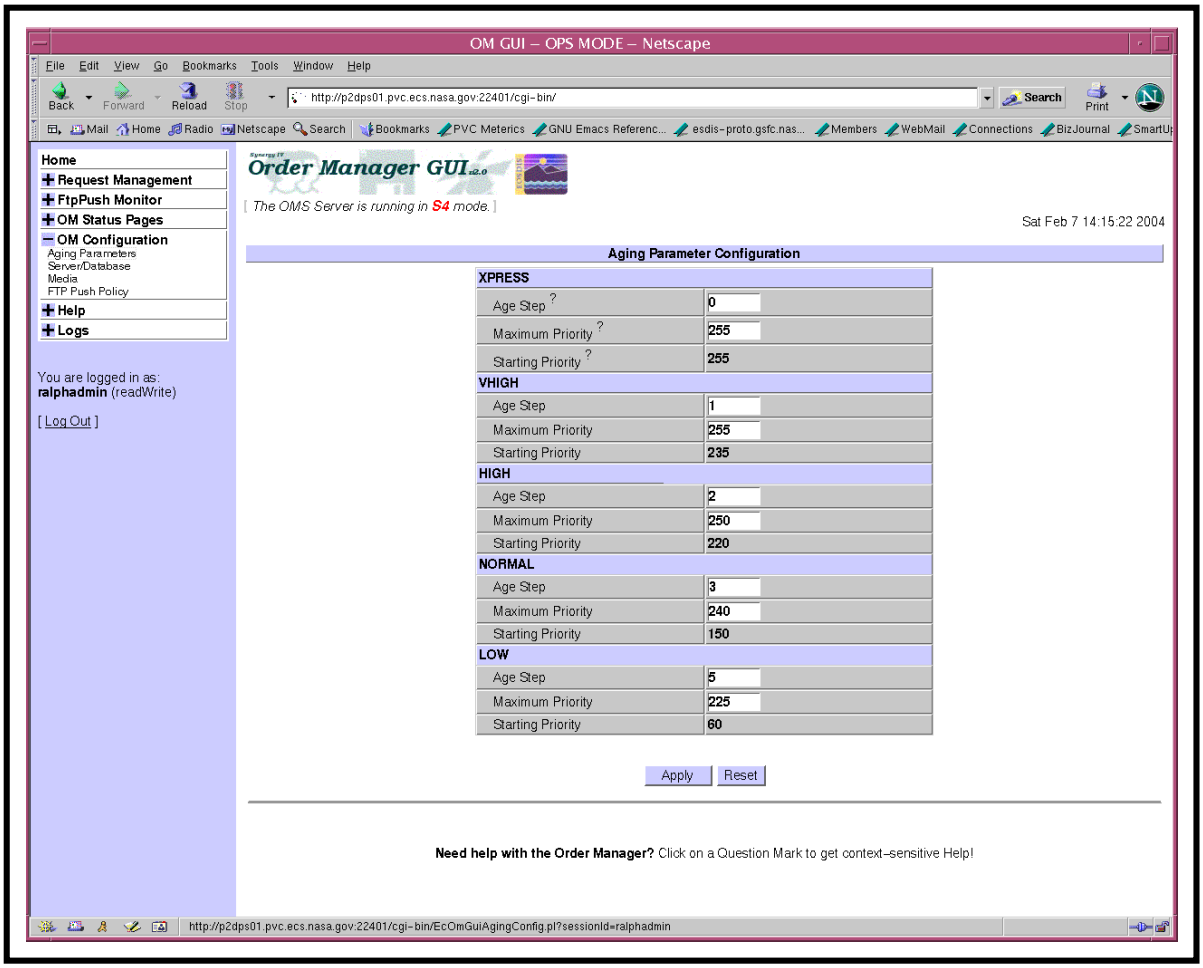

Figure 53. Aging Parameters Page

Aging parameters affect how Distribution Requests are aged over time. The following two aging parameters are configurable for each ECS Priority Level (i.e., XPRESS, VHIGH, HIGH, NORMAL, or LOW):

- **Age Step.**
- **Maximum Priority.**

Age Step is the aging rate by which the effective priority of a request increases for every hour it has been waiting. The range is 0-100, including decimal fractions. If the parameter is set to zero (0), waiting requests never increase in priority. For example, if the Age Step is set to 5.5 and a

request with an initial priority of 100 waits 10 hours to be pushed, the request increases in priority by a factor of 5.5 every hour until it has been delivered:

Hour 0: priority = 100
Hour 1: priority = 105.5
Hour 2: priority = 111
.
.
.
Hour 10: priority = 155

Maximum Priority is the maximum priority a request can attain through the aging process. For example, if Maximum Priority were set to 130, once the request had reached a priority of 130, it would not go any higher [e.g., if a Maximum Priority of 130 were applied to the previous example, at Hour 6 the priority would become 130 and at every hour thereafter (if not delivered) it would still be 130].

The procedure for checking/modifying aging parameters starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].

Checking/Modifying Aging Parameters

---

1 If it has not been expanded already, click on the **OM Configuration** link in the navigation frame of the **OM GUI**.

- The **OM Configuration** menu is expanded.

2 If the **Aging Parameters** page (Figure 53) is not already being displayed, click on the **Aging Parameters** link in the navigation frame of the **OM GUI**.

- The **Aging Parameters** page (Figure 53) is displayed.

3 Observe information displayed in the table on the **Aging Parameters** page.

- The table is divided into sections for the various distribution request priorities (e.g., XPRESS) and within each section there are rows that indicate the identity and value of each of the following parameters associated with the priority:
  - **Age Step.**
  - **Maximum Priority.**
  - **Starting Priority** (cannot be changed).

- Whenever there is little question mark next to a button or text field (e.g., **Age Step**), clicking on the question mark opens a dialogue box that describes the item.
  - The "HelpOnDemand" feature provides context-sensitive help for each page, particularly for controls or parameters that may not be entirely self-descriptive.
- The Netscape browser **Reload** button can be used to update the data on (refresh) the screen.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

4 If aging parameter value(s) is (are) to be modified (and there is authorization to do so), first type the new value(s) in the text entry box(es) for the relevant parameter(s).

5 If aging parameter value(s) is (are) to be modified, click on the appropriate button from the following selections:

- **Apply** - to apply the new value(s) to the parameter(s).
  - The new value(s) is (are) applied to the parameter(s).
- **Reset** - to clear the new value(s) from the text entry box(es) without changing the current value(s).
  - The original value(s) is (are) retained.

6 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

7 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Checking/Modifying OMS Server or Database Parameters

The **OMS Server and Database Configuration** page (Figure 54) provides the full-capability operator with a means of checking and modifying OMS server or database parameters. The limited-capability operator can check but is not allowed to change any OMS server or database parameters.

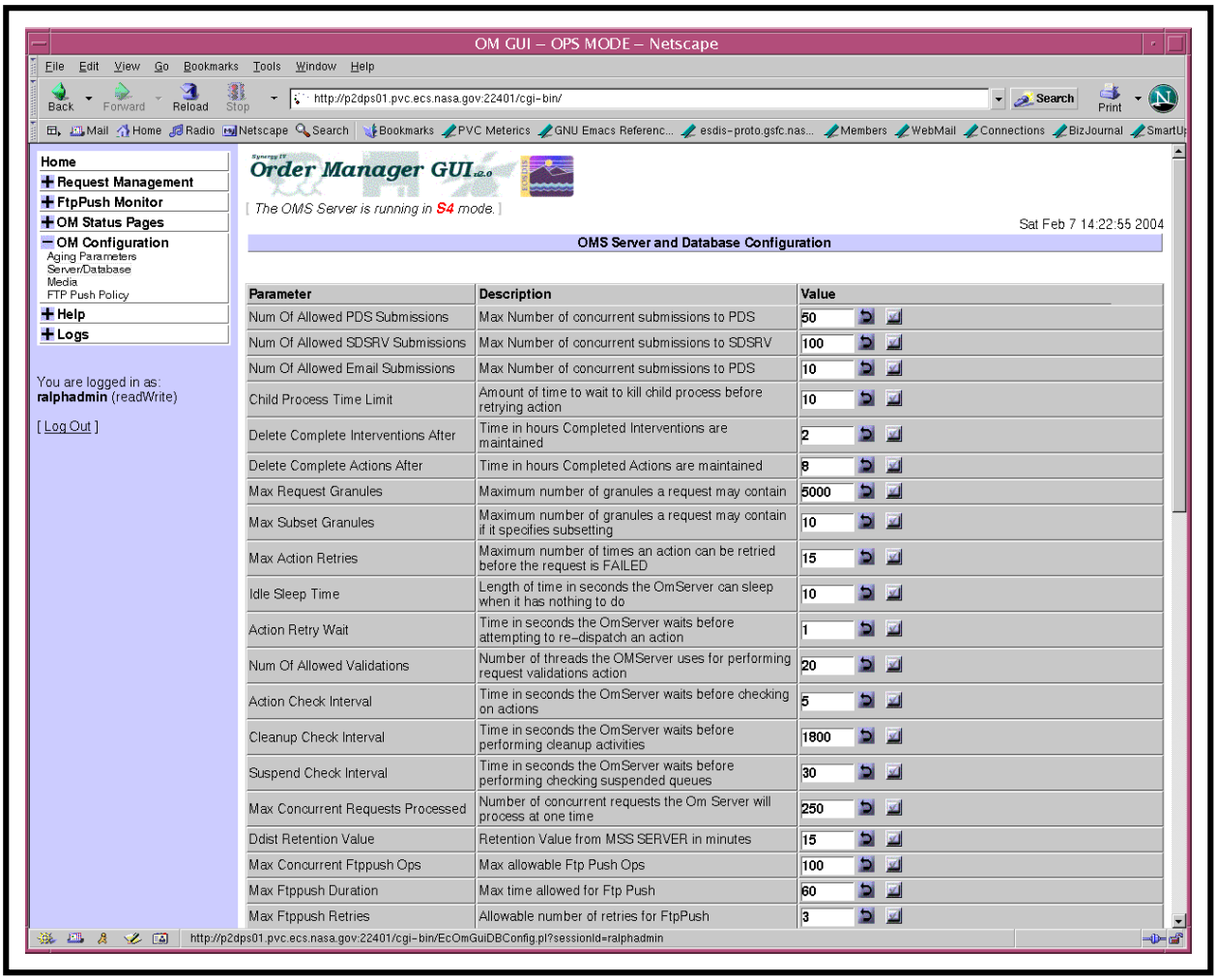

Figure 54. OMS Server and Database Configuration Page

OMS server and database parameters affect how the OM server and database run. The parameters are dynamically loaded from the OMS database into the configuration pages on the

OM GUI. If a configuration parameter is added to the database, it is subsequently displayed on the OM GUI when the applicable configuration page is requested. If a configuration parameter is deleted from the database, it is no longer displayed on the OM GUI. Consequently, the configuration parameters displayed on the OM GUI are variable.

The procedure for checking/modifying OMS server or database parameters starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].

Checking/Modifying OMS Server or Database Parameters

---

1 If it has not been expanded already, click on the **OM Configuration** link in the navigation frame of the **OM GUI**.

- The **OM Configuration** menu is expanded.

2 If the **OMS Server and Database Configuration** page (Figure 54) is not already being displayed, click on the **Server/Database** link in the navigation frame of the **OM GUI**.

- The **OMS Server and Database Configuration** page (Figure 54) is displayed.

NOTE: OMS configuration parameters are dynamically loaded from the OMS database into the configuration pages on the **OM GUI**. If a configuration parameter is added to the database, it is subsequently displayed on the **OM GUI** when the applicable configuration page is requested. If a configuration parameter is deleted from the database, it is no longer displayed on the **OM GUI**. Consequently, the configuration parameters displayed on the **OM GUI** are variable.

3 Observe information displayed in the table on the **OMS Server and Database Configuration** page.

- The table on the **OMS Server and Database Configuration** page has the following columns:
  - **Parameter.**
  - **Description.**
  - **Value.**
- The rows in the table indicate the current values and descriptions of the following types of parameters:
  - **Num of Allowed PDS Submissions.**
  - **Num of Allowed SDSRV Submissions.**

- **Num of Allowed Email Submissions.**
- **Child Process Time Limit.**
- **Delete Complete Interventions After.**
- **Delete Complete Actions After.**
- **Max Request Granules.**
- **Max Subset Granules.**
- **Max Action Retries.**
- **Idle Sleep Time.**
- **Action Retry Wait (Seconds).**
- **Num of Allowed Validations.**
- **Action Check Interval.**
- **Cleanup Check Interval.**
- **Suspend Check Interval.**
- **Max Concurrent Requests Processed.**
- **Ddist Retention Value.**
- **Max Concurrent Ftppush Ops.**
- **Max Ftppush Duration.**
- **Max Ftppush Retries.**
- **Retry Interval.**
- **Min Moderate Request.**
- **Min Expensive Request.**
- **Cheap Rhwm.**
- **Moderate Rhwm.**
- **Expensive Rhwm.**
- **Max Failed Push Ops.**
- **Pull Gran Dpl Time.**
- **Pull Gran Dpl Ret Pri.**
- **Min Pri to Preempt.**

- **Ret Time Failed Order.**
- **Max Failure Archive.**
- **Failed Order Ret Time.**
- **Max Orphan Req Age.**
- **Cleanup Orphan Req Age.**
- **Cleanup Orphan Req Period.**
- **Billing Agency Email Address.**
- **Billing Agency Name.**
- **Notify User for Partition Request.**
- **Global Staging Status.**
- **Global Configured Email.**
- **Delay Partition.**

- The Netscape browser **Reload** button can be used to update the data on (refresh) the screen.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

4 If server or database parameter value(s) is (are) to be modified (and there is authorization to do so), first type the new value(s) in the text entry box(es) for the relevant parameter(s).

NOTE: Server parameters cannot be set to 0 (zero).

5 If server or database parameter value(s) is (are) to be modified, click on the appropriate button from the following selections:

- **Apply -** to apply the new value(s) to the parameter(s).
  - The new value(s) is (are) applied to the parameter(s).
  - The **OMS Server and Database Configuration** page refreshes and displays the modified value(s).
- **Reset -** to clear the new value(s) from the text entry box(es) without changing the current value(s).
  - The original value(s) is (are) retained.

6 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message “Are you sure you want to log out? This will close your browser.” is displayed.

7 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Checking/Modifying Media Parameters

The **Media Configuration** page (Figure 55) provides the full-capability operator with a means of checking and modifying media parameters. The limited-capability operator can check but is not allowed to change any media parameters.

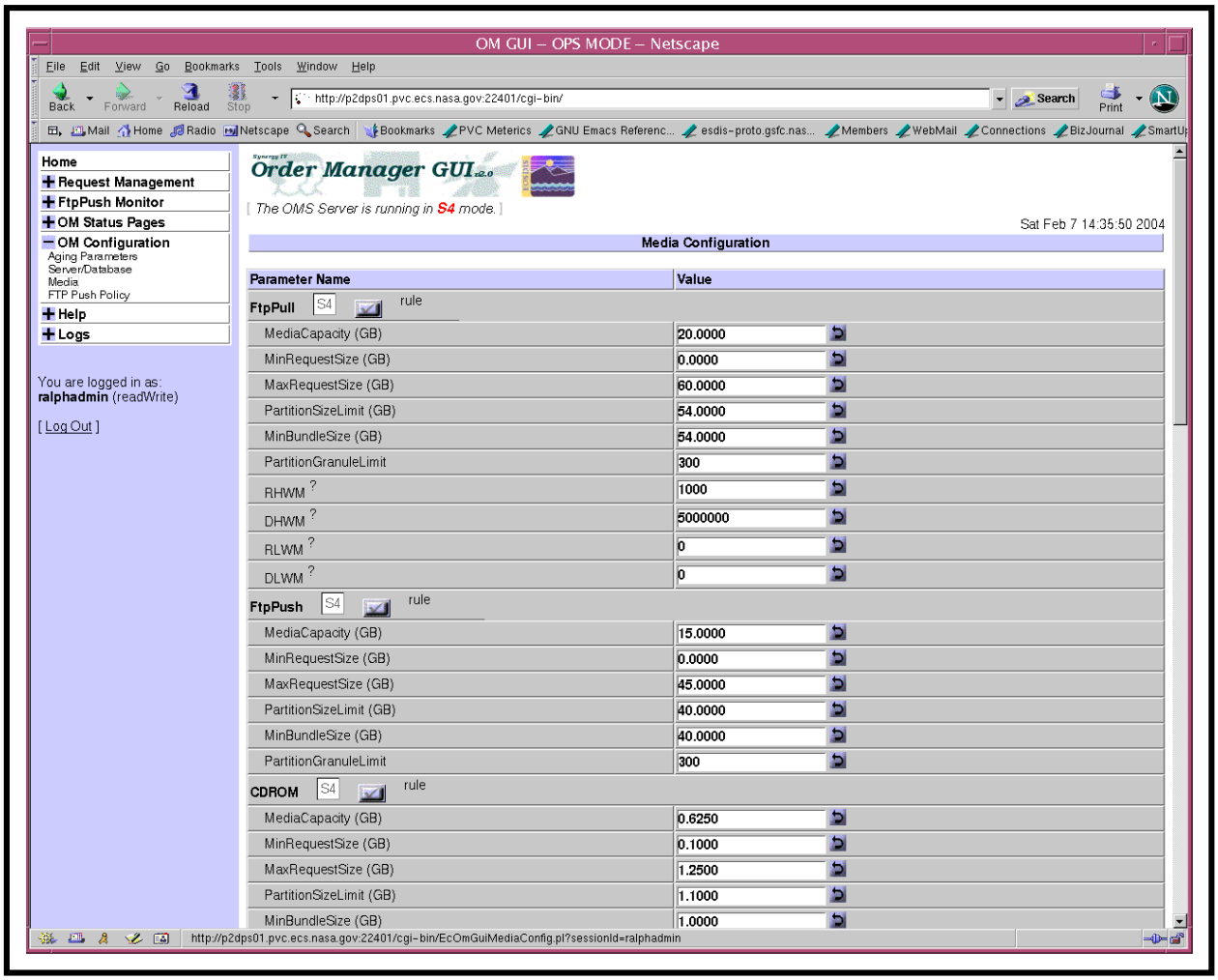

Figure 55. Media Configuration Page

Media parameters are specific to each kind of distribution medium and affect such things as limit checking against standard media capacity limits (e.g., minimum request size and maximum request size) and the partitioning of requests (e.g., partition size). The parameters are dynamically loaded from the OMS database into the configuration pages on the OM GUI. If a configuration parameter is added to the database, it is subsequently displayed on the OM GUI when the applicable configuration page is requested. If a configuration parameter is deleted from the database, it is no longer displayed on the OM GUI. Consequently, the configuration parameters displayed on the OM GUI are variable.

The procedure for checking/modifying media parameters starts with the following assumptions:

- All applicable servers are currently running.

- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].

Checking/Modifying Media Parameters

---

1 If it has not been expanded already, click on the **OM Configuration** link in the navigation frame of the **OM GUI**.

- The **OM Configuration** menu is expanded.

2 If the **Media Configuration** page (Figure 55) is not already being displayed, click on the **Media** link in the navigation frame of the **OM GUI**.

- The **Media Configuration** page (Figure 55) is displayed.

NOTE: OMS configuration parameters are dynamically loaded from the OMS database into the configuration pages on the **OM GUI**. If a configuration parameter is added to the database, it is subsequently displayed on the **OM GUI** when the applicable configuration page is requested. If a configuration parameter is deleted from the database, it is no longer displayed on the **OM GUI**. Consequently, the configuration parameters displayed on the **OM GUI** are variable.

3 Observe information displayed in the table on the **Media Configuration** page.

- The **Media Configuration** table has the following columns:
  - **Parameter.**
  - **Current Value.**
  - **Change to…**
- The rows in the table indicate the current values assigned to the following types of parameters for each type of distribution medium:
  - **MediaCapacity (GB).**
  - **MinRequestSize (GB).**
  - **MaxRequestSize (GB).**
  - **PartitionSizeLimit (GB).**
  - **MinBundleSize (GB).**
  - **PartitionGranuleLimit.**
- Each of the preceding parameters applies to each of the following distribution media:
  - **FtpPull.**

- **FtpPush.**
- **CDROM.**
- **DLT.**
- **DVD.**
- **8MM.**
- **scp.**

- The Netscape browser **Reload** button can be used to update the data on (refresh) the screen.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

4 If media parameter value(s) is (are) to be modified (and there is authorization to do so), first type the new value(s) in the text entry box(es) for the relevant parameter(s).

- **MediaCapacity (GB)** should initially be set to the maximum capacity (in gigabytes) for the type of medium, but later should be adjusted to a lower or higher value depending on whether or not data compression is used.
- **MinRequestSize (GB)** is the minimum number of gigabytes that can be requested for the type of medium.
- **MaxRequestSize (GB)** should be the maximum total number of gigabytes that can be requested for that type of medium, regardless of whether or not it can be partitioned.
- **PartitionSizeLimit (GB)** should be the size (in GB) at which point partitioning of a request can occur.
- **MinBundleSize (GB)** is the minimum number of gigabytes in a bundle for the type of medium.
- **PartitionGranuleLimit** is the maximum number of granules that may be partitioned for the type of medium.
- **RHWM -** The Request High Water Mark is the desired maximum number of requests that may be in the Staging state, or that have completed Staging but are not yet in a terminal state (e.g., Shipped).
- **DHWM –** The Data High Water Mark is the maximum volume (in MB) of data in staging or already staged but not yet shipped. If the data volume and number of requests is above the DHWM, it is assumed the media devices have plenty of work to keep them busy.
- **RLWM -** The Request Low Water Mark.

- **DLWM** – The Data Low Water Mark is the minimum volume (in MB) of data that should be in staging or already staged but not yet shipped. If the data volume is below the DLWM, the media devices may soon become idle.

5 If media parameter value(s) is (are) to be modified, click on the appropriate button from the following selections:

- **Apply** - to apply the new value(s) to the parameter(s).
  - A **"Remember Values" Confirmation** dialogue box (Figure 56) is displayed.
- **Reset** - to clear the new value(s) from the text entry box(es) and reinsert the current value(s).
  - The values displayed in the text entry boxes return to the current values.

Figure 56. "Remember Values" Confirmation Dialogue Box

6 If a **"Remember Values" Confirmation** dialogue box (Figure 56) is displayed, click on the appropriate button from the following selections:

- **Yes**.
- **Never for this site**.
- **No**.

7 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

8 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK -** to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Checking/Modifying FTP Push Policy Configuration

The **FTP Push Policy Configuration** page (Figure 57) provides the full-capability operator with a means of defining and configuring the fine-tuning parameters of FtpPush destinations. The limited-capability operator can check but is not allowed to change the fine-tuning parameters of FtpPush destinations.

Configuration parameters on the **FTP Push Policy Configuration** page are grouped in the following three areas:

- **Global Settings for All Destinations.**
- **Settings for Non-Configured Destinations.**
- **Frequently Used Destinations.**

All FtpPush destinations belong to either the Frequently Used group, or the Non-Configured (general) group. All FtpPush destinations not specifically defined as **Frequently Used Destinations** are considered non-configured and use the parameters in the **Settings for Non-Configured Destinations** area. All new destinations use the **Settings for Non-Configured Destinations** as their default values until other values are specifically assigned.

Global Settings for All Destinations are parameters that apply to all destinations regardless of their individual settings. Global settings apply to both frequently used and non-configured destinations.

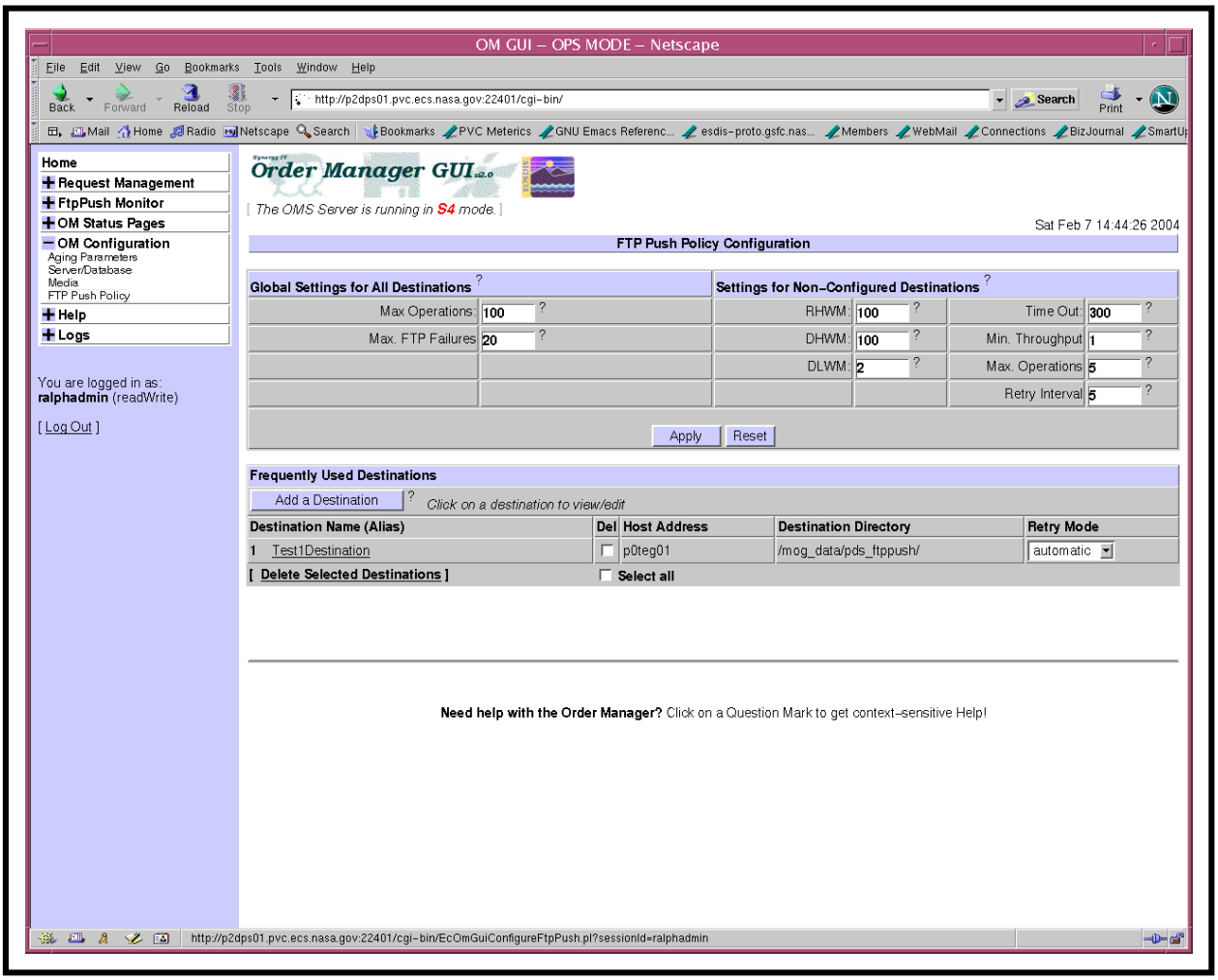

Figure 57. FTP Push Policy Configuration Page

The procedure for checking/modifying FtpPush policy configuration starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].

Checking/Modifying FTP Push Policy Configuration

1 If it has not been expanded already, click on the **OM Configuration** link in the navigation frame of the **OM GUI**.

- The **OM Configuration** menu is expanded.

2 If the **FTP Push Policy Configuration** page (Figure 57) is not already being displayed, click on the **FTP Push Policy** link in the navigation frame of the **OM GUI**.

- The **FTP Push Policy Configuration** page (Figure 57) is displayed.

3 Observe information displayed in the table on the **FTP Push Policy Configuration** page.

- Configuration parameters on the **FTP Push Policy Configuration** page are grouped in the following three areas:
  - **Global Settings for All Destinations.**
  - **Settings for Non-Configured Destinations.**
  - **Frequently Used Destinations.**
- The **Global Settings for All Destinations** area has the following types of parameters:
  - **Max Operations.**
  - **Max. FTP Failures.**
- The **Settings for Non-Configured Destinations** area has the following types of parameters:
  - **RHWM** [Request High Water Mark].
  - **DHWM** [Data High Water Mark].
  - **DLWM** [Data Low Water Mark].
  - **Time Out.**
  - **Min. Throughput.**
  - **Max. Operations.**
  - **Retry Interval.**
- The **Frequently Used Destinations** area has information in the following columns:
  - **Destination Name (Alias).**
  - **Del** [“delete” boxes – select box to mark corresponding destination for deletion].
  - **Host Address.**
  - **Destination Directory.**
  - **Retry Mode.**

- Clicking on a specific Destination Name in the **Frequently Used Destinations** area brings up a screen containing more detailed data concerning that particular destination.
  - The **FTP Push Destination Details** page (Figure 58) displays the following types of data concerning the destination in the **Destination Details** area:
    - **Name (Alias).**
    - **Target Directory.**
    - **Host/IP Address.**
  - The **FTP Push Destination Details** page (Figure 58) displays the following types of data concerning the destination in the **Settings for this Destination** area:
    - **Max. Operations.**
    - **RHWM.**
    - **DHWM.**
    - **DLWM.**
    - **Time Out.**
    - **Min Throughput.**
    - **Retry Interval.**
    - **Retry Mode.**
    - **Notes.**
  - Clicking on the Netscape browser **Back** button causes the **FTP Push Policy Configuration** page to be redisplayed.
- Whenever there is little question mark next to a button or text field (e.g., **Max Operations**), clicking on the question mark opens a dialogue box that describes the item.
  - The "HelpOnDemand" feature provides context-sensitive help for each page, particularly for controls or parameters that may not be entirely self-descriptive.
- Horizontal and vertical scroll bars appear when necessary to allow viewing data that are not readily visible in the window.
- The Netscape browser **Reload** button can be used to update the data on (refresh) the screen.
- The Netscape browser **Edit → Find in Page** menu provides a means of performing a keyword search of the data currently being displayed on the screen.

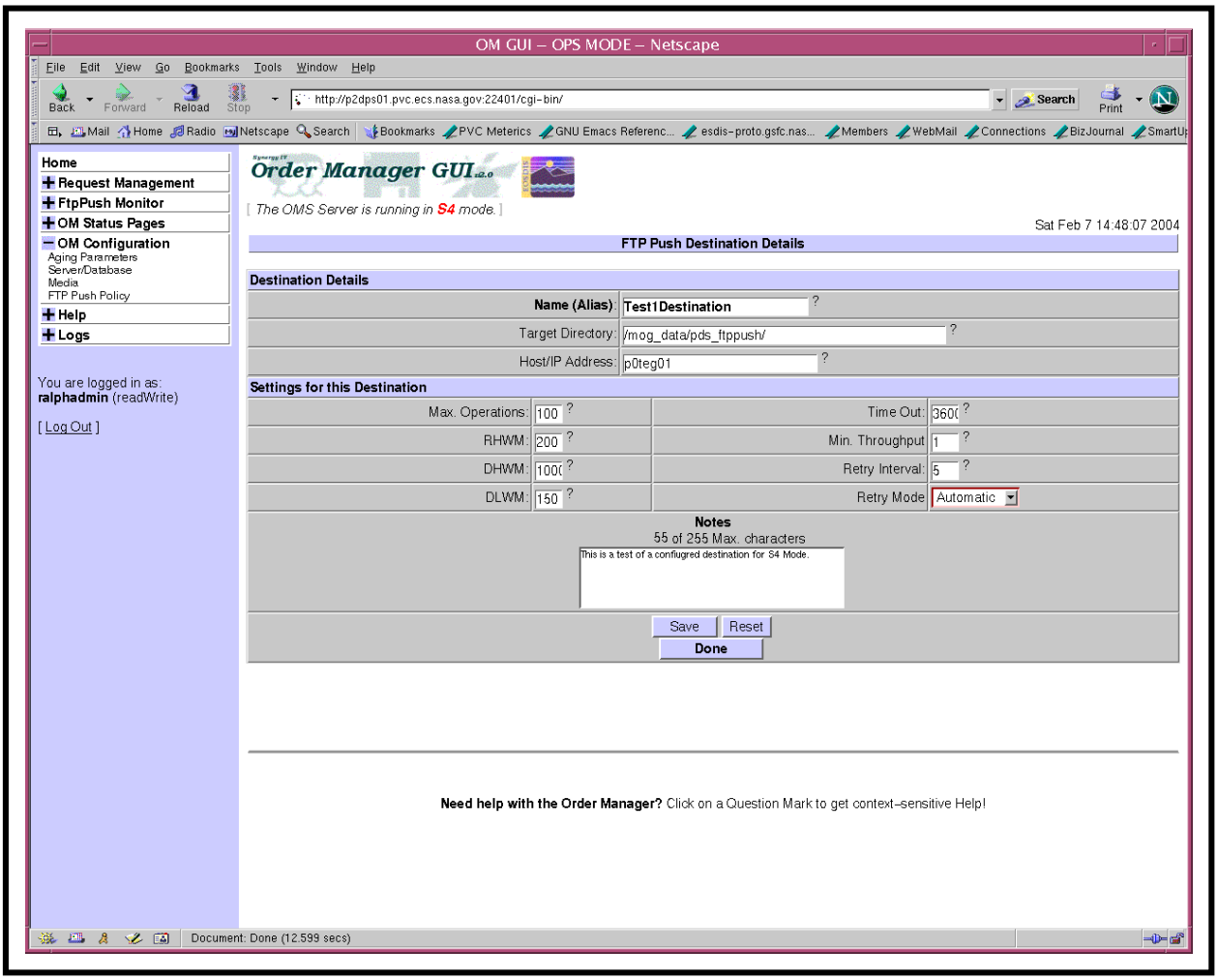

Figure 58. FTP Push Destination Details Page

4 If parameter value(s) in either the **Global Settings for All Destinations** area or **Settings for Non-Configured Destinations** area is (are) to be modified (and there is authorization to do so), first type the new value(s) in the text entry box(es) for the relevant parameter(s).

5 If parameter value(s) in either the **Global Settings for All Destinations** area or **Settings for Non-Configured Destinations** area is (are) to be modified, click on the appropriate button from the following selections:

- **Apply** - to apply the new value(s) to the parameter(s).
  - The new value(s) is (are) applied to the parameter(s).

- **Reset -** to clear the new value(s) from the text entry box(es) without changing the current value(s).
  - The new value(s) is (are) not applied to the parameter(s).

6 If the retry mode for a destination in the **Frequently Used Destinations** area should be changed (and there is authorization to do so), click on the option button (in the **Retry Mode** column) associated with the destination to display a menu of retry modes then click on the desired selection.

- The following choices are available:
  - **Automatic.**
  - **Manual.**
- Selected mode is displayed in the **Retry Mode** column.
- The retry mode for the destination is changed to the selected value.

7 To remove (delete) destination(s) from the **Frequently Used Destinations** area, first either click in the corresponding box(es) in the **Del** column or (if all destinations are to be removed) click in the **Select all** box near the bottom of the **Frequently Used Destinations** area.

- Selected destination(s) is (are) marked for deletion.
- Removing a destination from the **Frequently Used Destinations** area does not actually delete the destination; it moves the destination to the non-configured group and erases its individual configuration parameters.

8 To continue the process of removing (deleting) destination(s) from the **Frequently Used Destinations** area, click on the **Remove Selected Destinations** link near the bottom of the **FTP Push Policy Configuration** page.

- A destination deletion confirmation dialogue box is displayed with the message “Are you sure you want to delete the selected destinations?”

9 To complete the process of removing (deleting) destination(s) from the **Frequently Used Destinations** area, click on the appropriate button from the following selections:

- **OK -** to delete the selected destination(s) and dismiss the confirmation dialogue box.
  - The confirmation dialogue box is dismissed.
  - The **FTP Push Policy Configuration** page is refreshed to display the **Frequently Used Destinations** list without the deleted destination(s).
- **Cancel –** to dismiss the confirmation dialogue box without deleting the selected destination(s).
  - The confirmation dialogue box is dismissed.

10 To add a new destination to the **Frequently Used Destinations** area perform the procedure for **Adding Destinations to the Frequently Used Destinations Area** (subsequent section of this lesson).

- In order for a destination to be added to the list of Frequently-Used Destinations, the destination must already exist (i.e., must be referenced in at least one current order).

11 If parameter value(s) for destination(s) in the **Frequently Used Destinations** area is (are) to be modified (and there is authorization to do so), perform the procedure for **Modifying Values Assigned to Parameters of Frequently Used Destinations** (subsequent section of this lesson).

12 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message "Are you sure you want to log out? This will close your browser." is displayed.

13 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK -** to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel -** to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

Adding Destinations to the Frequently Used Destinations List

The **Add New Destination** page (Figure 59) provides the full-capability operator with a means of adding destinations to the **Frequently Used Destinations** list on the **FTP Push Policy Configuration** page (Figure 57). The limited-capability operator is not allowed to add destinations to the **Frequently Used Destinations** list on the **FTP Push Policy Configuration** page.

A destination on the **Frequently Used Destinations** list is defined by the following three attributes:

- **Alias** – a descriptive name or handle by which the destination can be easily identified. Each alias must be unique.
- **Target Directory -** the directory on the remote host to which files will be pushed.

- **Host Address** - the remote host machine name or IP address.

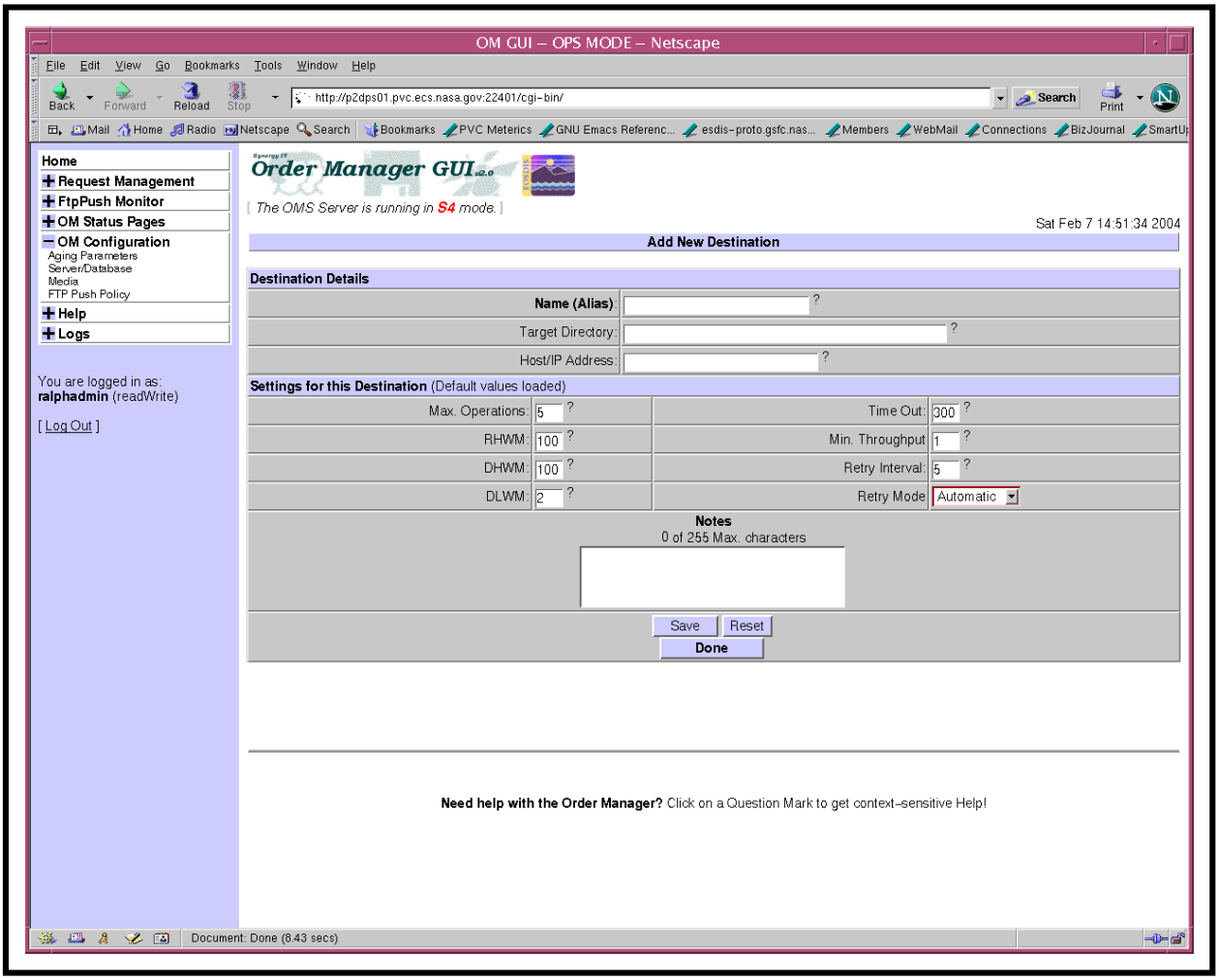

Figure 59. Add New Destination Page

Each destination on the **Frequently Used Destinations** list must have exclusive attributes and an exclusive alias. Each new destination is initially assigned the same parameter values as are used by the non-configured destinations.

The procedure for adding destinations to the **Frequently Used Destinations** list starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].

- The destination to be added to the **Frequently Used Destinations** list must already exist (i.e., must be referenced in at least one current order).

Adding Destinations to the Frequently Used Destinations List

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1 If it has not been expanded already, click on the **OM Configuration** link in the navigation frame of the **OM GUI**.

- The **OM Configuration** menu is expanded.

2 If the **FTP Push Policy Configuration** page (Figure 57) is not already being displayed, click on the **FTP Push Policy** link in the navigation frame of the **OM GUI**.

- The **FTP Push Policy Configuration** page (Figure 57) is displayed.

3 Click on the **Add a Destination** button in the **Frequently Used Destinations** area of the **FTP Push Policy Configuration** page.

- The **Add New Destination** page (Figure 59) is displayed.
  - In the **Destination Details** area of the **Add New Destination** page (Figure 59) text boxes for entering the following types of destination attributes are displayed:
    - **Name (Alias).**
    - **Target Directory.**
    - **Host/IP Address.**
  - In the **Settings for this Destination** area of the **Add New Destination** page (Figure 59) current values for the following types of parameters are displayed:
    - **Max. Operations.**
    - **RHWM.**
    - **DHWM.**
    - **DLWM.**
    - **Time Out.**
    - **Min Throughput.**
    - **Retry Interval.**
    - **Retry Mode.**
    - **Notes.**

- Each destination on the **Frequently Used Destinations** list must have exclusive attributes and an exclusive alias.
  - The attributes are entered in the **Destination Details** area of the **Add New Destination** page (Figure 59).
- Each new destination is initially assigned the same parameter values as are used by the non-configured destinations.
  - The parameter values are displayed in the **Settings for this Destination** area of the **Add New Destination** page (Figure 59).
- Whenever there is little question mark next to a button or text field (e.g., **Target Directory**), clicking on the question mark opens a dialogue box that describes the item.
  - The "HelpOnDemand" feature provides context-sensitive help for each page, particularly for controls or parameters that may not be entirely self-descriptive.

4 Type ***alias*** in the **Name (Alias)** text box.

- ***alias*** is a unique descriptive name or handle by which the destination can be easily identified and by which the destination will be commonly known. For example:

  Norford University

5 Type ***path*** in the **Target Directory** text box.

- ***path*** is the path to the directory on the remote host to which data are to be pushed by ftp. For example:

  /sci/data/push

6 Type ***address*** in the **Host/IP Address** text box.

- ***address*** is the remote host machine name or IP address where data are to be pushed by ftp. For example:

  dsc@nu.edu

7 Type ***#operations*** in the **Max. Operations** text box.

- ***#operations*** is the maximum number of concurrent FtpPush operations for a particular destination (exclusive of but subject to the global Max Operations). For example:

  2

8 Type ***rhwm*** in the **RHWM** text box.

- ***rhwm*** is the Request High Water Mark, the desired maximum number of requests that may be in the Staging state, or that completed Staging but are not in a terminal state (e.g., Shipped). For example:

  10

9 Type ***dhwm*** in the **DHWM** text box.

- ***dhwm*** is the Data High Water Mark, the maximum volume of data (in GB) in Staging or already staged but not yet pushed. For example:

  10

10 Type ***dlwm*** in the **DLWM** text box.

- ***dlwm*** is the Data Low Water Mark, the minimum volume of data (in GB) in Staging or already staged but not yet pushed. For example:

  2

11 Type ***min*** in the **Time Out** text box.

- ***min*** is an extra time allotment (in minutes) that is applied to the expected throughput, such that expected throughput equals minimum throughput plus timeout. For example:

  60

12 Type ***MB*** in the **Min. Throughput** text box.

- ***MB*** is minimum data throughput (in MB/sec) for a particular destination. For example:

  100

13 Type ***min*** in the **Retry Interval** text box.

- ***min*** is the waiting period (in minutes) before FtpPush operations for a suspended destination are automatically retried. For example:

  60

14 Click on the **Retry Mode** option button to display a menu of retry modes then click on the desired selection.

- The following choices are available:
  - **Automatic.**
  - **Manual.**
- Selected mode is displayed in the **Retry Mode** column.

15 If a note should be entered concerning the destination (e.g., the reason for adding the destination to the **Frequently Used Destinations** list), type the applicable text in the **Notes** text box.

16 Click on the appropriate button from the following selections:

- **Save -** to save the new frequently used destination and the values specified for its parameters.
  - A **"Remember Values" Confirmation** dialogue box (Figure 56) is displayed.
- **Done -** to dismiss the **Add New Destination** page (Figure 59) and display the **FTP Push Policy Configuration** page (Figure 57).
  - A **"Done" Confirmation** dialogue box (Figure 60) is displayed.
- **Reset -** to clear the new value(s) from the text entry box(es) without changing the current value(s).
  - The new value(s) is (are) cleared from the text entry box(es) without changing the current value(s).

17 If a **"Remember Values" Confirmation** dialogue box (Figure 56) is displayed, click on the appropriate button from the following selections:

- **Yes**.
  - The **"Remember Values" Confirmation** dialogue box (Figure 56) is dismissed.
  - The **Add New Destination** page (Figure 59) is displayed.
- **Never for this site**.
  - The **"Remember Values" Confirmation** dialogue box (Figure 56) is dismissed.
  - The **Add New Destination** page (Figure 59) is displayed.

Figure 60. "Done" Confirmation Dialogue Box

- **No**.
  - The **"Remember Values" Confirmation** dialogue box (Figure 56) is dismissed.
  - The **Add New Destination** page (Figure 59) is displayed.

18 If a **"Done" Confirmation** dialogue box (Figure 60) is displayed, click on the appropriate button from the following selections:

- **OK** - to dismiss the **"Done" Confirmation** dialogue box (Figure 60) and the **Add New Destination** page (Figure 59) and display the **FTP Push Policy Configuration** page (Figure 57).
  - The **"Done" Confirmation** dialogue box (Figure 60) is dismissed.
  - The **Add New Destination** page (Figure 59) is dismissed.
  - The **FTP Push Policy Configuration** page (Figure 57) is displayed.
- **Cancel** - to dismiss the **"Done" Confirmation** dialogue box and return to the **Add New Destination** page (Figure 59).
  - The **"Done" Confirmation** dialogue box (Figure 60) is dismissed.

19 If the **Add New Destination** page (Figure 59) is still being displayed and no changes to the new destination are needed, click on the **Done** button.

  - A **"Done" Confirmation** dialogue box (Figure 60) is displayed.

20 If a **"Done" Confirmation** dialogue box (Figure 60) is displayed, click on the appropriate button from the following selections:

- **OK -** to dismiss the **"Done" Confirmation** dialogue box (Figure 60) and the **Add New Destination** page (Figure 59) and display the **FTP Push Policy Configuration** page (Figure 57).
  - The **"Done" Confirmation** dialogue box (Figure 60) is dismissed.
  - The **Add New Destination** page (Figure 59) is dismissed.
  - The **FTP Push Policy Configuration** page (Figure 57) is displayed.
- **Cancel -** to dismiss the **"Done" Confirmation** dialogue box and return to the **Add New Destination** page (Figure 59).
  - The **"Done" Confirmation** dialogue box (Figure 60) is dismissed.

21 If changes to the new frequently used destination are needed, repeat Steps 4 through 20 as necessary.

22 Return to the procedure for **Checking/Modifying FTP Push Policy Configuration** (preceding section of this lesson).

Modifying Values Assigned to Parameters of Frequently Used Destinations

The **FTP Push Destination Details** page (Figure 58) provides the full-capability operator with a means of modifying the values assigned to parameters of frequently used FtpPush destinations (as listed in the **Frequently Used Destinations** area of the **FTP Push Policy Configuration** page, Figure 57). The limited-capability operator can check but is not allowed to change the values assigned to parameters of frequently used FtpPush destinations.

The procedure for modifying values assigned to parameters of frequently used destinations starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].

Modifying Values Assigned to Parameters of Frequently Used Destinations

---

1 If it has not been expanded already, click on the **OM Configuration** link in the navigation frame of the **OM GUI**.

- The **OM Configuration** menu is expanded.

2 If the **FTP Push Policy Configuration** page (Figure 57) is not already being displayed, click on the **FTP Push Policy** link in the navigation frame of the **OM GUI**.

- The **FTP Push Policy Configuration** page (Figure 57) is displayed.

3 If the **FTP Push Destination Details** page (Figure 58) for the relevant destination is not already being displayed, click on the specific Destination Name in the **Frequently Used Destinations** area.

- The **FTP Push Destination Details** page (Figure 58) is displayed.

4 Observe information displayed on the **FTP Push Destination Details** page.

- In the **Destination Details** area of the **FTP Push Destination Details** page (Figure 58) the following types of destination attributes are displayed:
  - **Name (Alias).**
  - **Target Directory.**
  - **Host/IP Address.**
- In the **Settings for this Destination** area of the **FTP Push Destination Details** page (Figure 58) current values for the following types of parameters are displayed:
  - **Max. Operations.**
  - **RHWM.**
  - **DHWM.**
  - **DLWM.**
  - **Time Out.**
  - **Min Throughput.**
  - **Retry Interval.**
  - **Retry Mode.**
  - **Notes.**

5 Perform Steps 6 through 19 as necessary to modify values that need to be changed.

6 Type ***alias*** in the **Name (Alias)** text box.

- ***alias*** is a unique descriptive name or handle by which the destination can be easily identified and by which the destination will be commonly known. For example:

  Norford University

7 Type ***path*** in the **Target Directory** text box.

- ***path*** is the path to the directory on the remote host to which data are to be pushed by ftp. For example:

  /sci/data/push

8 Type ***address*** in the **Host/IP Address** text box.

- ***address*** is the remote host machine name or IP address where data are to be pushed by ftp. For example:

  dsc@nu.edu

9 Type ***#operations*** in the **Max. Operations** text box.

- ***#operations*** is the maximum number of concurrent FtpPush operations for a particular destination (exclusive of but subject to the global Max Operations). For example:

  2

10 Type ***rhwm*** in the **RHWM** text box.

- ***rhwm*** is the Request High Water Mark, the desired maximum number of requests that may be in the Staging state, or that completed Staging but are not in a terminal state (e.g., Shipped). For example:

  10

11 Type ***dhwm*** in the **DHWM** text box.

- ***dhwm*** is the Data High Water Mark, the maximum volume of data (in GB) in Staging or already staged but not yet pushed. For example:

  10

12 Type ***dlwm*** in the **DLWM** text box.

- ***dlwm*** is the Data Low Water Mark, the minimum volume of data (in GB) in Staging or already staged but not yet pushed. For example:

  2

13 Type ***min*** in the **Time Out** text box.

- ***min*** is an extra time allotment (in minutes) that is applied to the expected throughput, such that expected throughput equals minimum throughput plus timeout. For example:

  60

14 Type ***MB*** in the **Min. Throughput** text box.

- ***MB*** is minimum data throughput (in MB/sec) for a particular destination. For example:

  100

15 Type ***min*** in the **Retry Interval** text box.

- ***min*** is the waiting period (in minutes) before FtpPush operations for a suspended destination are automatically retried. For example:

  60

16 Click on the **Retry Mode** option button to display a menu of retry modes then click on the desired selection.

- The following choices are available:
  - **Automatic.**
  - **Manual.**
- Selected mode is displayed in the **Retry Mode** column.

17 If a note should be entered concerning the destination (e.g., the reason for modifying the parameter values), type the applicable text in the **Notes** text box.

18 Click on the appropriate button from the following selections:

- **Save -** to save the frequently used destination and the values specified for its parameters.
  - A **"Remember Values" Confirmation** dialogue box (Figure 56) is displayed.
- **Done -** to dismiss the **FTP Push Destination Details** page (Figure 58) and display the **FTP Push Policy Configuration** page (Figure 57).
  - A **"Done" Confirmation** dialogue box (Figure 60) is displayed.
- **Reset -** to clear the new value(s) from the text entry box(es) without changing the current value(s).
  - The new value(s) is (are) cleared from the text entry box(es) without changing the current value(s).

19 If a **"Remember Values" Confirmation** dialogue box (Figure 56) is displayed, click on the appropriate button from the following selections:

- **Yes**.
  - The **"Remember Values" Confirmation** dialogue box (Figure 56) is dismissed.

- The **FTP Push Destination Details** page (Figure 58) is displayed.

- **Never for this site**.
  - The **"Remember Values" Confirmation** dialogue box (Figure 56) is dismissed.
  - The **FTP Push Destination Details** page (Figure 58) is displayed.
- **No**.
  - The **"Remember Values" Confirmation** dialogue box (Figure 56) is dismissed.
  - The **FTP Push Destination Details** page (Figure 58) is displayed.

20 If a **"Done" Confirmation** dialogue box (Figure 60) is displayed, click on the appropriate button from the following selections:

- **OK -** to dismiss the **"Done" Confirmation** dialogue box (Figure 60) and the **FTP Push Destination Details** page (Figure 58) and display the **FTP Push Policy Configuration** page (Figure 57).
  - The **"Done" Confirmation** dialogue box (Figure 60) is dismissed.
  - The **FTP Push Destination Details** page (Figure 58) is dismissed.
  - The **FTP Push Policy Configuration** page (Figure 57) is displayed.
- **Cancel -** to dismiss the **"Done" Confirmation** dialogue box and return to the **FTP Push Destination Details** page (Figure 58).
  - The **"Done" Confirmation** dialogue box (Figure 60) is dismissed.

21 If the **FTP Push Destination Details** page (Figure 58) is still being displayed and no changes to the new destination are needed, click on the **Done** button.

- A **"Done" Confirmation** dialogue box (Figure 60) is displayed.

22 If a **"Done" Confirmation** dialogue box (Figure 60) is displayed, click on the appropriate button from the following selections:

- **OK -** to dismiss the **"Done" Confirmation** dialogue box (Figure 60) and the **FTP Push Destination Details** page (Figure 58) and display the **FTP Push Policy Configuration** page (Figure 57).
  - The **"Done" Confirmation** dialogue box (Figure 60) is dismissed.
  - The **FTP Push Destination Details** page (Figure 58) is dismissed.
  - The **FTP Push Policy Configuration** page (Figure 57) is displayed.

- **Cancel** - to dismiss the **"Done" Confirmation** dialogue box and return to the **FTP Push Destination Details** page (Figure 58).
  - The **"Done" Confirmation** dialogue box (Figure 60) is dismissed.

23 If changes to the frequently used destination are needed, repeat Steps 6 through 22 as necessary.

24 Return to the procedure for **Checking/Modifying FTP Push Policy Configuration** (preceding section of this lesson).

Using OM GUI Help

There are several ways for the Distribution Technician to get access to help in using the **OM GUI**.

- Whenever there is little question mark next to a button or text field on an **OM GUI** page, clicking on the question mark opens a dialogue box that describes the item.
  - The "HelpOnDemand" feature provides context-sensitive help for each page, particularly for controls or parameters that may not be entirely self-descriptive.
  - Figure 61 provides an example of HelpOnDemand.

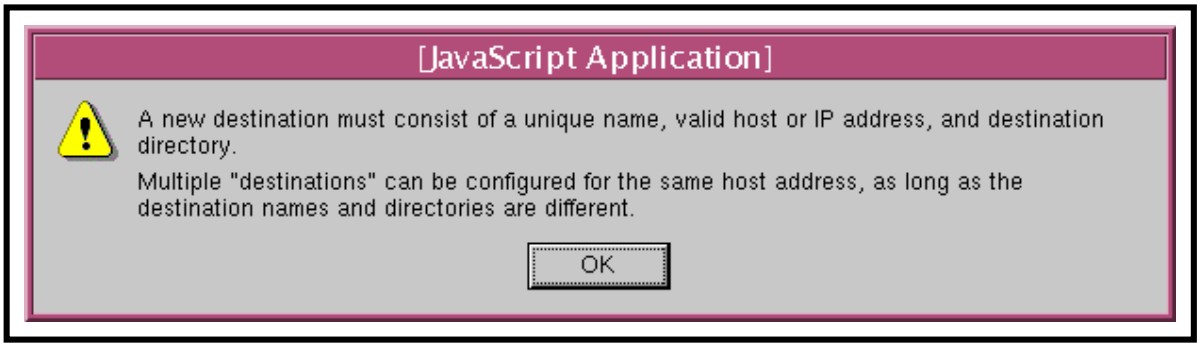

Figure 61. Example of HelpOnDemand

- For help on a particular topic the **Help** link in the navigation frame of the **OM GUI** causes the **Help** page (Figure 62) to be displayed.

Viewing the OM GUI Log

The **OM GUI Log Viewer** page (Figure 63) provides the Distribution Technician with a means of checking entries in the OM GUI log. The log file that the log viewer displays is located under the cgi-bin/logs directory where the **OM GUI** is installed. It is not the web server log or the SYSLOG. It is a log that is specifically generated by and for the **OM GUI**.

The procedure for viewing the OM GUI log starts with the following assumptions:

- All applicable servers are currently running.
- The **OM GUI** has been launched [e.g., as described in the procedure for **Launching the Order Manager GUI** (preceding section of this lesson)].

Viewing the OM GUI Log

---

1 If it has not been expanded already, click on the **Logs** link in the navigation frame of the **OM GUI**.

- The **Logs** menu is expanded.

2 If the **OM GUI Log Viewer** page (Figure 63) is not already being displayed, click on the **OM GUI Log Viewer** link in the navigation frame of the **OM GUI**.

- The **OM GUI Log Viewer** page (Figure 63) is displayed.

3 Observe information displayed in the **Log Summary**.

- The **Log Summary** provides the following kinds of information:
  - **Size** (size of the log file).
  - **Lines** (number of lines in the log file).

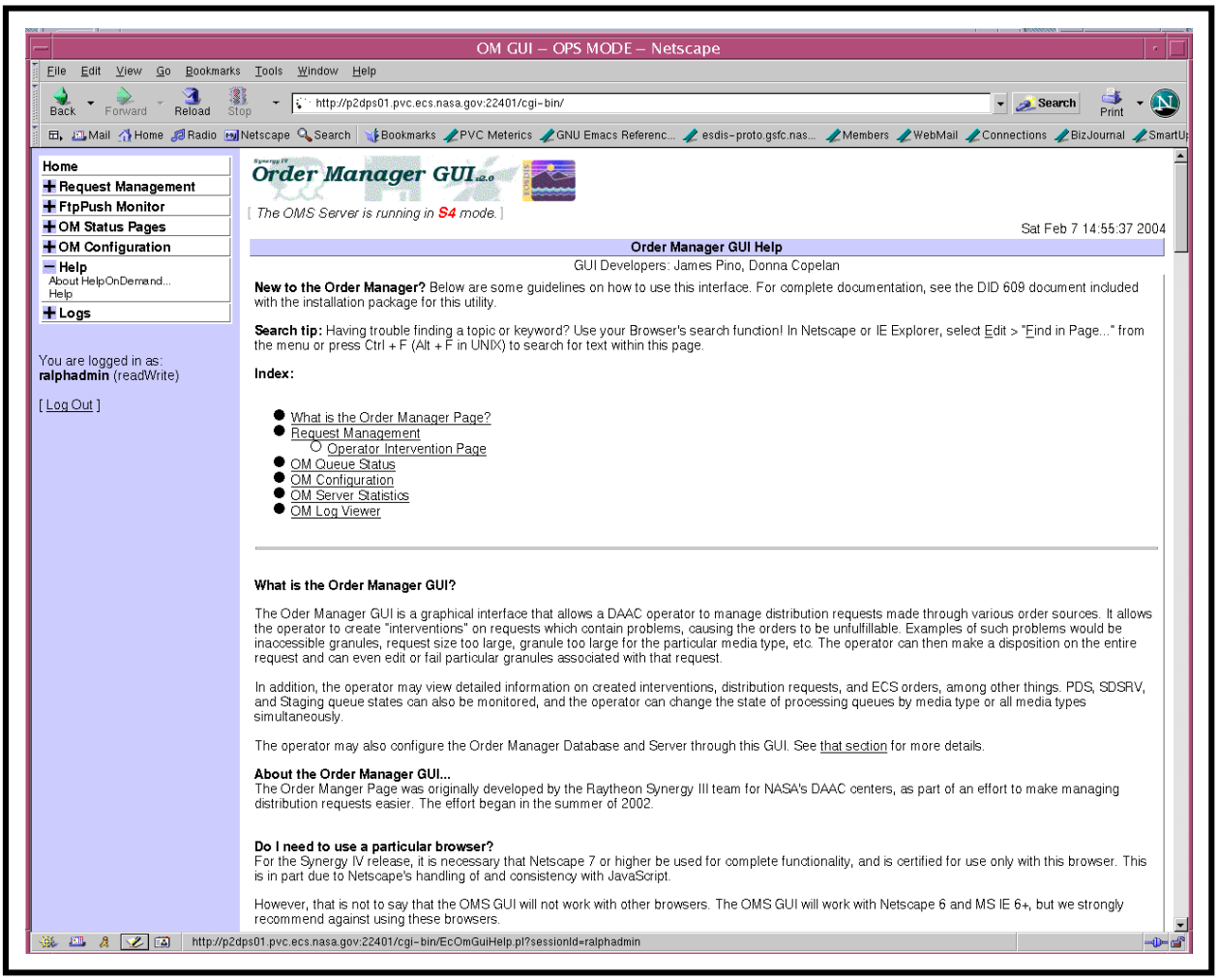

Figure 62. OM GUI Help Page

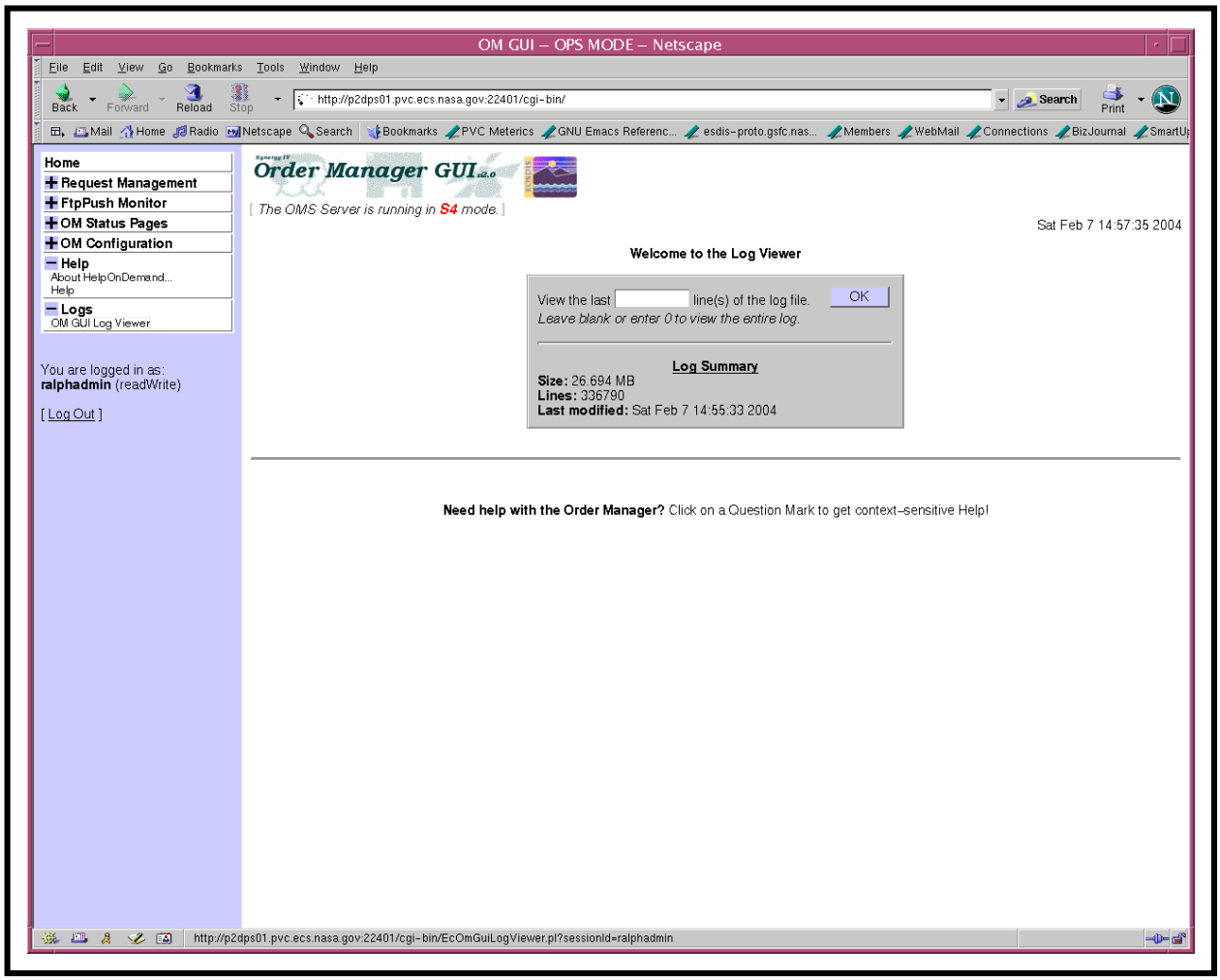

Figure 63. OM GUI Log Viewer Page

– **Last Modified** (when the log file was last modified).

4 In the **View the last ___ line(s) of the log file** text box type the appropriate number of lines to be displayed.

- The log viewer's functioning is similar to that of the UNIX "tail" command: to see a particular number of lines at the end of the log, specify the number of lines in the **View the last ___ line(s) of the log file** text box.
- Entering 0 (zero) or leaving the text box blank indicates that the entire log file should be displayed.

- It is possible to specify a number that is equal to or greater than the total number of lines in the log file.
  - The total number of lines in the log file is shown in the **Log Summary** on the **OM GUI Log Viewer** page.
- After long periods of usage, the log file may grow to considerable size and it may take some time to load the entire log into the **OM GUI Log Viewer** page.
  - In most cases viewing the last 100 - 500 lines would be adequate to assess recent activity and it would greatly decrease the amount of time it would take to load the log file onto the page.

5 Click on the **OK** button.

- The specified lines from the log file are displayed as shown in the example, Figure 64.

6 Observe information displayed in the log file.

- The GUI log is a record of every page that runs and every stored procedure that is called within those pages.
- The actual log file (EcOmGui.log) is typically located in the /usr/ecs/*MODE*/CUSTOM/WWW/OMS/cgi-bin/logs directory on the Data Pool Server host (x0dps01).
  - If preferred, the log file can be viewed with any UNIX editor or visualizing command (e.g., **pg, vi**, **view, more**).

7 To start the process of logging out (if applicable) click on the **Log Out** link in the navigation frame of the **OM GUI**.

- A log-out dialogue box containing the message “Are you sure you want to log out? This will close your browser.” is displayed.

8 To complete the process of logging out (when applicable) click on the appropriate button from the following selections:

- **OK** - to dismiss the dialogue box and complete the log-out.
  - The dialogue box is dismissed.
  - The Netscape browser is dismissed.
- **Cancel** - to dismiss the dialogue box without logging out.
  - The dialogue box is dismissed.
  - The **OM GUI** is displayed.

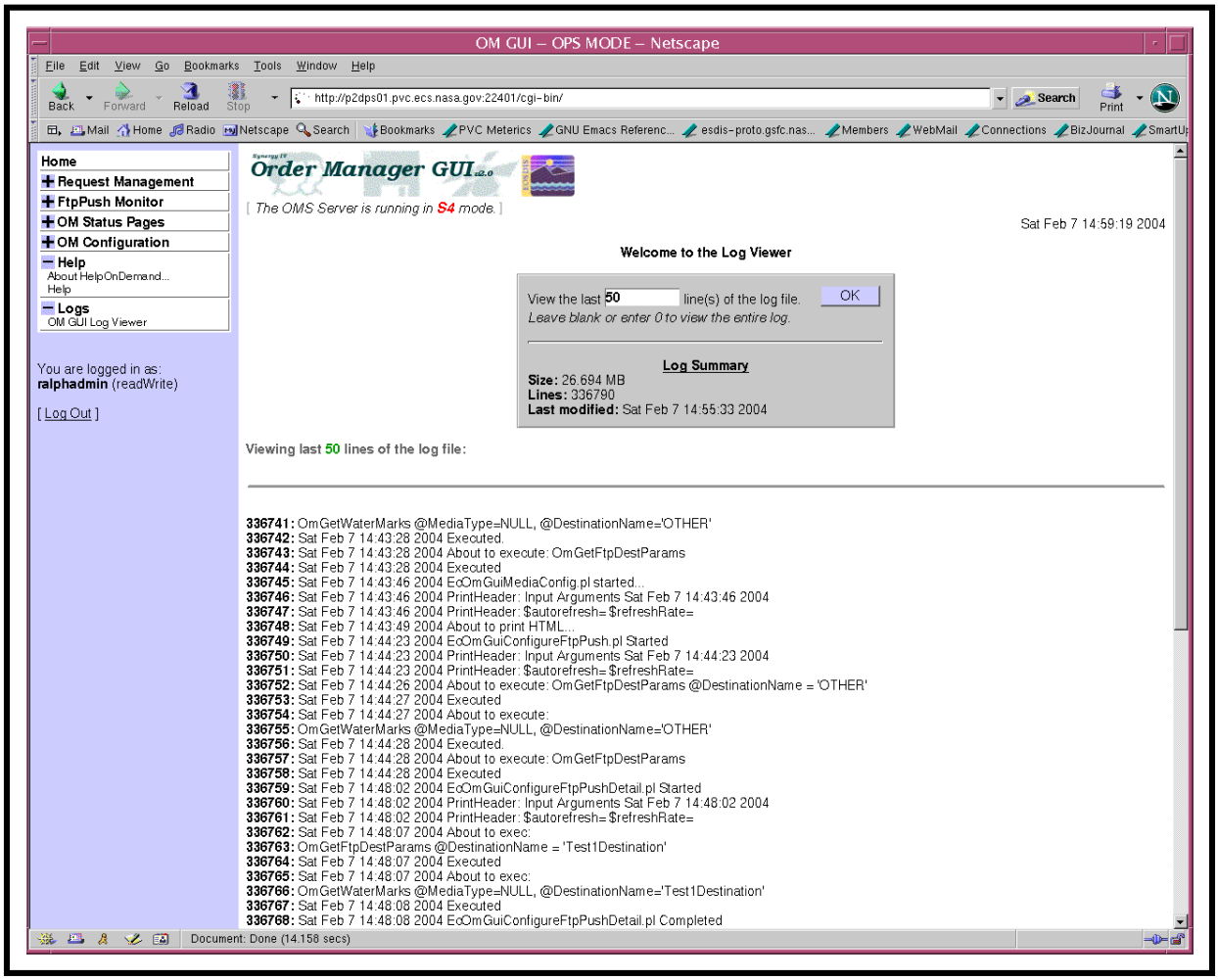

Figure 64. Example of OM GUI Log Contents

Using the OMS Configuration Script (OMS CI)

OMS Configuration Script (OMS CI) Activities

The **OMS Configuration Script** or **OMS Command-Line Interface** (**OMS CI**) allows full-capability operators to configure certain attributes of the OMS that are not configured using the **OM GUI**; for example, switching between Synergy IV and Synergy III operations. For the most part the attributes that are configured using the **OMS CI** do not require frequent modification.

The **OM CI** utility is intended for full-capability operators only. Because it is a UNIX utility, the **OM CI** depends on standard UNIX permissions to restrict execution of the script to authorized users.

Starting the OMS CI

Before starting the **OM CI**, it may be necessary to prepare input files that are specified in optional arguments when starting the OM CI. If such input files are used, the full-capability operator references the input file(s) in the command-line arguments when starting the **OM CI**.

Preparing Input Files for Use with the OMS CI

There are two general types of input files used with the OMS CI:

- Synergy III mode exception files.
- Order-tracking retention time data.

If any Synergy III mode exceptions are to be applied using the **OMS CI**, the appropriate input file(s) must be prepared first so the file(s) can be included in arguments that are specified when the **OMS CI** is started. Each potential input is a “flat” file that contains one of the following types of data:

- ESDT collection(s).
- Media type(s).
- Ftp push destination(s).

The files can be used to specify either of the following dispositions for the data:

- Add the data in the file to the current types of data being processed in Synergy III mode.
- Delete the data in the file from the current types of data being processed in Synergy III mode.

Consequently, files may be created for the following six conditions:

- Add ESDT collection(s) to processing in Synergy III mode.
- Delete ESDT collection(s) from processing in Synergy III mode.
- Add media type(s) to processing in Synergy III mode.
- Delete media type(s) from processing in Synergy III mode.
- Add ftp push destination(s) to processing in Synergy III mode.
- Delete ftp push destination(s) from processing in Synergy III mode.

Each Synergy III mode exception file specified when starting the **OMS CI** must contain only one of the preceding types of data. For example, if a new ftp push destination is to be added and a current ftp push destination is to be deleted, two separate files must be created, one containing the destination to be added and the other containing the destination to be deleted. The same principle applies whether the additions or deletions relate to ftp push destinations, media types, or ESDTs.

If order-tracking retention time (how long order-tracking information is kept in the OMS database) is to be modified using the **OMS CI**, a file of data "imported" from the OMS database (using the **OMS CI**) must be edited so the file can be included in an argument that is specified when the **OMS CI** is started the next time. The "imported" file contains the following three types of data:

- Order source [i.e., "D" (Data Pool), "S" (Spatial Subscription Server), "V" (V0 Gateway), or "M" (Machine-to-Machine Gateway)].
- Distribution medium.
- Retention time period in days.

The "imported" order-tracking retention time file is edited to incorporate the new configuration information (i.e., retention time for each set of order source/medium). The edited file is subsequently "exported" to the OMS database (using the **OMS CI**), where the new values are entered.

Preparing input files for use with the **OMS CI** starts with the assumption that the full-capability operator has logged in to the ECS system.

Preparing Input Files for Use with the OMS CI

---

1 Access a terminal window logged in to the Data Pool Server host.

- Examples of Data Pool Server host names include **e0dps01**, **g0dps01**, **l0dps01,** and **n0dps01**.

- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/WWW/OMS/cgi-bin** then press **Return/Enter**.

- Change directory to the directory containing the Order Manager scripts (e.g., EcOmConfig.pl).
- The ***MODE*** will most likely be one of the following operating modes:
  - OPS (for normal operation).
  - TS1 (for SSI&T).
  - TS2 (new version checkout).
- Note that the separate subdirectories under /usr/ecs apply to different operating modes.

3 Type **vi *filename*** then press **Return/Enter**.

- ***filename*** is the name of a file to be opened.
  - It may be either the name of an existing file (e.g., a file of order-tracking retention time data "imported" from the OMS database) or the name of a new file (e.g., additional media types to be processed in Synergy III mode).
- For example:

  x0pls01{cmops}[10]->vi ESDT20040109.dat

  ~

  ~

  ~

  […]

  "ESDT20040109.dat" [New file]

  - Many blank lines have been deleted from the example.
- The new file will specify the values to be sent to the OMS.
- Although this procedure has been written for the **vi** editor, any UNIX editor can be used to create the file.

4 Using vi editor commands create a file that specifies the relevant values to be sent to the OMS.

- Each Synergy III mode exception file contains one item per line.
  - White space is ignored, so multiple lines can separate groups of collection.

- For example the following entries are included in an ESDT collection file:

  MOD11_L2.001
  MOD11_L2.002
  GDAS_0ZF.001
  GDAS_0ZF.002

- Another example shows entries included in a media file:

  8MM
  scp

- Another example shows entries included in an ftp push destination file:

  "Fordham University"
  "Yale University"
  ftp.hbc.md.edu
  223.516.34.14

  - A destination may be a configured "Name" as created by the **OMS GUI** or a host/IP address.
  - If the configured name is used, it must be enclosed in double quotes (e.g., "Fordham University").

- Each line in an order-tracking retention time file contains an order source code, a distribution medium, and the retention time period in days.

  - For example, the following entries are included in an order-tracking retention time file:

```
D        FtpPull     0
S        FtpPull     0
V        FtpPull     0
M        FtpPull     0
D        FtpPush     0
S        FtpPush     0
V        FtpPush     0
M        FtpPush     0
D        CDROM       0
S        CDROM       0
V        CDROM       0
M        CDROM       0
D        DLT         0
S        DLT         0
V        DLT         0
M        DLT         0
D        DVD         0
```

S	**DVD**	**0**
V	**DVD**	**0**
M	**DVD**	**0**
D	**8MM**	**0**
S	**8MM**	**0**
V	**8MM**	**0**
M	**8MM**	**3**
D	**scp**	**0**
S	**scp**	**0**
V	**scp**	**1.5**
M	**scp**	**0**

- Order source codes include “D” (Data Pool), “S” (Spatial Subscription Server), “V” (V0 Gateway), and “M” (Machine-to-Machine Gateway).

- The following vi editor commands are useful:
  - **h** (move cursor left).
  - **j** (move cursor down).
  - **k** (move cursor up).
  - **l** (move cursor right).
  - **a** (append text).
  - **i** (insert text).
  - **r** (replace single character).
  - **x** (delete a character).
  - **dw** (delete a word).
  - **dd** (delete a line).
  - ***n*dd** (delete *n* lines).
  - **u** (undo previous change).
  - **Esc** (switch to command mode).

5 Press the **Esc** key.

6 Type **ZZ**.

- **vi** exits and the new or edited file is saved.
  - To exit **vi** without saving the new entries in the file type **:q!** then press **Return/Enter**.

- UNIX command line prompt is displayed.

Starting the OMS CI

If any Synergy III mode exceptions are to be applied using the **OMS CI**, the appropriate input file(s) must have been prepared first so the file(s) can be included in arguments that are specified when the **OMS CI** is started. The **OMS CI** script can take several options to process input files for Synergy III mode exceptions. Each potential input is a "flat" file that contains one of the following types of data:

- ESDT collection(s).
- Media type(s).
- FtpPush destination(s).

Based on the file names included in arguments when it is started, the **OMS CI** determines which file was specified for which purpose (media, ESDTs, or destinations) and requests confirmation. Then the **OMS CI** requests whether the file entries are to be added or deleted from the relevant list.

The procedure for starting the **OMS CI** starts with the following assumptions:

- The full-capability operator has logged in to the ECS system.
- If any Synergy III mode exceptions are to be applied using the **OMS CI**, the appropriate input file(s) has (have) been prepared and placed in the appropriate directory [e.g., as described in the procedure for **Preparing Input Files for use with the OMS CI** (preceding section of this lesson)].

Starting the OMS CI

---

1 Access a terminal window logged in to the Data Pool Server host.

- Examples of Data Pool Server host names include **e0dps01**, **g0dps01**, **l0dps01,** and **n0dps01**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/WWW/OMS/cgi-bin** then press **Return/Enter**.

- Change directory to the directory containing the Order Manager scripts (e.g., EcOmConfig.pl).
- The ***MODE*** will most likely be one of the following operating modes:
  - OPS (for normal operation).

- TS1 (for SSI&T).
- TS2 (new version checkout).

- Note that the separate subdirectories under /usr/ecs apply to different operating modes.

3 Type **EcOmConfig.pl** ***MODE*** ***[*** **-s3col** ***filename]*** ***[*** **-s3media** ***filename]*** ***[*** **-s3dest** ***filename]*** ***[*** **-ot** ***filename]*** ***[*** **-help** ***]*** then press **Return/Enter**.

- The **OMS CI Main Menu** (Figure 65) is displayed.
- **-s3col** ***filename*** is an optional argument that specifies a flat file (***filename***) containing a list of ESDT collections to be added or deleted for processing in Synergy III mode, depending on the selection made by the operator.
- **-s3media** ***filename*** is an optional argument that specifies a flat file (***filename***) containing a list of media types to be added or deleted for processing in Synergy III mode, depending on the selection made by the operator.
- **-s3dest** ***filename*** is an optional argument that specifies a flat file (***filename***) containing a list of FtpPush destinations to be added or deleted for processing in Synergy III mode, depending on the selection made by the operator.
- **-ot** ***filename*** is an optional argument that specifies a flat file (***filename***) containing edited order-tracking retention times for update in the OMS database.
- **-help** is an optional argument that provides a brief overview of the input options that can be used with the **OMS CI** utility.

```
OMS Configuration CI v1.0

MENU:
-----------------------
1) Synergy III Mode Exceptions
2) Configure MSS/OMS Order Tracking
3) Switch Server Mode
4) Help

Type "x" to exit

=>
```

Figure 65. OMS CI Main Menu

4 To perform another task using the **OMS CI** go to the applicable procedure from the following list:

- **Processing Input Files Specified for Synergy III Exceptions** (to add or delete ESDT collections, media types, and/or FtpPush destinations to/from those processed in S3 (Synergy III) processing mode).
- **Configuring How Long Order-Tracking Information is Kept in the OMS Database** (to configure how long order-tracking information is kept in the OMS database).
- **Switching Between Synergy IV and Synergy III Operations** (to switch OMS Server processing between S4 (Synergy IV) operations and S3 (Synergy III) operations).
- **Getting OMS CI Help** (to display help information for the **OMS CI**).

5 To exit from the **OMS CI** (when applicable) at the **OMS CI Main Menu** prompt type **x** then press **Return/Enter**.

- The **OMS CI** is closed.

Using the OMS CI

The full-capability operator can perform the following tasks using the OMS CI:

- **Processing Input Files Specified for Synergy III Exceptions.**
- **Configuring How Long Order-Tracking Information is Kept in the OMS Database.**
- **Switching Between Synergy IV and Synergy III Operations.**
- **Getting OMS CI Help.**

Limited-capability operators should not be able to get access to the **OMS CI**.

Processing Input Files Specified for Synergy III Exceptions

If any Synergy III mode exceptions are to be applied using the **OMS CI**, the appropriate input file(s) must have been prepared first and the file name(s) must have been included in arguments that were specified when the **OMS CI** was started. There may be as many as six Synergy III exception files to account for the following six conditions:

- Add ESDT collection(s) to processing in Synergy III mode.
- Delete ESDT collection(s) from processing in Synergy III mode.
- Add media type(s) to processing in Synergy III mode.

- Delete media type(s) from processing in Synergy III mode.
- Add ftp push destination(s) to processing in Synergy III mode.
- Delete ftp push destination(s) from processing in Synergy III mode.

The files can specify either types of data to be added to or types of data to be deleted from the current types of data being processed in Synergy III mode. For example, a file of media types can add to the media types processed in Synergy III mode or a file can specify media types to be deleted from the media types processed in Synergy III mode. The file specified when starting the **OMS CI** must contain either the one type of data or the other, not both. If both additions and deletions are to be made, two separate files must be created. The same principle applies whether additions or deletions of media types, ESDTs, or ftp push destinations are specified.

Based on the file names included in arguments when it is started, the **OMS CI** determines which file was specified for which purpose (media, ESDTs, or destinations) and requests confirmation. When the full-capability operator confirms the file and its content, the **OMS CI** requests whether the entries in the file are to be added or deleted from the relevant list.

The procedure for processing input files specified for Synergy III exceptions starts with the following assumptions:

- The **OMS CI** has been started.
- The appropriate input file(s) for all Synergy III mode exceptions to be applied has (have) been prepared and placed in the appropriate directory [e.g., as described in the procedure for **Preparing Input Files for Use with the OMS CI** (preceding section of this lesson)].

Processing Input Files Specified for Synergy III Exceptions

---

1 If it has not been started already, start the **OMS CI**.

- For detailed instructions refer to the procedure for **Starting the OMS CI** (preceding section of this lesson).

2 At the **OMS CI Main Menu** prompt type **1** then press **Return/Enter**.

- The **Synergy III Mode Exceptions Menu** (Figure 66) is displayed.

3 At the **Synergy III Mode Exceptions Menu** prompt, type the appropriate number from the following list then press **Return/Enter**:

- **1 -** to process any of the input files specified for Synergy III Exceptions.
  - The following type of message is displayed:

    "media20040109.dat" has been specified as the file containing media types. Use this file? [y/n]

```
Synergy III Mode Exceptions:
-----------------------------
1) Process input files...
2) Back to Main Menu

=>
```

Figure 66. Synergy III Mode Exceptions Menu

- If the file specified in the confirmation message is the proper file, skip Steps 4 through 7 and go to Step 8.
- If the file specified in the confirmation message is not the proper file, continue with Step 4.

- **2** - to return to the **OMS CI Main Menu**.
  - The **OMS CI Main Menu** (Figure 65) is displayed.
  - Return to Step 2.

4 If the file specified in the confirmation message is not the proper file, at the **Use this file? [y/n]** prompt type **n** then press **Return/Enter**.

- The **OMS CI Main Menu** (Figure 65) is displayed.
- A likely cause of the problem is having mistyped the file name when starting the **OMS CI**.

5 If the file specified in the confirmation message is not the proper file, at the **OMS CI Main Menu** prompt, type **x** then press **Return/Enter**.

6 If the file specified in the confirmation message is not the proper file, start the **OMS CI** using the appropriate option (i.e., **-s3col**, **-s3media**, or **-s3dest**) and the proper file name as an argument.

- For detailed instructions refer to the procedure for **Starting the OMS CI** (preceding section of this lesson).

7 If the file specified in the confirmation message is not the proper file, return to Step 2 of this procedure to start the process of processing the input file specified for Synergy III exception.

8 To process the file specified in the confirmation message, at the **Use this file? [y/n]** prompt type **y** then press **Return/Enter**.

- The **Synergy III Mode Actions Menu** (Figure 67) is displayed.

```
Select an action to take:

1) ADD the media types specified in the file

2) DELETE the media types specified in the file

3) Back to main menu

=>
```

Figure 67. Synergy III Mode Actions Menu

9 To continue processing the file specified in the confirmation message, at the **Synergy III Mode Actions Menu** prompt, type the appropriate number from the following list then press **Return/Enter**:

- **1** - to add the data in the file to the types of data to be processed in Synergy III mode.
  - The following type of message is displayed:

    Submission successful. Press <ENTER> to continue...
- **2** - to remove the data in the file from the types of data to be processed in Synergy III mode.
  - The following type of message is displayed:

    Submission successful. Press <ENTER> to continue...
- **3** - to abort the process of processing the file specified in the confirmation menu and return to the **OMS CI Main Menu**.
  - The **OMS CI Main Menu** (Figure 65) is displayed.
  - Return to Step 2.

10 If a "**Submission successful. Press <ENTER> to continue...**" message was displayed, press **Return/Enter**.

- The specified Synergy III exceptions have been successfully processed.
  - The **OMS CI Main Menu** (Figure 65) is displayed.

11 Repeat Steps 2 through 10 (as applicable) to apply additional Synergy III exceptions.

12 To perform another task using the **OMS CI** (if the **OMS CI Main Menu** is being displayed), go to the applicable procedure from the following list:

- **Configuring How Long Order-Tracking Information is Kept in the OMS Database** (to configure how long order-tracking information is kept in the OMS database).
- **Switching Between Synergy IV and Synergy III Operations** (to switch OMS Server processing between S4 (Synergy IV) operations and S3 (Synergy III) operations).
- **Getting OMS CI Help** (to display help information for the **OMS CI**).

13 To exit from the **OMS CI** (when applicable) at the **OMS CI Main Menu** prompt type **x** then press **Return/Enter**.

- The **OMS CI** is closed.
- A UNIX command line prompt is displayed.

Configuring How Long Order-Tracking Information is Kept in the OMS Database

The full-capability operator can configure how long order-tracking information is kept in the OMS database. The length of time can be different for each combination of media type and order source.

The process of configuring how long order-tracking information is kept in the OMS database involves "importing" the current configuration to a local file, editing the file, and exporting it back into the OMS database.

- When the full-capability operator requests the **OMS CI** to "import" the current configuration, the utility creates and saves a unique file in the current directory.
- The saved file contains the configuration for all media types and all order sources.
- The full-capability operator exits the **OMS CI** and edits the import file to incorporate changes.
- The full-capability operator starts the **OMS CI** using the **–ot** option and specifying the edited file.
- The full-capability operator uses the **OMS CI** to export the data in the file to the database.
- The **OMS CI** parses the file and submits the changes to the OMS database.

The procedure for configuring how long order-tracking information is kept in the OMS database starts with the following assumptions:

- The **OMS CI** has been started.
- If applicable, the appropriate input file for configuring how long order-tracking information is kept in the OMS database has been prepared and placed in the appropriate directory [e.g., as described in the procedure for **Preparing Input Files for Use with the OMS CI** (preceding section of this lesson)].

Configuring How Long Order-Tracking Information is Kept in the OMS Database

---

1 If it has not been started already, start the **OMS CI**.

- For detailed instructions refer to the procedure for **Starting the OMS CI** (preceding section of this lesson).

2 At the **OMS CI Main Menu** prompt type **2** then press **Return/Enter**.

- The **Configure Order Tracking Data Menu** (Figure 68) is displayed.

```
Configure Order Tracking Data
-----------------------------

1) Import current configuration to file...
2) Export new configuration to database...
3) View current configuration
4) Back to main menu
=>
```

Figure 68. Configure Order Tracking Data Menu

3 At the **Configure Order Tracking Data Menu** prompt, type the appropriate number from the following list then press **Return/Enter**:

- **1** - to import the current order-tracking retention time configuration (from the OMS database) into a file.
  - The following type of message is displayed:

    Importing to local file "MssOmsOrderTracking.1067729076"...
    Import OK. Please edit this file and use this utility to export the new configuration.

  - The utility creates and saves a unique file (containing the current order-tracking retention time configuration from the OMS database) in the current directory.
  - The "imported" order-tracking retention time file would be edited to incorporate the new configuration information. The edited file would subsequently be "exported" to the OMS database, where the new order-tracking retention time values would be applied.
  - Press **Return/Enter**.
    - The **OMS CI Main Menu** (Figure 65) is displayed.
    - Go to Step 4.
- **2** - to export an edited order-tracking retention time file to the OMS database.
  - The following type of message is displayed:

    You are about to export an edited configuration file. Please make sure the fields are properly edited. These changes will be submitted to the OMS database.

    "MssOmsOrderTracking.1067729243" was specified as the export file. Do you want to use this one? [y/n]

    - The "exported" file would used to update the OMS database, where the new order-tracking retention time values would be applied.
  - If the file specified in the confirmation message is not the proper file, go to Step 8.
  - If the file specified in the confirmation message is the proper file, go to Step 12.
- **3** - to view the current configuration.
  - The current order-tracking retention time configuration (from the OMS database) is displayed.

- Each line of the order-tracking retention time configuration contains the following three items:
  - Order source code [e.g., “D” (Data Pool), “S” (Spatial Subscription Server), “V” (V0 Gateway), and “M” (Machine-to-Machine Gateway)].
  - Distribution medium.
  - Retention time period in days.
- For example:

```
Order   Media   Ret. Time
Source  Type    Period (Hours)
----------------------------
D       FtpPull      0
S       FtpPull      0
V       FtpPull      0
M       FtpPull      0
D       FtpPush      0
S       FtpPush      0
V       FtpPush      0
M       FtpPush      0
D       CDROM   0
S       CDROM   0
V       CDROM   0
M       CDROM   0
D       DLT     0
S       DLT     0
V       DLT     0
M       DLT     0
D       DVD     0
S       DVD     0
V       DVD     0
M       DVD     0
D       8MM     0
S       8MM     0
V       8MM     0
M       8MM     0
D       scp     0
S       scp     0
V       scp     0
M       scp     0

Press <enter> to return to main menu...
```

- Press **Return/Enter**.
  - The **OMS CI Main Menu** (Figure 65) is displayed.
  - Return to Step 2.

- **4** - to return to the **OMS CI Main Menu**.
  - The **OMS CI Main Menu** (Figure 65) is displayed.
  - Return to Step 2.

4 After importing the current order-tracking retention time configuration into a file, at the **OMS CI Main Menu** prompt, type **x** then press **Return/Enter**.

- The **OMS CI** is closed.

5 After importing the current order-tracking retention time configuration into a file and closing the **OMS CI**, edit the import file (to incorporate changes) as described in the procedure for **Preparing Input Files for Use with the OMS CI** (preceding section of this lesson).

6 After editing the order-tracking retention time file (to incorporate changes), start the **OMS CI** using the **–ot** option and the file name of the edited file as an argument.

- For detailed instructions refer to the procedure for **Starting the OMS CI** (preceding section of this lesson).

7 After starting the **OMS CI** with reference to the edited file, return to Step 2 of this procedure to start the process of exporting the edited order-tracking retention time file to the OMS database.

8 If the file specified in the confirmation message is not the proper file, at the **Do you want to use this one? [y/n]** prompt type **n** then press **Return/Enter**.

- The **OMS CI Main Menu** (Figure 65) is displayed.
- A likely cause of the problem is having mistyped the file name when starting the **OMS CI**.

9 If the file specified in the confirmation message is not the proper file, at the **OMS CI Main Menu** prompt, type **x** then press **Return/Enter**.

10 If the file specified in the confirmation message is not the proper file, start the **OMS CI** using the **–ot** option and the proper file name as an argument.

- For detailed instructions refer to the procedure for **Starting the OMS CI** (preceding section of this lesson).

11 If the file specified in the confirmation message is not the proper file, return to Step 2 of this procedure to start the process of exporting the edited order-tracking retention time file to the OMS database.

12 To export an edited order-tracking retention time file to the OMS database, at the **Do you want to use this one? [y/n]** prompt type **y** then press **Return/Enter**.

- The following prompt is displayed:

  You are about to export file "<*filename*>". Continue? [y/n]

13 To continue the process of exporting an edited order-tracking retention time file to the OMS database, at the **Continue? [y/n]** prompt type **y** then press **Return/Enter**.

- If there is no problem exporting the file to the OMS database, the following messages are displayed:

  Submitting file to database...
  Syntax checking the input file...
  Export OK. Press <ENTER> to continue...

  – The edited order-tracking retention time file was successfully exported to the OMS database

14 Press **Return/Enter**.

- The **OMS CI Main Menu** (Figure 65) is displayed.

15 If there was a problem exporting the file to the OMS database, return to Step 2.

16 To perform another task using the **OMS CI** go to the applicable procedure from the following list:

- **Processing Input Files Specified for Synergy III Exceptions** (to add or delete ESDT collections, media types, and/or FtpPush destinations to/from those processed in S3 (Synergy III) processing mode).
- **Switching Between Synergy IV and Synergy III Operations** (to switch OMS Server processing between S4 (Synergy IV) operations and S3 (Synergy III) operations).
- **Getting OMS CI Help** (to display help information for the **OMS CI**).

17 To exit from the **OMS CI** (when applicable) at the **OMS CI Main Menu** prompt type **x** then press **Return/Enter**.

- The **OMS CI** is closed.
- A UNIX command line prompt is displayed.

Switching Between Synergy IV and Synergy III Operations

The option to switch server (processing) mode allows the full-capability operator to switch the OMS Server processing between S4 (Synergy IV) operations and S3 (Synergy III) operations.

The feature works like a toggle; i.e., if the current mode is S3, the only option is to switch to S4 and vice versa.

Invoking the option to switch server (processing) mode allows also causes the current status of the OMS Server (i.e., “up” or “down”) to be displayed. Because the processing mode is kept as a parameter in the OMS database, it can be changed regardless of OMS server status.

The procedure for switching between Synergy IV and Synergy III operations starts with the assumption that the **OMS CI** has been started.

Switching Between Synergy IV and Synergy III Operations

1 If it has not been started already, start the **OMS CI**.

- For detailed instructions refer to the procedure for **Starting the OMS CI** (preceding section of this lesson).

2 At the **OMS CI Main Menu** prompt type **3** then press **Return/Enter**.

- If the OMS Server is “up,” the OMS Server status and current processing mode are displayed along with the following message:

  Please shut down the OMS Server before switching the server mode. You may then select this option again from the main menu. (No need to exit this program)

- If the OMS Server is “down,” the **Switch Processing Mode Menu** (Figure 69) is displayed.
  - The OMS Server status and current processing mode are displayed.
- If the OMS Server is “up,” continue with Step 3.
- If the OMS Server is “down,” skip Steps 3 through 5 and go to Step 6.

```
1) Switch Processing mode to S3
2) Back to main menu
3) Exit
=>
```

Figure 69. Switch Processing Mode Menu

3 If a "**Please shut down the OMS Server**" message is being displayed, press **Return/Enter**.

- The **OMS CI Main Menu** (Figure 65) is displayed.

4 If a "**Please shut down the OMS Server**" message was displayed, shut down the OMS Server (EcOmOrderManager) or make a request to the Operations Controller/System Administrator to shut down the OMS Server for the appropriate mode.

- There is no need to exit from the **OMS CI** while the OMS Server is being shut down.
  - The shutdown can be accomplished in a separate terminal window.

NOTE The OMS Server (EcOmOrderManager) is typically installed on the Sun Consolidation Internal Server. Examples of Sun Consolidation Internal Server host names include **e0acs11**, **g0acs11**, **l0acs03**, and **n0acs04**.

5 If a "**Please shut down the OMS Server**" message was displayed, return to Step 2 after the OMS Server has been shut down.

6 At the **Switch Processing Mode Menu** prompt, type the appropriate number from the following list then press **Return/Enter**:

- **1 -** to switch to the other processing mode.
  - The processing mode is switched (either from S3 to S4 or from S4 to S3, as applicable).
- **2 -** to return to the **OMS CI Main Menu**.
  - The **OMS CI Main Menu** (Figure 65) is displayed.
- **3 -** to exit from the **OMS CI**.
  - The **OMS CI** is closed.

8 If appropriate, start the OMS Server (EcOmOrderManager) or make a request to the Operations Controller/System Administrator to bring up (start) the OMS Server in the appropriate mode.

9 To perform another task using the **OMS CI** (if the **OMS CI Main Menu** is being displayed), go to the applicable procedure from the following list:

- **Processing Input Files Specified for Synergy III Exceptions** (to add or delete ESDT collections, media types, and/or FtpPush destinations to/from those processed in S3 (Synergy III) processing mode).
- **Configuring How Long Order-Tracking Information is Kept in the OMS Database** (to configure how long order-tracking information is kept in the OMS database).
- **Getting OMS CI Help** (to display help information for the **OMS CI**).

10 To exit from the **OMS CI** (when applicable) at the **OMS CI Main Menu** prompt type **x** then press **Return/Enter**.

- The **OMS CI** is closed.
- A UNIX command line prompt is displayed.

Getting OMS CI Help

The "help" function of the **OMS CI** allows the full-capability operator to display a complete synopsis of the options and all available functions of the CI.

The procedure for getting OMS CI help starts with the assumption that the **OMS CI** has been started.

Getting OMS CI Help

---

1 If it has not been started already, start the **OMS CI**.

- For detailed instructions refer to the procedure for **Starting the OMS CI** (preceding section of this lesson).

2 At the **OMS CI Main Menu** prompt type **4** then press **Return/Enter**.

- The first page of the **OMS CI Help** (Figure 70) is displayed.

3 To view additional help information press either **Return/Enter** or the space bar.

- Another line of the **OMS CI Help** is displayed if **Return/Enter** is pressed.
- Another page of the **OMS CI Help** is displayed if the space bar is pressed.

4 To exit from Help type **q**.

- A "**Press <ENTER> to return to main menu...**" message is displayed.

5 If a "**Press <ENTER> to return to main menu...**" message was displayed, press **Return/Enter**.

- The **OMS CI Main Menu** (Figure 65) is displayed.

```
OMS Configuration CI 1.0 HELP
---------------------------------------------------------------

Type "q" at any time to quit help.

Usage:
EcOmConfig.pl [options]
-ot <file>              Order tracking export file
-s3col <file>           File containing Synergy III ESDT collections
-s3media <file>         File containing Synergy III media types
-s3dest <file>          File containing Synergy III FTP destinations



SWITCH SERVER MODE
This function toggles the server mode between "S3" and "S4". It
sets a parameter in the database that the OMS Server picks up
the next time it is started. It does not set the mode directly
in the server.
--MORE--
```

Figure 70. OMS CI Help

6 To perform another task using the **OMS CI** (if the **OMS CI Main Menu** is being displayed), go to the applicable procedure from the following list:

- **Processing Input Files Specified for Synergy III Exceptions** (to add or delete ESDT collections, media types, and/or FtpPush destinations to/from those processed in S3 (Synergy III) processing mode).
- **Configuring How Long Order-Tracking Information is Kept in the OMS Database** (to configure how long order-tracking information is kept in the OMS database).
- **Switching Between Synergy IV and Synergy III Operations** (to switch OMS Server processing between S4 (Synergy IV) operations and S3 (Synergy III) operations).

7 To exit from the **OMS CI** (when applicable) at the **OMS CI Main Menu** prompt type **x** then press **Return/Enter**.

- The **OMS CI** is closed.
- A UNIX command line prompt is displayed.

Tuning Data Server Subsystem Parameters

Tuning Data Server Subsystem Configuration Parameters

The values assigned to system parameters affect the functioning and performance of the system. When certain parameters are modified, the system operates differently. Changes to some other parameters may not appear to affect the system although there may in fact be subtle effects. In any case before system parameters are modified it is essential to understand what will happen to system functioning and performance.

Many system parameters may be subject to control by Configuration Management (CM). When making or requesting a change to system parameters, the CM process at the particular site must be followed (if applicable).

Values are assigned to Storage Management and Data Distribution parameters in the following databases:

- Configuration Registry database.
- Storage Management and Data Distribution database.

With respect to Storage Management servers the Registry contains database connectivity information only. All other configuration information is in the Storage Management and Data Distribution database and is typically entered or modified using the **Storage Management Control GUI**.

Modifying System Parameters in the Configuration Registry Database

The Configuration Registry Server provides a single interface (via a Sybase server) for retrieving configuration attribute-value pairs for ECS servers from the Configuration Registry database. When ECS servers are started, they access the Configuration Registry Database to obtain needed configuration parameters.

The Database Administrator has access to a Configuration Registry GUI for viewing and editing configuration data in the database. Therefore, it is necessary to coordinate with the Database Administrator when changes to configuration parameters are needed. Also, as previously mentioned, changes to configuration-controlled parameters are subject to approval through the site CM process.

Default and adjusted values assigned to system parameters vary from site to site. For guidance concerning the assignment of values to parameters included in the Configuration Registry refer to document 910-TDA-022, *Custom Code Configuration Parameters for ECS*. The document is available at http://cmdm.east.hitc.com/baseline/ under “Technical Documents.”

The following parameters are examples of parameters whose values may be modified to enhance system functioning or performance:

- AppLogSize [parameter applies to all servers].
  - Maximum size of the application log (ALOG) file for a particular application.
  - Recommended size varies considerably depending the nature of the application for which the file is being written.
- AppLogLevel [parameter applies to all servers].
  - Level of detail provided in the ALOG file for a particular application.
  - Acceptable values are 0, 1, 2, or 3.
  - A setting of “0” provides the most data.
- DebugLevel [parameter applies to all servers].
  - Level of detail provided in the debug log file for a particular application.
  - Normally acceptable values are 0, 1, 2, or 3.
  - A setting of "0" turns off logging; a setting of “3” provides a significant amount of data.
  - STMGT offers "enhanced" debugging based on bitmaps.
    - Level 7 (the 4 bit) provides detailed database debugging.
    - Level 15 (the 8 bit) frequently dumps the in-memory request queue (in the Request Manager).
    - Both Level 7 and Level 15 quickly create enormous log files.
- DBMaxConnections [EcDsDistributionServer and EcDsDdistGui parameter].
  - Maximum number of database open connections (e.g., 15) allowed a particular application.
  - Increasing the assigned value may prevent other applications from getting access to the database.
- FtpPushThreshold [EcDsDistributionServer parameter].
  - Maximum number of bytes (e.g., 15000000000) per ftp push request.
  - The FtpPushThreshold should always be greater than the size of the largest input granule used by the Planning and Data Processing Subsystems (PDPS) to ensure that PDPS distribution requests are processed without manual intervention.

  - When a distribution request exceeds a threshold (e.g., FtpPushThreshold or FtpPullThreshold), the request is suspended in DDIST.

- FtpPullThreshold [EcDsDistributionServer parameter].
  - Maximum number of bytes (e.g., 20000000000) per ftp pull request.
- MaxThreads [EcDsDistributionServer parameter].
  - Worker threads (created at start up) used to process active requests.
  - Needs to be greater than or equal to the sum of all priority thread limits.
- RETRIEVAL_CHUNK_SIZE [EcDsDistributionServer parameter].
  - Number of per-request archived files (e.g., 40) to be retrieved from the archive server.
  - Must be greater than zero (0).
  - Should not be greater than half the number of service threads used by the STMGT cache managers for archive reading.
- SocketLimit [EcDsDistributionServer parameter].
  - Number of connections (e.g., 620) to a server through the Hubble Space Telescope (HST) sockets middleware.
  - Too low a number misses connections.
  - Too high a number may adversely affect the memory of the server's host.
- CheckSumStoreFreq [EcDsStArchiveServer parameter].
  - Percentage of StoreFile requests to be checksummed.
- CheckSumRetrieveFreq [EcDsStCacheManagerServer parameter].
  - Percentage of checksummed files to be checksummed for file retrieve requests.

When the value assigned to a parameter has been changed and saved in the Configuration Registry, the modified value does not take effect until the affected server has been restarted. For example, if the debug level for the Distribution Server log has been changed from "2" to "3" in the Configuration Registry, the modification does not affect the recording of data in the log until after a warm restart of the Distribution Server (at which time the server would read the parameters in the Configuration Registry).

Checksum Status

It is possible to have a checksum calculated for each file stored (inserted) in the archive. In addition, there is an option for having a checksum computed for each file retrieved from the archive and validating it by comparing it with the checksum previously computed.

The extent of check-summing is determined by the values assigned to the following two configuration parameters in the Configuration Registry:

- CheckSumStoreFreq.
- CheckSumRetrieveFreq.

CheckSumStoreFreq is an archive server (EcDsStArchiveServer) parameter that specifies the percentage of StoreFile requests to be checksummed. CheckSumRetrieveFreq is a cache manager server (EcDsStCacheManagerServer) parameter that specifies the percentage of file retrieve requests to be checksummed. The recommended value for both parameters is 100 (i.e., calculate a checksum for 100% of requests). If either value needs to be modified, coordinate the change with the Database Administrator.

Tuning System Parameters in the Storage Management and Data Distribution Database

Staging Area Size and Read-Only Cache Size

Cache and staging disk space requirements are defined in separate columns in different database tables in the Storage Management and Data Distribution Database.

- The TotalStagingSpace column in the DsStStagingDiskServer table contains the overall size of the space (in blocks) available for a staging disk.
  - It should reflect the available disk space in the file partition that is configured.
- The TotalCacheSpace column in the DsStCache table contains the overall size (in blocks) of a cache.
  - TotalCacheSpace is seen as "Original Cache Space" from the Storage Management Control GUI.
  - The value assigned to the cache manager that is configured as the Pull Monitor (Pull Area Manager) should be the size (in blocks) of the partition that houses the Pull Area.
  - If the value assigned to the Pull Monitor (Pull Area Manager) is changed while there are files in the Pull Area, the value should be higher than the cumulative size of files in the cache.

NOTE: In Storage Management configurations, capacity ("space") is consistently specified in blocks. File size is specified in bytes.

Each cache has its own path as shown in the following comparison of staging disk and cache paths:

- EcDsStCacheManagerServerACM1 cache path:
  - /usr/ecs/OPS/CUSTOM/apc/x0acg01/data/staging/cache
    - The cache area used to be identified as "user1".
- EcDsStStagingDiskServerACM1 root path:
  - /usr/ecs/OPS/CUSTOM/apc/x0acg01/data/staging//disks
    - Each staging disk has a unique number (e.g., disk1132), even across servers.

The cache and staging disk space parameters are modified using the **Storage Management Control** GUI. Refer to the section on **Modifying System Parameters in the Storage Management and Data Distribution Database Using the Storage Management Control GUI** (subsequent section of this lesson) for the applicable procedure.

Setting Expiration Thresholds for Cache Managers

A just-enough-cache cleanup strategy is used in Storage Management. A principal effect of the strategy is that caches (including the Pull Area) generally remain full because each cache manager (including the cache manager that is configured as the Pull Monitor or Pull Area Manager) identifies and removes just enough old files to accommodate new ones.

In the DsStCache database table there is an ExpirationThreshold column that contains the number of hours it takes for files to expire in the cache area managed by each cache manager. The ExpirationThreshold for the cache manager that is configured as the Pull Monitor (i.e., EcDsStCacheManagerServerPULL) specifies the number of hours it takes for files to expire in the Pull Area.

When setting the ExpirationThreshold for each cache manager the following factors should be taken into consideration:

- ExpirationThreshold specifies the number of hours a lien will be held against a cached file.
- If a lien expires and space is required, the lien will be automatically removed unless the ConfirmDelete flag (for expired files) is set to "Yes."
- ExpirationThreshold entries are typically set at 72 (hours) but may be set at some other value (usually in the range of 24 - 72).
  - Too short a time limits the ability of users to get their data before it is deleted (if ConfirmDelete is set to "No").

  - Too long a time increases the chance of filling up the cache.
- The ConfirmDelete column in the DsStCache table is a flag that indicates whether to automatically delete upon reaching the ExpirationThreshold.
  - Typically set to "No" (do not require confirmation before deleting).
- Files are pulled to the Pull Area by the Pull Monitor (Pull Area Manager); they are not pushed there by the ftp server.
- The Fault Level and Warning Level parameters are ignored.

Expiration thresholds and ConfirmDelete flags for expired files are modified using the **Storage Management Control** GUI. Refer to the section on **Modifying System Parameters in the Storage Management and Data Distribution Database Using the Storage Management Control GUI** (subsequent section of this lesson) for the applicable procedure.

Storage Management Service Thread Allocation

Service threads process requests submitted to the applicable server (e.g., EcDsStRequestManagerServer, EcDsStArchiveServer, EcDsStCacheManager-Server, EcDsStStagingDiskServer, or EcDsStFtpServer). The number of service threads assigned to a server should be set on the basis of the resources available and the server throughput.

The DsStServiceThreadConfig database table contains the number, types, and priorities of service threads for Storage Management servers.

- The following columns in the DsStServiceThreadConfig database table indicate the number of service threads assigned to each priority:
  - XpressThreads.
  - VhighThreads.
  - HighThreads.
  - NormalThreads.
  - LowThreads.
- The PoolType column identifies the type of threads within a certain pool. (i.e., Service Threads, Read Threads, Write Threads) applicable to the server.
  - In Storage Management Read Threads and Write Threads apply to the archive servers only.
- The NumThreads column contains the number of threads in a particular pool.

Table 1 lists representative default values as listed in the DsStServiceThreadConfig database table. In the table ServerId 1 refers to EcDsStArchiveServerACM4 and ServerId 2 refers to EcDsStArchiveServerDRP3.

Table 1. Representative Default Values Listed in the DsStServiceThreadConfig Database Table

ServerId	PoolType	Num Threads	Xpress Threads	Vhigh Threads	High Threads	Normal Threads	Low Threads
1	ReadThreadPool	30	0	10	10	0	10
1	ThreadPool	30	0	10	10	0	10
1	WriteThreadPool	30	0	10	10	0	10
2	ReadThreadPool	10	0	0	0	0	10
2	ThreadPool	50	0	10	10	0	30
2	WriteThreadPool	100	0	20	70	0	10

Storage Management service thread-related values are modified using the **Storage Management Control** GUI. Refer to the section on **Modifying System Parameters in the Storage Management and Data Distribution Database Using the Storage Management Control GUI** (subsequent section of this lesson) for the applicable procedure.

Data Distribution Priority Thread Allocation

Data Distribution (DDIST) has been enhanced to support a DAAC-configurable number of thread pools with each pool having a separate thread limit. The pools are defined in a DDIST database table called DsDdThreadPool. Each row in the table contains a unique pool identifier, a thread pool name, and the number of threads (thread limit) associated with the pool. Table 2 shows an example of DsDdThreadPool table contents.

Table 2. Example of DsDdThreadPool Table Contents

ThreadPoolId	ThreadPoolName	ThreadLimit
13	SUB_LARCINGMGR	15
14	DEFAULT	10
15	PRODUCTION	20
16	SUB_ASTERGDS	10
17	SUB_NOAASOAP	20
18	SUB_JSMITH	20
19	PDS	30
20	USER_FTPPUSH	35
21	USER_FTPPULL	10
22	S4POPS	20
23	SUB_PRIVUSER	80
24	SUB_REGUSER	60

The DsDdThreadPool table in the example (Table 2) defines the following 12 pools:

- SUB_LARCINGMGR (15 threads maximum).
- DEFAULT (10 threads maximum).
- PRODUCTION (20 threads maximum).
- SUB_ASTERGDS (10 threads maximum).
- SUB_NOAASOAP (20 threads maximum).
- SUB_JSMITH (20 threads maximum).
- PDS (30 threads maximum).
- USER_FTPPUSH (35 threads maximum).
- USER_FTPPULL (10 threads maximum).
- S4POPS (20 threads maximum).
- SUB_PRIVUSER (80 threads maximum).
- SUB_REGUSER (60 threads maximum).

There must always be a DEFAULT pool present in the DsDdThreadPool table because a distribution request that fails to match any of the other rules for assigning requests to thread pools is automatically assigned to the DEFAULT pool.

The rules for assigning requests to thread pools are specified in the DsDdAssignmentRule table. The rules are DAAC-configurable and are based on request attributes. The following attributes are used for establishing a thread pool assignment:

- ECSUserId.
- Priority.
- EsdtType.
- MediaType.
- EmailAddress.
- NumberOfGranules.

Each row in the DsDdAssignmentRule table defines an assignment rule. Table 3 shows an example of DsDdAssignmentRule table contents.

Table 3. Example of DsDdAssignmentRule Table Contents

SeqNum	Thread PoolId	ECSUserId	Priority	Esdt Type	Media Type	EmailAddress	NumberOf Granules
50	14	ANY	ANY	ANY	scp	ANY	ANY
100	15	$EcDpPrEM	ANY	ANY	ANY	ANY	ANY
200	16	aster_gds	NORMAL	ANY	ANY	ANY	ANY
300	13	LarcIngMgr	NORMAL	ANY	ANY	ANY	ANY
400	17	NOAA/SOAP	ANY	ANY	ANY	ANY	ANY
500	18	jsmith	NORMAL	ANY	ANY	ANY	ANY
600	19	$PDS3	ANY	ANY	ANY	ANY	ANY
900	22	s4opsaaf	ANY	ANY	ANY	ANY	ANY
1000	22	s4opsaar	ANY	ANY	ANY	ANY	ANY
1100	22	s4opsamf	ANY	ANY	ANY	ANY	ANY
1200	22	s4opsamr	ANY	ANY	ANY	ANY	ANY
1300	22	s4opsdpf	ANY	ANY	ANY	ANY	ANY
1400	22	s4opstmf	ANY	ANY	ANY	ANY	ANY
1500	22	s4opstmr	ANY	ANY	ANY	ANY	ANY
1600	23	PrivUser	ANY	ANY	FtpPush	userops@x0ins02.daac.ecs.nasa.gov	2
1700	24	RegUser	ANY	ANY	ANY	ANY	ANY
1800	17	NoneUser	ANY	ANY	ANY	ANY	ANY
1900	20	ANY	ANY	ANY	FtpPush	ANY	ANY
2000	21	ANY	ANY	ANY	FtpPull	ANY	ANY

For each new request, the rules (in the DsDdAssignmentRule table) are evaluated in order by SeqNum until a rule is found where all conditions evaluate to true, in which case the request is assigned to the pool specified in the ThreadPoolId column. A rule evaluates to true if the values of all of the request attributes (i.e., ECSUserId, Priority, EsdtType, MediaType, EmailAddress, and NumberOfGranules) match the values contained in the rule's row in the table. Note that a value of "ANY" automatically evaluates to true for that attribute. So, in the example, any request with the ECSUserId "s4opsaaf" is allocated to ThreadPoolId 22 (i.e., the S4POPS thread pool in Table 2) and any FtpPull request that does not meet the conditions specified for any other assignment rule are allocated to ThreadPoolId 21 (the USER_FTPPULL thread pool). Any request that fails to match the rules for any of the thread pool IDs in the assignment rule table is assigned to the DEFAULT thread pool.

In addition to enforcing rules for assigning requests to thread pools (as specified in the DsDdAssignmentRule table) Data Distribution has another mechanism for preventing certain types of requests from monopolizing distribution resources. The mechanism is called dynamic

FTP server assignment and it involves using a set of rules in the DsDdAssignmentRuleHWCI table to evaluate each distribution request and allocate it to the appropriate Data Distribution FTP server.

The rules for assigning a distribution request to a specific FTP server (identified by HWCI) are DAAC-configurable and are based on request attributes. The following attributes are used for making an HWCI assignment:

- ECSUserId.
- SeniorClient.
- MediaType.
- EsdtType.
- PushDest.
- EmailAddress.

Each row in the DsDdAssignmentRuleHWCI table defines an HWCI assignment rule. Table 4 shows an example of DsDdAssignmentRuleHWCI table contents.

Table 4. Example of DsDdAssignmentRuleHWCI Table Contents

SeqNum	HWCI	ECSUserId	Senior Client	Media Type	Esdt Type	PushDest	EmailAddress
100	DRP1	$PDS	ANY	ANY	ANY	ANY	ANY
200	DRP1	ANY	PD	ANY	ANY	ANY	ANY
300	DRP1	ANY	IN	ANY	ANY	ANY	ANY
400	DRP1	$PDS3	ANY	ANY	ANY	ANY	ANY
500	DRP2	PrivUser	ANY	FtpPush	ANY	ANY	ANY
600	DRP1	RegUser	ANY	FtpPush	ANY	ANY	ANY
700	DRP1	s4opsaaf	ANY	FtpPush	ANY	ANY	ANY
800	DRP1	s4opsaar	ANY	FtpPush	ANY	ANY	ANY
900	DRP1	s4opsamf	ANY	FtpPush	ANY	ANY	ANY
1000	DRP1	s4opsamr	ANY	FtpPush	ANY	ANY	ANY
1100	DRP2	s4opsdpf	ANY	FtpPush	ANY	ANY	ANY
1200	DRP1	s4opstmf	ANY	FtpPush	ANY	ANY	ANY
1400	DRP1	s4opstmr	ANY	FtpPush	ANY	ANY	ANY
1500	DRP1_auto	ANY	ANY	scp	ANY	ANY	ANY

In the example shown in Table 4 FtpPush requests from either PrivUser or s4opsdpf that do not have a senior client of either “PD” or “IN” are assigned to DRP2 (EcDsStFtpServerDRP2). All other requests are allocated to DRP1 (EcDsStFtpServerDRP1).

When DDIST receives a request, a stored procedure executes to assign the request to the appropriate thread pool based on the rules contained in the DsDdAssignmentRule table (Table 3).

- Once all threads in a given thread pool have been allocated, new requests assigned to that pool are put in a "pending" state until a thread becomes available.
- Requests are no longer automatically assigned to threads in other pools if there are no available threads in their assigned pool.
- Pending requests for each pool are activated in first-in-first-out order by request priority.

Another stored procedure executes to map the request to an HWCI based on the rules contained in the DsDdAssignmentRuleHWCI table (Table 4).

DAACs may adjust configurations by updating the DsDdThreadPool, DsDdAssignmentRule, and DsDdAssignmentRuleHWCI tables.

- Assignment rules may be added, deleted or updated at any time without warm-starting DDIST.
  - Changes to assignment rules take effect immediately upon being entered in the database.
  - All new requests entering DDIST are subject to the updated rules.
- The ThreadLimit attribute in the DsDdThreadPool table may be dynamically changed as well.
  - The DDIST server reloads thread limits every 90 seconds so thread limit changes take effect within 90 seconds after being entered.
  - New thread pools can be added by inserting rows in the DsDdThreadPool table.
  - However, they are not used until the DDIST server is warm-started.
  - A thread pool can be deleted as long as there are no rules in the DsDdAssignmentRule table that point to the thread pool and all requests that have been assigned to the thread pool have been completed and have migrated out of the DDIST database.

When DDIST is warm-started, all requests are reassigned to thread pools based on the current set of rules.

If necessary, it is possible to reassign requests after they have been assigned to a thread pool. The following process is used:

- Update the rules in the DsDdAssignmentRule table as necessary to ensure that the request will be assigned to the desired thread pool.
- Warm-start DDIST (EcDsDistributionServer).

There is no GUI support for making changes to either the thread pool configuration or the FTP server assignment. Thread pool configuration or FTP server assignment changes are made by a DAAC DBA using the isql interface to update the DsDdThreadPool, DsDdAssignmentRule and/or DsDdAssignmentRuleHWCI tables in the database.

The following guidelines are provided for tuning DDIST priority thread allocation:

- In most cases, each FtpPush destination site should have its own thread pool.
- For each FtpPush destination, the DAAC should determine the number of concurrent file transfers it takes to fully utilize the available network bandwidth.
  - The number represents a parameter called "MaxTransfers."
- For subscription-based FtpPush distribution, the thread limit for the associated thread pool should be set to 130% of MaxTransfers (rounded up).
  - This should provide a sufficient number of threads to utilize the available network bandwidth plus allow for one or more threads to be concurrently staging data out of the AMASS cache.
- For non-subscription-based FtpPush distribution, the thread limit for the associated thread pool should be set to 200% of MaxTransfers (rounded up).
  - This should provide sufficient threads to utilize the available network bandwidth plus allow for staging of data from archive tapes.
- The total number of threads in DsDdThreadPool (i.e., sum of ThreadLimit for all rows) represents the maximum number of threads that can be active concurrently n DDIST.
  - The total must be less than the number of worker threads configured for DDIST.
  - The default number of worker threads configured for DDIST is 228.
- Although DDIST thread pools can be configured around request attributes other than priority, it is important to remember that STMGT CacheManager thread pools are organized by priority; consequently, it is important to ensure that STMGT thread pools are configured to optimally handle the likely mix of request priorities.
- During warm-start, it takes DDIST 0.83 second to recover each active or pending request; consequently, for a 2000-request backlog, it takes DDIST approximately 28 minutes to reach the end of start monitoring and begin accepting new requests.
  - However, note that DDIST immediately begins to work off its request backlog as requests are assigned to thread pools.

Procedures for modifying thread pools and thread-pool-assignment rules are included in the section on **Modifying System Parameters in the Storage Management and Data Distribution Database Using ISQL** (subsequent section of this lesson).

Modifying System Parameters in the Storage Management and Data Distribution Database Using the Storage Management Control GUI

As previously mentioned the effects on system functioning and performance must be considered before modifying system parameters. In addition, when making or requesting a change to system parameters, the CM process at the particular site must be followed (if applicable). Depending on circumstances (e.g., operator permissions) at a particular site, it may be necessary to request that someone else make parameter modifications using the **Storage Management Control** GUI. The procedure that follows is provided to assist Distribution Technicians who have to make parameter modifications using the **Storage Management Control** GUI.

The procedure for changing system parameters using the **Storage Management Control** GUI starts with the assumption that all applicable servers and the **Storage Management Control** GUI are running and the **Storage Config.** screen (Figure 11) is being displayed.

Modifying System Parameters in the Storage Management and Data Distribution Database Using the Storage Management Control GUI

1 Click on the appropriate server type in the **Configuration Parameter Reporting** window on the **Storage Config.** tab.

- The selected server type is highlighted in the **Configuration Parameter Reporting** window on the **Storage Config.** tab.
- The following server types are listed in the **Configuration Parameter Reporting** window on the **Storage Config.** tab:
  - **8MM** (8mm Stacker Server).
  - **ARCHIVE** (Archive Server).
  - **CACHE MANAGER** (Cache Management Server).
  - **CDROM** (CDROM Device Server).
  - **DLT** (DLT Stacker Server).
  - **DTF** (DTF Device Server).
  - **FTP** (FTP Server).
  - **REQUEST MANAGER** (Request Manager Server).
  - **STAGING DISK** (Staging Disk Server).
- Associated servers are listed in the server information window on the **Storage Config.** tab.

2 Click on the appropriate server in the server information window on the **Storage Config.** tab.

- The selected server is highlighted in the server information window on the **Storage Config.** tab.
- For example, if **CACHE MANAGER** were selected from the **Configuration Parameter Reporting** window on the **Storage Config.** tab, the following servers might be listed in the server information window:
  - EcDsStCacheManagerServerACM1.
  - EcDsStCacheManagerServerDRP3.
  - EcDsStCacheManagerServerPULL.
  - EcDsStCacheManagerServerWKS1.

3 Click on the **Modify Server/View Stackers** button.

- The applicable server configuration dialogue box is displayed.
  - For example, if **CACHE MANAGER** had been selected, the **Cache Manager Server Configuration** dialogue box (Figure 71) would be displayed.
  - For example, the **Cache Manager Server Configuration** dialogue box (Figure 71) displays data in the following fields (as applicable):
    - **Server Name**.
    - **RPC** [remote procedure call] **Tag**.
    - **Original Cache Space (blocks)**.
    - **Available Cache Space (blocks)** [cannot be modified from GUI].
    - **Allocation Block Size (bytes)**.
    - **Description** [e.g., "Cache Manager"].
    - **Expiration Threshold (hours)**.
    - **Expired Files Confirm Delete** [option button with **Yes** and **No** as the options].
    - **Disk Capacity: Fault Level** [currently ignored].
    - **Disk Capacity: Warning Level** [currently ignored].
    - **File I/O Block Size (bytes)** [typically set to 4194304 (4MB)].

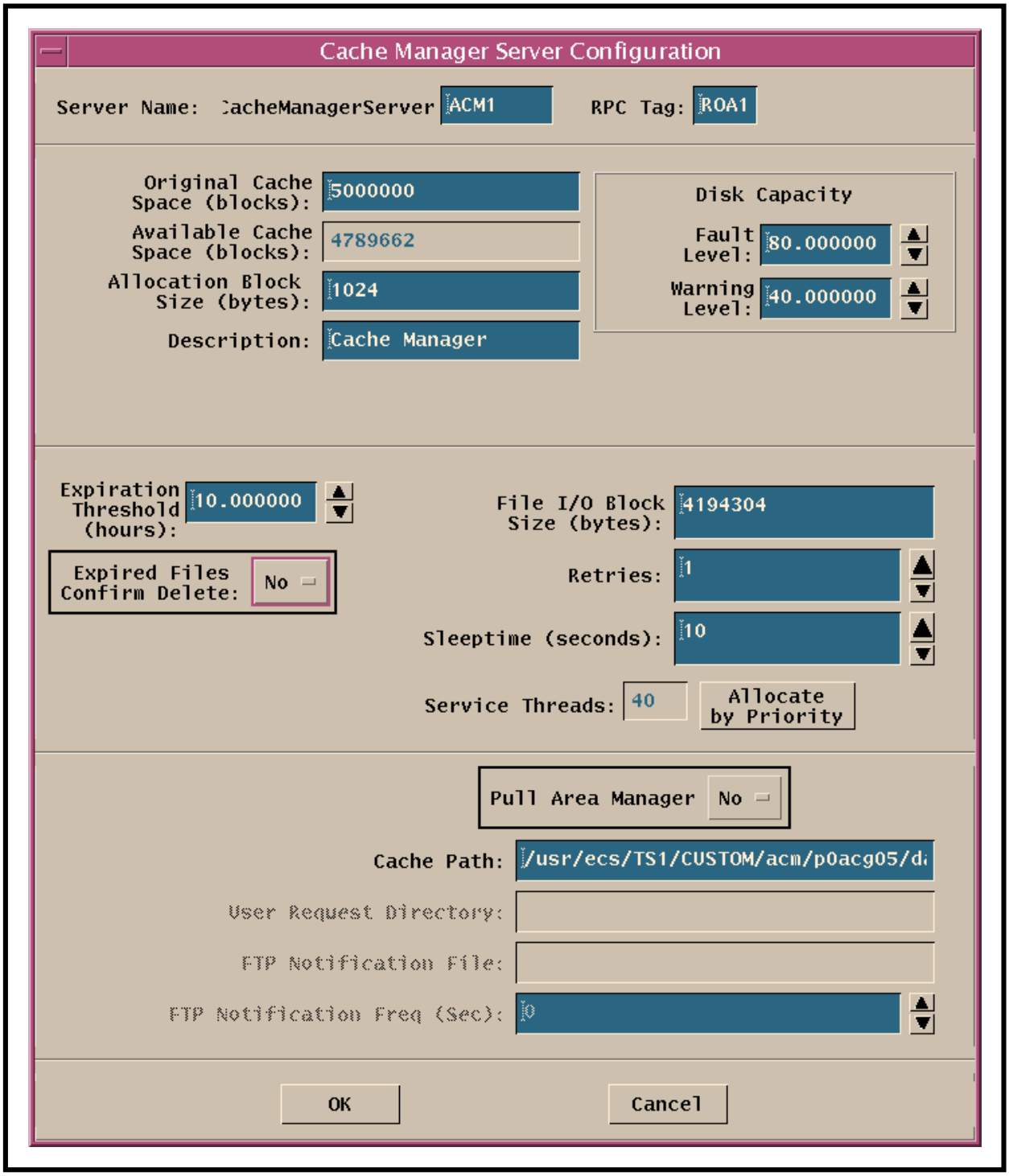

Figure 71. Cache Manager Server Configuration Dialogue Box

- **Service Threads** [number of worker threads that are allocated within the server instance to process requests - modified through the **Allocate by Priority** button].
- **Pull Area Manager** [option button with **Yes** and **No** as the options].
- **Cache Path**.
- **User Request Directory**.
- **FTP Notification File**.
- **FTP Notification Freq (Sec)**.

- Refer to the Installation Instructions for the relevant software release to find recommended values for the configuration of Storage Management servers.
  - Installation Instructions are included in the Release Notes for the software release and are available at http://cmdm.east.hitc.com/baseline/ under "Release Notes/CCRs."

4 Type modified data in relevant field(s) as necessary.

5 If service-thread (or read-thread or write-thread) priority allocations are to be modified, click on the corresponding **Allocate by Priority** button.

- The appropriate **Allocate by Priority** window [e.g., the **Service Threads: Allocate by Priority** window (Figure 72)] is displayed.

6 If thread priority allocations are being modified, type the desired values in the appropriate fields in the appropriate **Allocate by Priority** window, starting with the **Total** field.

- Lower-priority threads may be used to service higher priority requests, but never vice versa.
- By default, all service threads are created as low priority service threads, since they may be pre-empted by any priority request.
- The number of low threads is automatically re-calculated whenever the number of any of the other thread types is changed.
  - Consequently, the total of the numbers in each of the five different thread type fields equals the number in the **Total** field.

7 If thread priority allocations are being modified, click on the appropriate button from the following selections:

- **OK** - to approve the new value(s) and dismiss the **Allocate by Priority** window.
  - The **Cache Manager Server Configuration** dialogue box (Figure 72) is displayed.

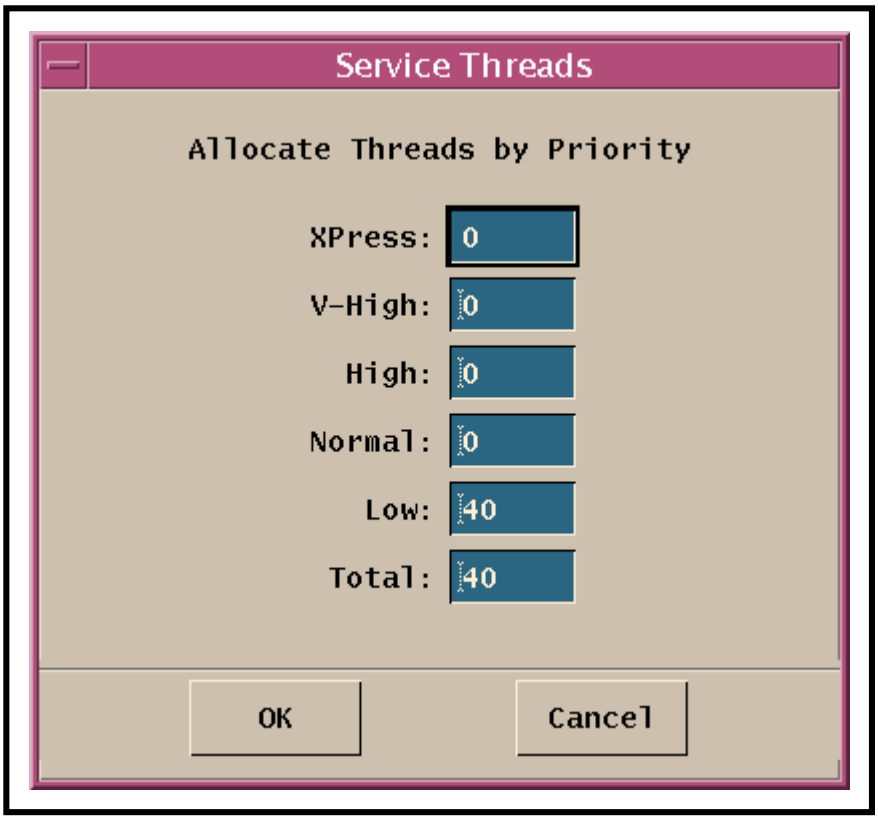

Figure 72. Service Threads: Allocate by Priority Window

- **Cancel** - to return to the **Cache Manager Server Configuration** dialogue box without saving the new value(s).
  - The **Cache Manager Server Configuration Dialogue Box** (Figure 72) is displayed.

NOTE: Sometimes when a secondary window (such as Figure 72, Service Threads: Allocate by Priority Window) has been accessed to modify parameters (e.g., to configure service threads), changes that were previously made in the primary window (such as Figure 71, Cache Manager Server Configuration Dialogue Box) are lost. Consequently, it is recommended that either values be changed in the secondary window first or that changes already made in the primary window be verified after the secondary window has been closed.

8 When new values have been entered in all fields to be modified, click on the appropriate button from the following selections:

- **OK** - to approve the new value(s) and dismiss the configuration dialogue box.

- The **Storage Config.** screen (Figure 11) is displayed.

- **Cancel** - to return to the **Storage Config.** screen without saving the new value(s).
  - The **Storage Config.** screen (Figure 11) is displayed.

9 Repeat Steps 1 through 8 as necessary.

Modifying System Parameters in the Storage Management and Data Distribution Database Using ISQL

As previously mentioned the effects on system functioning and performance must be considered before modifying system parameters. In addition, when making or requesting a change to system parameters, the CM process at the particular site must be followed (if applicable). Depending on circumstances at a particular site it may be necessary to request that the Database Administrator modify parameters in the Storage Management and Data Distribution database. The procedures that follow are provided to assist Distribution Technicians who have to make the database modifications themselves.

The procedures vary somewhat depending on what database table is to be modified. For example:

- Modifications can be made to the DsDdAssignmentRule or DsDdAssignmentRuleHWCI table at any time as described in the procedure for **Modifying System Parameters in the Storage Management and Data Distribution Database Using ISQL** that follows.
  - If the Distribution Server is running when the table is updated, the changes will take effect immediately (i.e., any new distribution requests will be allocated to a thread pool using the updated rules).
  - Consequently, rule changes to one of the tables must be self-consistent and are typically made within the scope of a single Sybase transaction.
- Modifications to the DsDdThreadPool table must be made while the Distribution Server is idle, as described in the procedure for **Modifying Parameters in the DsDdThreadPool Table Using ISQL** (subsequent section of this lesson).

The procedure for changing system parameters specified in the Storage Management and Data Distribution database using interactive structured query language (isql) starts with the assumption that the Distribution Technician has logged in to the system.

Modifying System Parameters in the Storage Management and Data Distribution Database Using ISQL

NOTE: If modifications to the DsDdThreadPool table are to be made, go to the procedure for **Modifying Parameters in the DsDdThreadPool Table Using ISQL** (subsequent section of this lesson).

1 Access a terminal window logged in to the Access/Process Coordinators (APC) Server host.

- Examples of APC Server host names include **e0acg11**, **g0acg01**, **l0acg02,** and **n0acg01.**
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **isql –U*userID* -S*DBServer*** then press **Return/Enter**.

- For example:

  isql –Ustmgt_role –Sx0acg01_srvr

3 At the **Password:** prompt type ***dbpassword*** then press **Return/Enter**.

- The ***dbpassword*** is the password for logging in to the database using the specified ***userID***.

4 Type **use *dbname*** at the **1>** prompt then press **Return/Enter**.

- The ***dbname*** is likely to be one of the following names:
  - **stmgtdb1** [OPS mode].
  - **stmgtdb1_TS1** [TS1 mode].
  - **stmgtdb1_TS2** [TS2 mode].

5 Type **go** at the **2>** prompt then press **Return/Enter**.

6 Type **select * from *TableName*** at the **1>** prompt then press **Return/Enter**.

- For example:

  select * from DsDdAssignmentRule

- Alternatively, type **select *columnName* from *TableName*** at the **1>** prompt then press **Return/Enter**.
  - For example:

    select ThreadPoolId from DsDdAssignmentRule

- Another alternative is to type **select *columnName1,columnName2[,columnName3,…]* from *TableName*** at the **1>** prompt then press **Return/Enter**.
  - For example:

    select ThreadPoolId,Priority from DsDdAssignmentRule

7 Type **go** at the **2>** prompt then press **Return/Enter**.

- Table contents are displayed.
  - If * (wildcard) was specified, all entries in the table are displayed.
  - If specific columnNames were entered, the data associated with those columns only are displayed.
- For example:

```
1> select * from DsDdAssignmentRule
2> go
    SeqNum     ThreadPoolId ECSUserId
    Priority      EsdtType
    MediaType
    EmailAddress
    NumberOfGranules
 ----------- ------------ ---------------------------------------------------
    --------------- -------------------------------------------------
    -------------------------------------------------
    ------------------------------------------------------------------------------------------------
-------
    ----------------
    100         15 $EcDpPrEM
    ANY            ANY
    ANY
    ANY
    ANY
    200         16 aster_gds
    NORMAL         ANY
    ANY
    ANY
    ANY
    300         13 LarcIngMgr
    NORMAL         ANY
    ANY
    ANY
```

ANY
600 19 $PDS3
ANY ANY
ANY
ANY
ANY
900 22 s4opsaaf
ANY ANY
ANY
ANY
ANY
1000 22 s4opsaar
ANY ANY
ANY
ANY
ANY
1100 22 s4opsamf
ANY ANY
ANY
ANY
ANY
1200 22 s4opsamr
ANY ANY
ANY
ANY
ANY
1300 22 s4opsdpf
ANY ANY
ANY
ANY
ANY
1400 22 s4opstmf
ANY ANY
ANY
ANY
ANY
1500 22 s4opstmr
ANY ANY
ANY
ANY
ANY
1700 24 RegUser

```
ANY          ANY
ANY
ANY
ANY
1800         17 NoneUser
ANY          ANY
ANY
ANY
ANY
1900         20 ANY
ANY          ANY
FtpPush
ANY
ANY
2000         21 ANY
ANY          ANY
FtpPull
ANY
ANY
400          17 NOAA/SOAP
ANY          ANY
ANY
ANY
ANY
601          19 $PDS
ANY          ANY
ANY
ANY
ANY
500          18 sjones
NORMAL       ANY
ANY
ANY
ANY
1600         23 PrivUser
ANY          ANY
FtpPush
userops@x0ins02.daac.ecs.nasa.gov
2

(19 rows affected)
```

8 If updating a row in a database table, type **update *TableName* set *columnName1=value1* where *columnName2=value2*** at the **1>** prompt then press **Return/Enter**.

- For example:

  update DsDdAssignmentRule set ECSUserId="jsmith" where ThreadPoolId=18

  - The effect of the modification shown in the example would be to change the ECSUserId in the row(s) of the database table containing ThreadPoolId 18 from “sjones” to "jsmith."
    - Subsequently all distribution requests with an ECSUserId of "jsmith" would be assigned to ThreadPoolId 18.
    - Distribution requests with an ECSUserId of "sjones" would no longer be assigned to ThreadPoolId 18.

- Go to Step 12.

9 If deleting a row from a database table, type **delete *TableName* where *columnName=value*** at the **1>** prompt then press **Return/Enter**.

- For example:

  1> delete DsDdAssignmentRule where ThreadPoolId=16

  - The effect of the modification shown in the example would be to delete any database row(s) with "16" in the ThreadPoolId column.

- Go to Step 12.

10 If adding a row to a database table, first type **insert *TableName* (*columnName1,columnName2,…*)** at the **1>** prompt then press **Return/Enter**.

- For example:

  1> insert DsDdAssignmentRule (SeqNum,ThreadPoolId,ECSUserId,Priority,EsdtType,MediaType, EmailAddress,NumberOfGranules)

11 If adding a row to a database table, type **values (*value1,value2,…*)** at the **2>** prompt then press **Return/Enter**.

- For example:

  2> values (1550,23,"MODAPS","HIGH","ANY","FtpPush","ANY","ANY")

  - The effect of the modification shown in the examples in Steps 10 and 11 would be to insert in the DsDdAssignmentRule database table a row containing the following values:
    - 1550 (SeqNum column).

        - 23 (ThreadPoolId column).
        - MODAPS (ECSUserId column).
        - HIGH (Priority column).
        - ANY (EsdtType column).
        - FtpPush (MediaType column).
        - ANY (EmailAddress column).
        - ANY (NumberOfGranules column).
- If modifying the DsDdAssignmentRule table (as shown in the examples in this procedure) the following attributes must be specified for each row:
    - SeqNum.
        - Determines the order in which a rule is evaluated.
        - Integer whose value is greater than or equal to zero.
        - Each rule must have a unique sequence number.
        - Rules are evaluated in order from the lowest sequence number to the highest sequence number.
        - It is recommended that sequence numbers not be created consecutively (e.g., instead of numbering 1, 2, 3, use 100, 200, 300) so new rules can be inserted without having to renumber subsequent rules.
    - ThreadPoolId.
        - Unique identifier of the thread pool to be assigned if the rule is the first one to evaluate to true.
        - Integer with a value greater than zero.
        - Must match one of the values in the ThreadPoolId column in the DsDdThreadPool table.
        - Multiple rules can assign the same ThreadPoolId.
    - ECSUserId.
        - User identifier associated with a distribution request.
        - String of up to 24 characters in length.
        - If the user identifier of a distribution request matches the string, the attribute evaluates to true.
        - If the string is set to the reserved word "ANY," the attribute always evaluates to true.

- String comparisons are case-sensitive.

– Priority.

  - Request priority associated with a distribution request.
  - String that must be set to one of the following six values: "XPRESS", "VHIGH", "HIGH", "NORMAL", "LOW", or "ANY".
  - If the priority of a distribution request matches the string then the attribute evaluates to true.
  - If the string is set to the reserved word "ANY," the attribute always evaluates to true.
  - String comparisons are case-sensitive.

– EsdtType.

  - Data type associated with a distribution request.
  - String of up to twelve (12) characters in length.
  - Must be set to a valid ESDT name and version number or the reserved words "MULTIPLE" or "ANY."
  - When an ESDT name and version number are specified, the string has the form "Name.Version" (e.g., "MOD021KM.003").
  - A distribution request has its EsdtType set to "MULTIPLE" if granules from more than one ESDT are being distributed. If the data type of a distribution request matches the string, the attribute evaluates to true.
  - If the string is set to the reserved word "ANY," the attribute always evaluates to true.
  - String comparisons are case-sensitive.

– MediaType.

  - Type of distribution medium to be used in fulfilling a distribution request.
  - String that must be set to one of the following seven values: "FtpPush", "FtpPull", "8MM", "CDROM", "DLT", “scp”, "ANY."
  - If the "media type" of a distribution request matches the string then the attribute evaluates to true.
  - If the string is set to the reserved word "ANY," the attribute always evaluates to true.
  - String comparisons are case-sensitive.

- Currently “8MM”, “CDROM”, and “DLT” never appear in distribution requests because media requests are redirected to PDS.

– EmailAddress.

  - An e-mail address that can be used to distinguish among different accounts with the same ECSUserId (e.g., to map specific ECSGuest requests to the appropriate thread pools).
  - The e-mail address is especially useful when a particular ECSGuest user submits so many requests that it is necessary to control how much of the distribution capacity those requests can utilize at any given time.
  - If the "e-mail address" associated with a distribution request matches the string, the attribute evaluates to true.
  - If the string is set to the reserved word "ANY," the attribute always evaluates to true.
  - String comparisons are case-sensitive.

– NumberOfGranules.

  - Number of granules in a distribution request.
  - The NumberOfGranules criterion can be used to map distribution requests to thread pools based on the size (in terms of granules) of the request.
  - NumberOfGranules is useful in controlling the distribution capacity available to large requests versus small requests. So it can be used to avoid having small requests back up behind large requests.
  - If the "NumberOfGranules" of a distribution request matches the value stored in the database, the attribute evaluates to true.
  - If the value of NumberOfGranules in the database is set to the reserved word "ANY," the attribute always evaluates to true.

12 Type **go** at the > prompt (e.g., **2>** or **3>**) then press **Return/Enter**.

13 Start verification of the update by typing **select * from *TableName*** (or one of the options described in Step 6) at the **1>** prompt then pressing **Return/Enter**.

14 Type **go** at the **2>** prompt then press **Return/Enter**.

- Table contents are displayed.
- Specified value should have been updated.
- For example:

```
1> select * from DsDdAssignmentRule
2> go
```

```
SeqNum     ThreadPoolId ECSUserId
Priority       EsdtType
MediaType
EmailAddress
NumberOfGranules
----------- ------------ ---------------------------------------------------
--------------- ---------------------------------------------------
--------------------------------------------------
-------------------------------------------------------------------------------------------
------
----------------
100          15 $EcDpPrEM
ANY            ANY
ANY
ANY
ANY
200          16 aster_gds
NORMAL         ANY
ANY
ANY
ANY
300          13 LarcIngMgr
NORMAL         ANY
ANY
ANY
ANY
600          19 $PDS3
ANY            ANY
ANY
ANY
ANY
900          22 s4opsaaf
ANY            ANY
ANY
ANY
ANY
1000          22 s4opsaar
ANY            ANY
ANY
ANY
ANY
1100          22 s4opsamf
```

ANY ANY
ANY
ANY
ANY
1200 22 s4opsamr
ANY ANY
ANY
ANY
ANY
1300 22 s4opsdpf
ANY ANY
ANY
ANY
ANY
1400 22 s4opstmf
ANY ANY
ANY
ANY
ANY
1500 22 s4opstmr
ANY ANY
ANY
ANY
ANY
1700 24 RegUser
ANY ANY
ANY
ANY
ANY
1800 17 NoneUser
ANY ANY
ANY
ANY
ANY
1900 20 ANY
ANY ANY
FtpPush
ANY
ANY
2000 21 ANY
ANY ANY
FtpPull

```
ANY
ANY
400         17 NOAA/SOAP
ANY            ANY
ANY
ANY
ANY
601         19 $PDS
ANY            ANY
ANY
ANY
ANY
500         18 jsmith
NORMAL         ANY
ANY
ANY
ANY
1600         23 PrivUser
ANY            ANY
FtpPush
userops@x0ins02.daac.ecs.nasa.gov
2

(19 rows affected)
```

– The preceding example indicates that the DsDdAssignmentRule table has been updated (from what was shown in the example in Step 7) to change the ECSUserId from “sjones” to “jsmith” in the row containing “18” for ThreadPoolId.

15 To exit from isql type **quit** at the **1>** prompt then press **Return/Enter**.

Modifying Parameters in the DsDdThreadPool Table Using ISQL

Modifications to the DsDdThreadPool table must be made while the Distribution Server is idle, as described in the procedure that follows.

The procedure for modifying parameters in the DsDdThreadPool table using isql starts with the assumption that the Distribution Technician has logged in to the system.

Modifying Parameters in the DsDdThreadPool Table Using ISQL

---

1 If any rule in the DsDdAssignmentRule table references a thread pool that is going to be deleted from the DsDdThreadPool table, update the rules in the DsDdAssignmentRule table so that no additional requests will be assigned to the thread pool that is to be deleted.

- Refer to the procedure for **Modifying System Parameters in the Storage Management and Data Distribution Database Using ISQL** (preceding section of this lesson).
- Thread pool assignment rules are defined by the rows in the DsDdAssignmentRule table.
- A thread pool should not be deleted while any rule in the DsDdAssignmentRule table references that thread pool.

2 If any request in the DsDdRequest table references a thread pool that is to be deleted, wait until all requests that are currently assigned to the thread pool have been completed before continuing.

- A thread pool should not be deleted while there is a request in the DsDdRequest table that references the thread pool.

3 When there are no current requests assigned to any thread pool to be deleted (if any), make a request to the Operations Controller/System Administrator to bring down (stop) the Distribution Server (EcDsDistributionServer) in the appropriate mode.

- If a new pool is added to DsDdThreadPool and new rules are added to DsDdAssignmentRule while the Distribution Server is running and the new rules result in a request being assigned to the new pool, the request will be suspended with a DsEDdMissingPool error code.
  - The suspended request cannot be resumed until the Distribution Server is warm-started.

4 Wait until the Distribution Server has stopped.

5 If a thread pool is to be deleted, use isql to set the ThreadLimit in the DsDdThreadPool table to zero.

- Refer to the procedure for **Modifying System Parameters in the Storage Management and Data Distribution Database Using ISQL** (preceding section of this lesson).

6 If a thread pool is to be added to the DsDdThreadPool table or an existing thread pool is to be modified, modify the DsDdThreadPool table using isql.

- Refer to the procedure for **Modifying System Parameters in the Storage Management and Data Distribution Database Using ISQL** (preceding section of this lesson).

- Each thread pool is defined by a row in the DsDdThreadPool table.
- The following attributes must be specified for each row in the DsDdThreadPool table:
  - ThreadPoolId.
    - Unique identifier for the thread pool.
    - Integer with a value greater than zero.
    - Each row in DsDdThreadPool must have a unique TheadPoolId.
  - ThreadPoolName.
    - Name of the thread pool.
    - String with a length less than or equal to 24 characters.
    - Each row in DsDdThreadPool must have a unique ThreadPoolName.
  - ThreadLimit.
    - Number of threads available for processing requests assigned to the thread pool.
    - Integer with a value greater than or equal to zero.
    - If the ThreadLimit for a given thread pool is zero, any requests that are assigned to the thread pool will remain in the pending state until the ThreadLimit is set to a value greater than zero.
    - If the ThreadLimit for a given thread pool is updated from a non-zero value to zero, no new requests assigned to the thread pool will be activated; however, any currently active requests will be allowed to complete.
    - The total of the thread limits for all thread pools must be less than the number of worker threads configured for DDIST.
    - The default worker thread configuration for DDIST is 228 threads.

7 When the appropriate modifications to the DsDdThreadPool table have been made using isql, make a request to the Operations Controller/System Administrator to perform a warm start of the Distribution Server (EcDsDistributionServer) in the appropriate mode.

8 If a thread pool is to be deleted (i.e., the ThreadLimit in the DsDdThreadPool table has been set to zero), wait until all completed requests that were assigned to the thread pool have been subject to garbage collection from the DsDdRequest table before continuing.

- A waiting time of 24 hours should be adequate.

9 If a thread pool is to be deleted (i.e., the ThreadLimit in the DsDdThreadPool table has been set to zero) and the waiting period has expired, use isql to delete the relevant row from DsDdThreadPool table.

- Refer to the procedure for **Modifying System Parameters in the Storage Management and Data Distribution Database Using ISQL** (preceding section of this lesson).

Troubleshooting DDIST and Order Manager GUI Problems

Trouble Symptoms

Troubleshooting is a process of identifying the source of problems on the basis of observed trouble symptoms. Most problems with data distribution can be traced to some part of the Data Server Subsystem:

- Data Distribution.
- Science Data Server.
- Storage Management.

However, a common source of problems involves the reliance on messages or data from other subsystems. Like many other operational areas in ECS, data distribution has interfaces with other subsystems. Consequently, it is possible to trace some problems to another ECS subsystem, including (but not necessarily limited to) those in the following list:

- Communications Subsystem (CSS).
- System Management Subsystem (MSS).
- Order Manager Subsystem (OMS).

The general process of troubleshooting involves the following activities:

- Review the trouble symptoms.
- Check the status of relevant hosts/servers (as necessary).
- Check log files (as necessary).
- Take action to correct the problem(s).

Fault Recovery

Each request that crosses a client/server boundary is assigned a system-unique identifier referred to as an RPC ID. (RPC refers to Remote Procedure Call, the mechanism by which requests are submitted from client to server.) The RPC ID facilitates the automatic fault recovery events that occur whenever there is a client or server failure.

- As a request propagates through the system, each associated client/server exchange is assigned a unique RPC ID.
  - The RPC ID for each interaction is derived from the previous RPC ID received by the client for the request.
    - Consequently, all RPC IDs associated with a given request have a common portion that relates the various client/server calls to one another.
  - Given the previous RPC ID, clients consistently reproduce the same RPC ID that was submitted to the server on the subsequent event.
- The concept of reproducible RPC IDs is central to the ECS fault recovery capability.
  - When requests are retried from client to server, they are always submitted with the same RPC ID that was used in the original submission of the request, even if either the client or server has crashed between retries.
- The RPC ID is also central to the check-pointing aspect of fault recovery.
  - As requests arrive at fault recovery-enabled servers, they are recorded in a persistent store (typically a database), tagged with the RPC ID, which identifies the request.
  - As the request is serviced, check-pointing state information may be updated in the persistent store, up to and including the completion status of the request.
  - This allows the servers to resume servicing from the last check-pointed state, particularly upon resubmission from a client.

Data Server Subsystem and Order Manager Subsystem components check-point the following types of information:

- **EcDsScienceDataServer** - Asynchronous “acquire” requests that have been accepted for processing and subscription server event notifications.
- **EcDsHdfEosServer** - None.
- **EcDsDistributionServer** - Requests (which have been accepted for processing).
- **EcDsStArchiveServer** - “Store” and “retrieve” request state information.

- **EcDsStStagingDiskServer** - Resource allocation and ownership for staging disks.
- **EcDsStFtpServer** - Request state information.
- **EcDsStCacheManagerServer** - None.
- **EcDsStDTFServer** - None.
- **EcDsStRequestManagerServer** - None.
- **EcOmOrderManager** - Requests (which have been submitted).

Fault Handling

Failure events are classified according to the following three severity levels:

- Fatal error.
  - Returned when a request cannot be serviced, even with operator intervention.
  - For example, if a request is made to distribute data via ftp to a non-existent host, the request is failed with a fatal error.
- Retry error.
  - Potentially recoverable error.
  - Normally, a retry error would be returned to the client only when the server cannot recover from the error automatically.
  - A retry error may require operator assistance during recovery.
    - For example, the Distribution Technician would use the Data Distribution Operator GUI to manually request resumption of a distribution request that had been “suspended with errors.”
- Warning.
  - Provided when operations can proceed without interruption, but an unexpected circumstance was detected.
  - For example, if a client requests a file to be removed but the file does not exist, there is no error per se; however, a warning is generated to caution the client that the file to be removed did not exist in the first place.

Transient errors (such as network errors) are always retry errors.

- In general, clients and servers that experience transient retry errors first attempt to recover by retrying the operation automatically.

- One special case of this is “rebinding,” which refers to the process by which a client automatically attempts to re-establish communication with a server in the event communication is disrupted.
  - The disruption may be caused by transient network failure, or by the server crashing or being brought down.
  - In any case, the client automatically attempts to reconnect to the server for a configurable period of time on a client-by-client basis.

ECS processes encountering an error or receiving an error from a server request can either pass the error back to a higher-level client or present it to the operator for operator intervention. The specific fault handling policies for Data Server Subsystem and Order Manager Subsystem client processes are shown in Table 5.

Table 5. Data Server Subsystem and Order Manager Subsystem Fault Handling Policies

Client Process	Fault Handling Policy
EcDsScienceDataServer **EcDsHdfEosServer**	**Retry errors:** Errors are retried a configurable number of times, then passed back to the calling client process unchanged. The default retry policy for Science Data Servers is “retry forever.” For asynchronous “acquire” requests involving subsetting, retry errors encountered with the HDF servers are not returned to the client. Instead, the request is queued for future execution. **Fatal errors:** Errors are passed back to the calling client process. **NOTE:** Errors associated with asynchronous requests are logged but do not appear on any GUI. The Operator restarts HDF servers manually.
EcDsDistributionServer	Errors are presented to the operator via the Data Distribution Operator GUI. **Retry errors:** Errors are presented as “Suspended with Errors” and can be resumed by the operator. **Fatal errors:** Errors are presented as “Failed.” For synchronous requests, fatal errors are also passed back to the calling client process. For asynchronous requests, fatal errors are sent as part of the e-mail notification.
EcDsStRequestManagerServer **EcDsStDTFServer**	**Retry errors:** Errors are passed back to the calling client process. **Fatal errors:** Errors are passed back to the calling client process.
EcOmOrderManager	**Retry errors:** Errors are retried a configurable number of times and then the request status is changed to “Operator Intervention” in the MSS database.

Client Crash and Restart

When a client of a SDSRV or DDIST server crashes, the server (i.e., EcDsScienceDataServer, EcDsHdfEosServer, or EcDsDistributionServer) continues to service the requests that were in process at the time of the client's crash. When a client of a STMGT server (i.e., EcDsStArchiveServer, EcDsStRequestManagerServer, EcDsStCacheManagerServer, EcDsStPullMonitorServer, EcDsStFtpServer, EcDsStDTFServer, or EcDsStStagingDiskServer) crashes, the requests that were in process are cancelled by another client process and there is no impact to the outside requester server.

The EcOmOrderManager does not care whether or not a client crashes.

When a client restarts in the ECS system, it sends a restart notification to each server with which it interacts.

- Clients notify servers that they have come up either "cold" or "warm."
- Generally, the notification temperature sent to the server matches the temperature at which the client process is restarted.
- However, there are some exceptions; for example:
  - EcDsScienceDataServer always notifies EcDsDistributionServer that it has performed a warm restart.
  - The default behavior for both EcDsHdfEosServer and EcDsStDTFServer is to send EcDsStRequestManagerServer cold restart notification.
- When a client sends restart notification to the EcDsStRequestManagerServer, the server calls a stored procedure to clean up the old request and staging disk (if any) created by the client, based on whether it was a cold or warm start.
  - The Storage Management Servers are not directly notified when a restart has occurred.
  - The Storage Management Servers respond to the event according to the fact that a previous request has been marked as failed and any staging disk resources they have allocated have been released.

The default server behavior in response to startup notification from a client is as follows:

- Warm Notification.
  - Outstanding requests for the restarted clients remain available in the persistent store.
  - The outstanding requests may be resubmitted by the client, and are serviced to completion upon resubmission.
  - Associated resources are left allocated until the requests are completed.

- Cold Notification.
  - All outstanding requests for the restarted client are cancelled.
  - If the client resubmits any cancelled request using the same RPC ID (e.g., by pressing the Retry button from an operator GUI), it is failed with a fatal error due to the client cold startup notification.
  - Any resources associated with the cancelled requests are released and reclaimed by the system.

The following servers have some non-standard responses to startup notification:

- **EcDsStArchiveServer**.
  - **Warm Notification:**
    - Default server behavior (as previously described).
  - **Cold Notification:**
    - For partially completed Ingest operations, all files stored are removed. (Partial granules are never permitted in the archive.)
- **EcDsStStagingDiskServer**.
  - **Warm Notification:**
    - All staging disks owned by the restarted client are retained, including temporary staging disks.
  - **Cold Notification:**
    - All staging disks owned by the restarted client are released.

Server Crash and Restart

When a server crashes, clients cannot continue to submit requests for processing.

- Synchronous requests in progress result in a Distributed Computing Environment (DCE) exception being thrown back to the client process, which enters a rebinding failure recovery mode (as previously mentioned).
- Attempts to submit requests while the server is down result in the client blocking until a communication timeout has been reached.
- Although DCE has been replaced by socket-based library calls (i.e., CCS Middleware), the DCE exception code is handled by the CCS Middleware.

When a server restarts, it may perform various resynchronization activities in order to recover from an unexpected termination.

- In the event of a server cold start or cold restart, the server typically cancels all outstanding requests and reclaims all associated resources.
- In general, existing request queues are retained for warm restarts and cleared for cold starts or cold restarts.
- **EcDsScienceDataServer**- and **EcDsHdfEosServer**-specific activities upon start/restart:
  - **Warm Restart:**
    - Restart asynchronous "acquire" requests that were in progress before the crash.
    - Retain the queue of asynchronous "acquire" requests.
    - It is expected that synchronous requests would be resubmitted by the respective senior client applications (i.e., PRONG or INGST).
    - Send event notifications to the Subscription Server for any services completed before the crash for which a subscribed event is registered but has not been sent to the Subscription Server.
  - **Cold Start or Cold Restart:**
    - Purge the queue of asynchronous "acquire" requests.
    - Purge the queue of Subscription Server Event Notifications.
- **EcDsDistributionServer**-specific activities upon start/restart:
  - **Warm Restart:**
    - Request Processing is restarted from the last check-pointed state.
  - **Cold Start or Cold Restart:**
    - EcDsDistributionServer deletes all (prior) request information from its database.
- **EcDsStArchiveServer**-specific activities upon start/restart:
  - **Warm Restart:**
    - Retains existing request queues.

- **Cold Start or Cold Restart:**
    - For partially completed “store” requests, the files copied into the archive are removed.
    - For partially completed “retrieve” requests, the access count is decremented in the read-only cache.

- **EcDsStCacheManagerServer**-specific activities upon start/restart:
  - **Warm Restart:**
    - The contents of the read-only cache are synchronized with the database.
    - Discrepancies are logged and removed.
  - **Cold Start or Cold Restart:**
    - All files are removed from the read-only cache.
    - Links to files in the read-only cache are left dangling.

- **EcDsStStagingDiskServer**-specific activities upon start/restart:
  - **Warm Restart:**
    - The set of staging disks in the staging area is synchronized with the database.
    - Discrepancies are logged and removed.
    - Existing request queues are cleared.
  - **Cold Start or Cold Restart:**
    - All staging disks are removed.

- **EcDsStPullMonitorServer**-specific activities upon start/restart:
  - **Warm Restart:**
    - The contents of the Pull Area and user request areas are synchronized with the database.
    - Discrepancies are logged and removed.
  - **Cold Start or Cold Restart:**
    - All files in the Pull Area and all user request areas are removed.

- **EcDsStFtpServer**-specific activities upon start/restart:
  - **Warm Restart:**
    - Existing request queues are retained.
  - **Cold Start or Cold Restart:**
    - Existing request queues are cleared.

Request Resubmission

Upon restarting a crashed client or server, requests are typically resubmitted. If the restarted process was started warm, the fault-recovery capabilities permit the server to resume processing of the request from its last check-pointed state. This prevents needless repetition of potentially time-consuming activities.

- **EcDsScienceDataServer**- and **EcDsHdfEosServer**-specific activities upon resubmission of a request:
  - All requests are serviced as if they are new requests.
  - RPC IDs are generated automatically and reproducibly; consequently, the Science Data Server typically recreates the same allocation requests on a resubmission.
    - This can trigger special logic to handle requests for which an allocated staging disk has been transferred to the Data Distribution Server.
- **EcDsDistributionServer**-specific activities upon resubmission of a request:
  - If previously submitted and completed, the request status is returned based on the check-pointed request status.
  - Otherwise, the client request thread is synchronized with the worker thread actually servicing the request.
- **EcDsStArchiveServer**-specific activities upon resubmission of a request:
  - The request is restored from the last check-pointed state.
  - For “store” requests, copies into the archive are resumed from the last file copied.
  - For “retrieve” requests, the entire “retrieve” request is reprocessed.
    - However, files previously retrieved for the request are, in all likelihood, still in the read-only cache.

- **EcDsStCacheManagerServer**- and **EcDsStFtpServer**-specific activities upon resubmission of a request:
  - If previously submitted and completed, the request status is returned based on the check-pointed request status.
  - Otherwise, the request is processed anew.
- **EcDsStStagingDiskServer**-specific activities upon resubmission of a request:
  - For staging disk allocation, the results are returned to the client if the client resubmits the allocation request under which the disk was created.
- **EcDsStPullMonitorServer**- and **EcDsStDTFServer**-specific activities upon resubmission of a request:
  - The resubmitted request is processed as if it were a new request.
- **EcOmOrderManager**-specific activities upon resubmission of a request:
  - EcOmOrderManager uses a different RPC ID for request resubmission.

Troubleshooting a DDIST, STMGT, or Order Manager GUI Failure

Actions to be taken in response to some common DDIST, STMGT, and OM GUI problems are described in the following tables:

- Table 6. Troubleshooting Data Distribution and Order Manager GUI Problems.
- Table 7. Data Distribution Operator GUI User Messages.
- Table 8. Storage Management User Messages.
- Table 9. Order Manager GUI User Messages.

If the problem cannot be identified and fixed without help within a reasonable period of time, the appropriate response is to call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 10 is a list of host machines that identifies the servers, clients and other software relevant to Data Distribution and the Order Manager GUI.

Table 6. Troubleshooting Data Distribution and Order Manager GUI Problems

Symptom	Response
Unable to log in to any host (e.g., Operations Workstation, g0acs02).	Check with the Operations Controller/System Administrator to ensure that the host is “up."
GUI or web browser (as applicable) not displayed when the start-up script/command has been properly invoked.	Ensure that the DISPLAY variable was set properly. [For detailed instructions refer to the procedure for **Launching the Data Distribution Operator and Storage Management Control GUIs** (previous section of this lesson).]
Error message associated with the Data Distribution Operator GUI.	Refer to Table 7, Data Distribution Operator GUI User Messages (adapted from the corresponding table in 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*) and Table 8, Storage Management User Messages (adapted from DsShErrorMessages.txt and DsStErrorMessages.txt in the /usr/ecs/*MODE*/CUSTOM/data/DSS directory on the DSS hosts).
Error message associated with the Storage Management Control GUI.	Refer to Table 8, Storage Management User Messages (adapted from DsShErrorMessages.txt and DsStErrorMessages.txt in the /usr/ecs/*MODE*/CUSTOM/data/DSS directory on the DSS hosts).
Error message associated with the Order Manager GUI.	Refer to Table 9, Order Manager GUI User Messages (adapted from the corresponding table in 609-CD-610-003, *Release 6B Operations Tools Manual for the ECS Project*).
Request status change to “Suspended with Errors,” indicating a data distribution failure.	1. If a suspended request is an FtpPush request to a remote host (e.g., ftp.averstar.com), check the connection to the remote host. [For detailed instructions refer to the procedure for **Checking the Connection to the Remote FTP Host** (subsequent section of this lesson).] 2. Ensure (e.g., using EcCsIdPingServers) that it is possible to connect to the necessary hosts and servers (listed in Table 10). [For detailed instructions refer to the procedure for **Checking Connections to Hosts/Servers** (subsequent section of this lesson).] 3. If it is not possible to connect to any needed host(s)/server(s), notify the Operations Controller/System Administrator to check the hosts/servers and bring them back up if necessary. 4. If hosts/servers are all “up,” notify the Operations Controller/System Administrator to have the STMGT servers bounced (shut down and immediately restarted). 5. When all relevant servers are “up,” resume processing of the suspended request. [For detailed instructions refer to the procedure for **Suspending/Resuming Data Distribution Requests** (previous section of this lesson).] 6. If processing does not resume, refer to the procedure for **Recovering from a Data Distribution Failure** (subsequent section of this lesson).

Table 6. Troubleshooting Data Distribution and Order Manager GUI Problems

Symptom	Response
Other problems.	Check the log files (e.g., EcDsDdistGui.ALOG, EcDsDistributionServer.ALOG, EcDsStRequestManagerServer.ALOG, EcDsStStagingDiskServerDIP1.ALOG) in the /usr/ecs/*MODE*/CUSTOM/logs directory of the applicable host for error messages. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).]

Table 7. Data Distribution Operator GUI User Messages

Message Text	Impact	Cause and Corrective Action
Cannot create connection pool.	Attempt to create connection pool to database failed.	1. Refresh the GUI display (click on the **Refresh** button). 2. Check the database connections. [For detailed instructions refer to the procedure for **Checking Database Connections** (subsequent section of this lesson).] 3. Refresh the GUI display (click on the **Refresh** button). 4. If the problem recurs, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
Cannot create the DsDdDistRequestList.	The Data Distribution Request List was not created.	1. Refresh the GUI display (click on the **Refresh** button). 2. Check the database connections. [For detailed instructions refer to the procedure for **Checking Database Connections** (subsequent section of this lesson).] 3. Refresh the GUI display (click on the **Refresh** button). 4. If the problem recurs, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
Cannot get a dbInterface connection pool.	Attempt to get a dbInterface from connection pool to database failed.	1. Refresh the GUI display (click on the **Refresh** button). 2. Check the database connections. [For detailed instructions refer to the procedure for **Checking Database Connections** (subsequent section of this lesson).] 3. Refresh the GUI display (click on the **Refresh** button). 4. If the problem recurs, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 7. Data Distribution Operator GUI User Messages

Message Text	Impact	Cause and Corrective Action
DDist Cancel Failure.	GUI received failure from server. Request was not canceled.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab (Figure 10)). Canceling the request may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Ensure (e.g., by typing **ps -ef | grep EcDsDistributionServer**) that the Distribution Server is "up." 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (click on the **Refresh** button). 5. Try again to cancel the request. [For detailed instructions refer to the procedure for **Canceling Data Distribution Requests** (previous section of this lesson).] 6. If repeated attempts to cancel the request fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
DDist Mark Shipped Failure.	GUI received failure from server. Request was not marked "Shipped."	No Longer Applicable.
DDist Refresh Failure.	Data Distribution Refresh Error. Dialogue Message GUI was not able to get new request list from server.	1. Check the database connections. [For detailed instructions refer to the procedure for **Checking Database Connections** (subsequent section of this lesson).] 2. Refresh the GUI display (click on the **Refresh** button). 3. If the problem recurs, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 7. Data Distribution Operator GUI User Messages

Message Text	Impact	Cause and Corrective Action
DDist Resume All Failure.	GUI received failure from server. Requests were not resumed.	1. Check the current state of the distribution request(s) (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab (Figure 10)). Resuming the request(s) may not be a valid operation in the current state(s) (e.g., if the current state is "Shipped"). 2. Ensure (e.g., by typing **ps -ef | grep EcDsDistributionServer**) that the Distribution Server is "up." 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (click on the **Refresh** button). 5. Try again to resume the request(s). [For detailed instructions refer to the procedure for **Suspending/Resuming Data Distribution Requests** (previous section of this lesson).] 6. If repeated attempts to resume request processing fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
DDist Resume Failure.	GUI received failure from server. Request was not resumed.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab (Figure 10)). Resuming the request may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Ensure (e.g., by typing **ps -ef | grep EcDsDistributionServer**) that the Distribution Server is "up." 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (click on the **Refresh** button). 5. Try again to resume the request. [For detailed instructions refer to the procedure for **Suspending/Resuming Data Distribution Requests** (previous section of this lesson).] 6. If repeated attempts to resume request processing fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 7. Data Distribution Operator GUI User Messages

Message Text	Impact	Cause and Corrective Action
DDist Set Priority Failure.	GUI received failure from server. Request set priority failed.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab (Figure 10)). Setting priority may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Ensure (e.g., by typing **ps -ef | grep EcDsDistributionServer**) that the Distribution Server is "up." 3. If the server has gone down, notify the Operations Controller/System Administrator to have it brought back up. 4. Try again to set the priority of the selected distribution request. [For detailed instructions refer to the procedure for **Changing the Priority of Data Distribution Requests** (previous section of this lesson).] 5. If repeated attempts to set the request priority fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
DDist Suspend All Failure.	GUI received failure from server. Requests will not be submitted in a SuspendAll state.	1. Check the current state of the distribution request(s) (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab (Figure 10)). Suspending the request(s) may not be a valid operation in the current state(s) (e.g., if the current state is "Shipped"). 2. Ensure (e.g., by typing **ps -ef | grep EcDsDistributionServer**) that the Distribution Server is "up." 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (click on the **Refresh** button). 5. Try again to suspend the request(s). [For detailed instructions refer to the procedure for **Suspending/Resuming Data Distribution Requests** (previous section of this lesson).] 6. If repeated attempts to suspend request processing fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 7. Data Distribution Operator GUI User Messages

Message Text	Impact	Cause and Corrective Action
DDist Suspend Failure.	GUI received failure from server. Request was not suspended.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab (Figure 10)). Suspending the request may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Ensure (e.g., by typing **ps -ef | grep EcDsDistributionServer**) that the Distribution Server is "up." 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (click on the **Refresh** button). 5. Try again to suspend the request. [For detailed instructions refer to the procedure for **Suspending/Resuming Data Distribution Requests** (previous section of this lesson).] 6. If repeated attempts to suspend request processing fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
DsDdRequestMgrC Cancel Failure.	GUI received failure from server. Request was not canceled.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab (Figure 10)). Canceling the request may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Ensure (e.g., by typing **ps -ef | grep EcDsDistributionServer**) that the Distribution Server is "up." 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (click on the **Refresh** button). 5. Try again to cancel the request. [For detailed instructions refer to the procedure for **Canceling Data Distribution Requests** (previous section of this lesson).] 6. If repeated attempts to cancel the request fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 7. Data Distribution Operator GUI User Messages

Message Text	Impact	Cause and Corrective Action
DsDdRequestMgrC create handle error.	Error cannot create Request Manager Handle to the Data Distribution Server.	1. Click on the **Refresh** button to try again. 2. Check the database connections. [For detailed instructions refer to the procedure for **Checking Database Connections** (subsequent section of this lesson).] 3. Refresh the GUI display (click on the **Refresh** button). 4. If the problem recurs, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
DsDdRequestMgrC Mark Shipped Failure.	GUI received failure from server. Request was not marked "Shipped."	No Longer Applicable.
DsDdRequestMgrC Resume Failure.	GUI received failure from server. Request was not resumed.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab (Figure 10)). Resuming the request may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Ensure (e.g., by typing **ps -ef | grep EcDsDistributionServer**) that the Distribution Server is "up." 3. If the Distribution Server has gone down, notify the Operations Controller/System Administrator to have the server brought back up. 4. Refresh the GUI display (click on the **Refresh** button). 5. Try again to resume the request. [For detailed instructions refer to the procedure for **Suspending/Resuming Data Distribution Requests** (previous section of this lesson).] 6. If repeated attempts to resume request processing fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 7. Data Distribution Operator GUI User Messages

Message Text	Impact	Cause and Corrective Action
DsDdRequestMgrC Set Priority Failure.	GUI received failure from server. Request priority was not changed.	1. Check the current state of the distribution request (**State** column of the **Data Distribution Requests** list on the **Distrib'n Requests** tab (Figure 10)). Setting priority may not be a valid operation in the current state (e.g., if the current state is "Shipped"). 2. Ensure (e.g., by typing **ps -ef | grep EcDsDistributionServer**) that the Distribution Server is "up." 3. If the server has gone down, notify the Operations Controller/System Administrator to have it brought back up. 4. Try again to set the priority of the selected distribution request. [For detailed instructions refer to the procedure for **Changing the Priority of Data Distribution Requests** (previous section of this lesson).] 5. If repeated attempts to set the request priority fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
Invalid text field entry.	Invalid data was entered.	1. Enter valid data in the relevant field. 2. Retry the operation that led to the error message.
No Ddist request selected. Please select one.	An operation was performed without first selecting a request from the scrolled list.	1. Select (highlight) the appropriate request in the list. 2. Retry the operation that led to the error message.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
.lib section in a.out corrupted	Standard system error.	
550 The file to be ftp pulled does not exist at the source location. Either the file never existed at the source location or the source locations file system or network is having problems.	Error returned by the FTP protocol.	Retry.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
553 The destination for the file does not exist or the destination exist but the permissions are such on the directory that the file cannot be written or the file already exist and can not be overwritten.	Error returned by the FTP protocol.	Retry.
A command to remove a file failed	Error from DsStStagingMonitor.	
A component of the path prefix is not a directory.	Error from SCSI.	
A configuration parameter had a null or invalid value	Error from DsStStagingMonitor.	
A daemon process was cold restarted so your request has been cancelled	Error returned from DsStCacheManagerServer.	
A [sic] error occured [sic] using a class destructor [sic].	Error for Archive.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
A file name was not found as expected in the database	Error from DsStStagingMonitor.	
A file size was not the length expected.	Error for Archive.	Retry.
A [sic] interrupted signal was caught.	Error from SCSI.	Retry.
A network error has occurred	Staging disk error message.	Retry.
A request has completed all processing	Error from DsStStagingMonitor.	[No action necessary.]
A request has not completed all processing	Error from DsStStagingMonitor.	[No action necessary.]

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
A Restart Backup request has failed.	Error for Archive.	Retry.
A search for a file to be retrieved has exhausted all locations.	Error for Archive.	Retry.
A staging disk object was not created in GetLocation()	Error for Archive.	1. Note all possible details related to the error. 2. Report all possible details to the vendor. 3. Retry.
A Store request failed because the volume group is closed.	Error for Archive.	1. Modify the desired volume group location to the valid path. 2. Retry.
Accessing a corrupted shared library	Standard system error.	
Address already in use	Standard system error.	Specify a free port on the server or specify a different server.
Address family not supported by protocol family	Standard system error.	
Advertise error	Standard system error.	
After the directory was made, the directory could not be stat [sic]	Staging disk error message.	1. Check the SYSLOG for errors. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).] 2. Retry after problems have been corrected.
All request slots are currently busy	Error returned from DsStCacheManagerServer.	Retry.
An attempt to delete a file failed.	Error for Archive.	1. Change the permissions on the file. 2. Retry the request.
An attempt to find a Cache Manager serverId has failed.	Error for Archive.	Retry.
An attempt to find a needed server has failed.	Error for Archive.	Retry.
An attempt to generate Restart Backup File requests failed.	Error for Archive.	Retry.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
An attempt to generate Store File requests failed.	Error for Archive.	Retry.
An attempt to reserve space for a Retrieve request failed.	Error for Archive.	Retry.
An attempt to retrieve data values from the database failed.	Error from DsStStagingMonitor.	
An attempt to spawn a read thread failed.	Error for Archive.	Retry.
An attempt to spawn a service thread failed.	Error for Archive.	Retry.
An attempt to spawn a write thread failed.	Error for Archive.	Retry.
An attempt to submit a reserve file for a Retrieve request failed.	Error for Archive.	Retry.
An attempt to submit a reserve space for a Retrieve request failed.	Error for Archive.	Retry.
An error was encountered generating ArDeleteFile requests.	Error for Archive.	Retry.
An internal error has occurred while communicating with Sybase	Error from database.	1. Check the Sybase error log for Sybase communication errors. 2. Ensure that Sybase is up and running properly. 3. Bounce the STMGT server warm to clear any transient error that may have corrupted the connection to the database.
An unknown exception has occurred	DsSt error.	[This error is an internal error in STMGT. It should never happen.] Report the error to the ECS DAAC Help Desk immediately.
An unknown request checkpoint state was found in the database.	Error for Archive.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
An unknown request type has been submitted to this server	Error returned from DsStCacheManagerServer.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Anode table overflow	Standard system error.	
Archive location does not contain requested file	Error for Archive.	Verify the spelling/path name of the requested file.
Archive location does not exist as defined in db tables	Error for Archive.	1. Check the spelling of the archive location that was entered. 2. If the spelling is correct, contact the System Administrator to determine whether the name should be made a new entry.
Archive location does not have adequate permissions	Error for Archive.	1. Ensure that the user ID used when logging in has the proper permissions. 2. If necessary, contact the Archive Administrator to have the permissions set properly.
Archive location does not have adequate permissions for files	Error for Archive.	1. Ensure that the user ID used when logging in has the proper permissions. 2. If necessary, contact the Archive Administrator to have the permissions set properly. 3. Retry.
Archive Store failed due to illegal file path	Error for Archive.	1. Verify that the file path given is a valid file path. 2. Retry.
Archive Store Failed EcUtFileCopy.Copy() failed	Error for Archive.	
Arg list too long	Standard system error.	
Attempting to link in more shared libraries than system limit	Standard system error.	
BackupOffsite() failed -- Offsite ID == DsCStEmptyString	Error for Archive.	1. Modify the ID of the desired offsite location. (The ID of the desired offsite location must be given, and must not be an empty string.) 2. Retry
BackupOnlineLocation failed -- SP DsCStVGSelectHistory execute failed	Error for Archive.	Retry.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
BackupTemporaryAndOffsite() failed -- Offsite ID == DsCStEmptyString	Error for Archive.	1. Modify the ID of the desired offsite location. (The ID of the desired offsite location must be given, and must not be an empty string.) 2. Retry
Bad address	Standard system error.	If the error arose from a gethostname() call, check the name and namelen parameters.
Bad command sequence -- error in ftp #503	Error returned by the FTP protocol.	
Bad exchange descriptor	Standard system error.	
Bad file descriptor	Standard system error.	1. Check whether the file exists. 2. Check file permissions.
Bad font file format	Standard system error.	
Bad request code	Standard system error.	
Bad request descriptor	Standard system error.	
Bad XDR Stream	Error from DsStFileInfo.	Retry.
Block device required	Standard system error.	
Broken pipe	Standard system error.	
Cache file entry not in db	Error returned from DsStCacheManagerServer.	[No action necessary.]
calculate checksum is disabled	DsSt error.	[Not an error.]
calculated checksum not equal to specified	DsSt error.	Retry.
Cancelled by a STMGT client	STMGT restart code.	
Cancelled due to client restart	STMGT restart code.	
Cancelled due to STMGT server cold start	STMGT restart code.	[The STMGT server reporting the error was cold started while the submitted request was in queue.] Resubmit the request. (It will be re-processed as if it were a new request.)
Cannot access a needed shared library	Standard system error.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Cannot assign requested address	Standard system error.	Specify a free port on the server.
Cannot delete from DsStBackup Table -- SP DsCStBDelete execute() failed	Error for Archive.	[No action necessary.]
Cannot delete from DsStRestore Table -- SP DsCStRDelete execute() failed	Error for Archive.	[No action necessary.]
Cannot exec a shared library directly	Standard system error.	
Cannot insert key -- file already exist [sic] in list	Error from DsStStagingDataList.	[No action necessary.]
Cannot open input file	Error from DsStPosixUtil.	Verify that the current user ID has read permission for the file.
Cannot open output file	Error from DsStPosixUtil.	1. Verify that the file is not already open for output. 2. Verify that the current user ID has write permission for the file.
Cannot send after socket shutdown	Standard system error.	
Can't open data connection -- error in ftp #425	Error returned by the FTP protocol.	
CDS path is null	Error for DsStArchiveProxy.	
Channel number out of range	Standard system error.	
Command not available -- error in ftp #502	Error returned by the FTP protocol.	
Command not implemented for that parameter -- error in ftp #504	Error returned by the FTP protocol.	
Communication error on send	Standard system error.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Components of path require hopping to multiple remote machines and the file system does not allow it.	Error from SCSI.	
Connection closed, transfer aborted -- error in ftp #426	Error returned by the FTP protocol.	
Connection refused	Standard system error.	1. Verify that the target machine is connected. 2. Verify that the listening server is running.
Connection reset by peer	Standard system error.	
Connection timed out	Standard system error.	1. Check the condition of the network. 2. Retry.
could not close input file	Error from DsStPosixUtil.	[No action necessary.]
could not close output file	Error from DsStPosixUtil.	[No action necessary.]
could not create a pull monitor object	Error from DsStDistributionFtp.	Retry.
could not create a stagingdisk for inftp	Error from inftp.	Retry.
could not create global pointer	Error from DsStDistributionFtp.	
could not create pointer to config file	Error from DsStDistributionFtp.	
Could not determine file size of file.	Error for Archive.	Verify the spelling/path name of the requested file.
Could not remove the staging disk entry from the database	Staging disk error message.	1. Check whether the staging disk exists in the database. (Probable that the disk does not exist.) 2. Retry.
Could not stat [sic] the file, possible NFS problems or file does not exist	Staging disk error message.	1. Check whether the file exists in the file system. 2. If the file does exist, check the SYSLOG for network file system (NFS) errors. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).] 3. Retry after problems have been corrected.
Cross-device link	Standard system error.	Substitute a symbolic link.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
DB Session unusable to previous error	Error from database.	[An attempt has been made to continue with a database operation when the previous operation failed. The previous failure has left the connection in a state that is unsuitable for continuing.] Retry.
DCE object not created	Error for DsStArchiveProxy.	Retry.
Deadlock situation detected/avoided	Standard system error.	
default	Error from DsStDistributionFtp.	
Denial of service -- error in ftp #702	Error returned by the FTP protocol.	
Destination address required	Standard system error.	
Device busy	Standard system error.	
Device is already open.	Error from SCSI.	
Device is not open.	Error from SCSI.	
Device Name should be specified to this device control operation	Media error message.	
Directory not empty	Standard system error.	
Drive element number in database does not match any of the physical drives.	Media error message.	
Eject tape Failed	Media error message.	
Empty archive location -- (myArchiveLocation == DsCStEmptyString)	Error for Archive.	[The name of the desired archive location must be given.]
empty archive location -- failed in SetBackupOnlineLocation()	Error for Archive.	Retry.
Empty file in move request not added to database	Error from DsStStagingMonitor.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Empty Offline Location	Error for Archive.	[The name of the off-line location must be given.]
empty VG Key	Error for Archive.	
Empty Volume group error	Error for DsStArchiveProxy.	
Environmental variable POSIXUTILCONFIG not set	Error from DsStPosixUtil.	1. Determine an appropriate value for the variable. 2. Set the variable to the appropriate value. 3. Run the command.
Error : User | Password | Host | Source | RequestID are not entered	Error from inftp.	[Any one or more of the following have not been entered: User, Password, Host, Source, or RequestID.] Verify that non-empty strings have been provided for all fields.
Error 47	Standard system error.	
Error close ftp control connection	DsSt error.	Retry.
Error close ftp data connection	DsSt error.	Retry.
Error closing server	Error for DsStFtpUtility.	Retry.
Error encountered in stored procedure	Error for Archive.	[See the description from the stored procedure DsCStSPBSelectByName.] Retry.
Error encountered in stored procedure	Error from database.	[See the description from the stored procedure.] Retry.
Error in accepting socket with accept	DsSt error.	Retry.
Error in closing server	Error for DsStFtpUtility.	Retry.
Error in closing the server	Error for DsStFtpUtility.	Retry.
Error in closing the server	Error from DsStNetworkResource.	Retry.
Error in executing ftp command	DsSt error.	Retry.
Error in executing ftp Exec()	Error from DsStNetworkResource.	Retry.
Error in FTP Unable to open file to FTP	Error from DsStNetworkResource.	1. Verify that the file exists. 2. Retry.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Error in opening server	Error for DsStFtpUtility.	Retry.
Error in opening the server	Error from DsStNetworkResource.	Retry.
Error in Receiving files	Error for DsStFtpUtility.	Retry.
Error in receiving files	Error from DsStNetworkResource.	Retry.
Error in sending files	Error from DsStNetworkResource.	Retry.
Error in setting hostname	Error for DsStFtpUtility.	Retry.
Error in setting local directory	Error for DsStFtpUtility.	Retry.
Error in setting the local directory	Error from DsStNetworkResource.	Retry.
Error in setting the remote directory	Error from DsStNetworkResource.	Retry.
Error in setting user	Error for DsStFtpUtility.	Retry.
Error in setting user name	Error from DsStNetworkResource.	Retry.
Error in setting User Password	Error for DsStFtpUtility.	Retry.
Error Open File descriptor	DsSt error.	Fatal
Error opening the server	Error for DsStFtpUtility.	Retry.
Error receiving files	Error for DsStFtpUtility.	Retry.
Error Recieving [sic] file	Error for DsStFtpUtility.	Retry.
Error returned when distributes [sic] files from a staging disk to the tape media in tar format.	Error for tape.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Error returned when ingests [sic] files from the tape media to a staging disk in tar format.	Error for tape.	
Error returned when verify [sic] the source file list.	Error for tape.	
Error selecting data from the database	Error for Archive.	[A stored procedure is returning a failed status code for a stored procedure.] 1. Set the debug level (for the relevant server) at 3 in the Registry database. 2. Reproduce the error.
Error setting hostname	Error for DsStFtpUtility.	Retry.
Error setting hostname -- host not exist [sic] or network error	Error from DsStNetworkResource.	Retry.
Error setting local directory	Error for DsStFtpUtility.	Retry.
Error setting remote directory	Error for DsStFtpUtility.	Retry.
Error setting server	Error for DsStFtpUtility.	Retry.
Error setting user	Error for DsStFtpUtility.	Retry.
Error setting user name	Error for DsStFtpUtility.	Retry.
Error setting user password	Error from DsStNetworkResource.	Retry.
Error setting user password function	Error for DsStFtpUtility.	Retry.
Error updating the initial RegMgrNotifiedFlag	Media error message.	[No action necessary.]
Error writing file in fast copy	Error from DsStPosixUtil.	Retry.
Exceeded maximum number of allowable connections to Sybase	Error from database.	1. Verify that the Sybase database configuration has been configured with an adequate number of connections. 2. Retry.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Exceeded storage allocation for current directory or dataset -- error in ftp #552	Error returned by the FTP protocol.	
Exec format error	Standard system error.	
execute() of Stored Procedure -- DsStGRInsert -- failed	Error from DsStDistributionFtp.	[No action necessary.]
Failed attempting to connect to Sybase server	Error from database.	1. Ensure that DBServer for the server has been set properly in the Registry database. 2. Ensure that DBName for the server has been set properly in the Registry database. 3. Retry.
Failed attempting to login to Sybase	Error from database.	1. Verify that the Application ID for the server has been properly set in the Registry database. 2. Verify that login accounts have been properly set up in the Sybase database. 3. Retry.
Failed in checking the slot status.	Media error message.	
Failed in checking the status of tape drive	Media error message.	
Failed in executing stored procedure to retrieve device info by stackerId.	Media error message.	
Failed in executing stored procedure to retrieve slot info by stackerId.	Media error message.	
Failed in executing stored procedure to retrieve stacker info by stackerId.	Media error message.	
Failed to allocate a tape device	Error from SCSI.	
failed to build the client object with parameters for the CDS path	Error for DsStArchiveProxy.	
Failed to deallocate a tape device	Error from SCSI.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Failed to get necessary information from database	Error for Archive.	[No action necessary.]
Failed to get the cellname	Error for DsStArchiveProxy.	
Failed to get the client mode	Error for DsStArchiveProxy.	1. Ensure that a mode has been specified as an option on the command line or in the calling script. 2. If a mode has been entered, ensure that it is a valid mode and that all other required command-line options have been entered.
Failed to get the PF config File Pointer	Error for DsStArchiveProxy.	[This command requires a ConfigFile option, where the word ConfigFile is followed by a valid PF config file name.]
Failed to get the PF Global pointer	Error for DsStArchiveProxy.	
Failed to insert the file into the staging disk inventory	Staging disk error message.	(This error should not occur.) 1. Verify that the staging disk exists. 2 Retry.
Failed to load tape (time out).	Error from SCSI.	Retry.
Failed to rename the file in the file system	Staging disk error message.	1. Check the SYSLOG for errors. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).] 2. Resubmit the request after problems have been corrected.
Failed to rename the file in the file system and could not reset the original file in the staging disk inventory	Staging disk error message.	Retry.
Failed to rename the file in the staging disk inventory	Staging disk error message.	1. Check the staging disk inventory for the file to be renamed. 2. Retry if the file exists. (If the file does not exist, the request should not be attempted again.)
Failed to stat [sic] the created staging disk directory and the staging disk entry could not be removed from the database	Staging disk error message.	1. Check NFS for errors. 2. The directory entry should be cleaned out of the database upon a warm or cold startup. 3. Retry.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Failed to stat [sic] the created staging disk directory.	Staging disk error message.	1. Check for NFS errors. 2. Retry. [If the directory does exist, the directory entry should be removed upon a warm or cold start of the server.]
Failed trying to make the directory entry in the file system.	Staging disk error message.	1. Check the SYSLOG for NFS errors. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).] 2. Check the permissions of the rootpath. 3. Retry after problems have been corrected.
Failed trying to make the directory entry in the file system. The directory entry could not be removed from the Database.	Staging disk error message.	1. Check the SYSLOG for NFS errors. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).] 2. Check the permissions on the rootpath. (the directory entry will be cleaned out of the database upon a warm start or cold start of the server.)
Failure in updating database table(s).	Media error message.	
Failure to close file -- not enough space to flush unwritten bytes	Error from DsStStream.	Retry.
Failure to close file in DsStStream	Error from DsStStream.	
Failure to establish a tcp connection	Error returned by the FTP protocol.	
Failure to open file in DsStStream	Error from DsStStream.	Verify that the file name is spelled correctly and the path is correct.
Fatal error returned by Data Distribution.	Error detected by Data Distribution.	
Fildes is not a valid open file descriptor.	Error from SCSI.	
Fildes is not associated with a device driver that accepts control functions.	Error from SCSI.	
File descriptor in bad state	Standard system error.	
File does not exist	Error from DsStUnixCompress.	Verify that the file name is spelled correctly and its path is correct.
File does not exist to copy	Error from DsStPosixUtil.	Verify the path and the spelling of the file name.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
File exists	Standard system error.	
File locking deadlock	Standard system error.	
File name of type RWCString is null	Error from DsStFileCompress.	[The file to be compressed was not given a name.] Enter a non-empty string to indicate file name before attempting this operation.
File name too long	Standard system error.	
File not found	Error from DsStFileCompress.	
File size in archive and DsMdFileStorage are different.	DsSt error.	1. Notify the Archive Manager to compare the entries in the SDSRV database DsMdFileStorage table and the file in the archive to determine whether the file size is incorrect in the database table or the file in archive is corrupted. 2. When the Archive Manager reports that the problem has been corrected, cancel the distribution request using the Data Distribution Operator GUI. 3. Resubmit the distribution request.
File table overflow	Standard system error.	
file to [sic] big for buffer -- cannot do fast copy	Error from DsStPosixUtil.	
file to [sic] big to read	Error from DsStPosixUtil.	
File too large	Standard system error.	
FTP file transfer failed without an FTP error code (unknown cause)	Error returned from DsStCacheManagerServer.	Retry.
Generic error returned by Data Distribution.	Error detected by Data Distribution.	
Get Location failed -- pathIndex > DsStNullIndex	Error for Archive.	
Get Sense Data failed.	Error from SCSI.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
GetVolGroupLocation failed -- SP DsCStVGSelectHistory execute failed	Error for Archive.	Retry.
Host is down	Standard system error.	
I/O error	Standard system error.	Retry.
ID not set	Error from DsStDistributionFtp.	[Could not find the parameter that indicates the request ID for this request (request parameter is currently an empty string).]
Identifier removed	Standard system error.	
If the file exist [sic] with enforced record locking enabled, record locks are on the file	Error from SCSI.	
Illegal byte sequence	Standard system error.	
Illegal seek	Standard system error.	
Inappropriate I/O control operation for device	Standard system error.	
Ingest starts	Media error message.	[No action necessary.]
InsertBackupTable() failed -- Unable to Insert into the DsStBackup table -- SP DsCStBInsert execute() failed	Error for Archive.	
InsertRestoreTable() failed - Unable to Insert into the DsStRestore table -- SP DsCStRInsert execute() failed	Error for Archive.	
Insufficient space to move file to the read only cache area	Error from DsStStagingMonitor.	Retry.
Insufficient storage -- error in ftp #452	Error returned by the FTP protocol.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Interrupted system call, possibly during a select() call	Standard system error.	
Invalid Archive area specified for retrieve	Error for Archive.	
Invalid drive path.	Media error message.	
Invalid function argument.	Standard system error.	[If this occurred after the bind() command, the namelen parameter may indicate an incorrect size, or the indicated socket may already be bound.]
Invalid put method type	Error returned from DsStCacheManagerServer.	
Invalid slot	Standard system error.	
Invalid slot number.	Media error message.	
Invalid stacker path.	Media error message.	
Invalid Transfer stage returned from DB -- err in RestartBackup() or RestartRestore()	Error for Archive.	
Is a directory	Standard system error.	Either select a different file name, select a file under the specified directory, or delete the directory.
Level 2 halted	Standard system error.	
Level 2 not synchronized	Standard system error.	
Level 3 halted	Standard system error.	
Level 3 reset	Standard system error.	
Link exists	Error returned from DsStCacheManagerServer.	
Link has been severed	Standard system error.	
Link number out of range	Standard system error.	
Link of files failed	Staging disk error message.	1. Check the staging disk log to identify the reason for the symlink failure. 2. Retry.
Local error in processing -- error in ftp #451	Error returned by the FTP protocol.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Machine is not on the network	Standard system error.	
Making space	Error returned from DsStCacheManagerServer.	[Space needed in cache.] Retry
Managed directory path is invalid	Error returned from DsStCacheManagerServer.	Check path and mount points.
Math argument out of domain of function	Standard system error.	
Message tables full	Standard system error.	
Message too long for message buffer	Standard system error.	
Missing request parameters	Media error message.	
MountTape Failed	Media error message.	
msg	Error for DsStArchiveProxy.	Retry.
Multihop attempted	Standard system error.	
Name not unique on network	Standard system error.	
Need account for storing files -- error in ftp #532	Error returned by the FTP protocol.	
Network dropped connection because of reset	Standard system error.	
Network is down	Standard system error.	Wait for the network to come back up.
Network is unreachable	Standard system error.	
No available drive.	Media error message.	
No buffer space available	Standard system error.	
No child processes	Standard system error.	
No CSI structure available	Standard system error.	
No data available	Standard system error.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
No disk space in pull monitor	Error from DsStDistributionFtp.	Retry.
No entries available to be deleted by Batch Delete function	Error for Archive.	[No action necessary.]
No entries in the queue	From DsStDiskRequestManager.	[No action necessary.]
No filename to delete from the amass cache	Error for DsStArchiveProxy.	Retry.
NO hwci	Error for DsStArchiveProxy.	1. Ensure that a Hardware Configuration Item (HWCI) has been specified as an option on the command line or in the calling script. 2. If an HWCI has been entered, ensure that it is valid and that all other required command-line options have been entered.
No hwci:volgrp error	Error for DsStArchiveProxy.	
No HWCI:volumegroup was passed	Error for Archive.	
No instance of queue exists	Error from DsStDiskRequestManager.	1. Note all circumstances related to the error. 2. Submit a trouble ticket.
No message of desired type	Standard system error.	
No online stacker.	Media error message.	
No record locks available	Standard system error.	
No records found in file to FTP	Error from DsStNetworkResource.	Check staging disk for file with list. Retry.
No requests have been cancelled for this server	Error returned from DsStCacheManagerServer.	[Not an error.] [The server is checking to see if any requests have been cancelled in order to process the cancellation. No requests have been cancelled. This error can be safely ignored as it is internal to STMGT.]
No resource (drive/slot) available for request	Error for tape.	1. Check stacker/drive status. 2. If appropriate, refill stacker. 3. Retry.
No route to host	Standard system error.	
NO SCSI device	Error from SCSI.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
No servers need to be awakened to service this request	Error returned from DsStCacheManagerServer.	[Not an error.] [The submitted request is a trivial request that can be fulfilled solely from the database. No servers will be notified as part of the request processing.]
No space left on device	Standard system error.	
No space left on device.	Error from SCSI.	
No such device	Standard system error.	
No such device or address; server exited before connection was complete	Standard system error.	
No such file or directory	Standard system error.	Verify the path name of the file or directory.
No such process	Standard system error.	
No such volume group	Error for Archive.	
No value for Capacity set in configuration file	Error from DsStFtpResourceConfig.	1. Ensure that the capacity has been queried on a valid device. 2. Ensure that the ftp resource config file exists. 3. Ensure that the ftp resource config file contains a value for CAPACITY.
Not a data message	Standard system error.	
Not a directory	Standard system error.	Verify the directory path.
Not a stream device	Standard system error.	
Not enough space	Standard system error.	1. Kill unnecessary processes. 2. Re-nice necessary processes if possible.
Not logged in - error in ftp #530 - username or password incorrect	Error returned by the FTP protocol.	
Not owner	Standard system error.	Either change the permissions or ownership of the file/executable, or run as a different user.
Null UserId or Password	Error for Archive.	[A valid UNIX userID must be entered and must contain at least one character.]

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Number of symbolic links encountered during path name traversal exceeds MAXSYMLINKS	Standard system error.	[There are probably symbolic links pointing to each other.]
Object is remote	Standard system error.	
Online Backup Failed EcUtFileCopy.Copy() failed	Error for Archive.	[No action necessary.]
Operation already in progress	Standard system error.	Wait for an operation on the socket or other object to complete.
Operation not applicable/not implemented	Standard system error.	
Operation not supported on transport endpoint	Standard system error.	
Operation now in progress	Standard system error.	
Option not supported by protocol	Standard system error.	
Out of stream resources	Standard system error.	Wait for other processes to release resources.
Package not installed	Standard system error.	
Page type unknown -- error in ftp #551	Error returned by the FTP protocol.	
Parameter syntax error in FTP -- error in ftp #501	Error returned by the FTP protocol.	
Path points to a remote machine, and the link to that machine is no longer active.	Error from SCSI.	
Path points to an illegal address.	Error from SCSI.	
path to pull monitor not set	Error from DsStDistributionFtp.	[Could not find the parameter that indicates the effective root directory for the pull monitor.] Verify that a path is being supplied.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Pending write is greater than the allocated space	Error from DsStStream.	Temporarily write data to a disk with more free space.
Permission denied	Standard system error.	1. Execute as root. 2. If already root, choose another socket type or protocol.
Possible space limitation or the disk does not exist in the database	Staging disk error message.	1. Check whether the server has space available. 2. Retry when sufficient space exists. (If the disk does not exist in the database, the request should be failed.)
Process chosen as database deadlock victim	Error from database.	[Command is automatically re-run.]
Protocol driver not attached	Standard system error.	
Protocol error	Standard system error.	
Protocol family not supported	Standard system error.	
Protocol not supported	Standard system error.	Call socket() with a different protocol.
Protocol wrong type for socket	Standard system error.	[Source code needs to be checked; name struct passed to connect command must reflect the protocol type used to open the socket.]
Pull monitors [sic] pull directory is null	Error from DsStDistributionFtp.	[Could not find the parameter that indicates the pull directory for this ftp request.] Verify that a path is being supplied.
Read only cache location does not have adequate permissions	Error for Archive.	1. Ensure that the user ID used when logging in has the proper permissions. 2. If necessary, contact the Cache Manager Administrator to have the permissions set properly.
Read-only file system	Standard system error.	1. Determine whether it is possible to write to the destination directory (i.e., check permissions). 2. If it is possible to write to the destination directory, remount the device that contains the directory.
Remote address changed	Standard system error.	
Remote archive not created for BackupOnline or BackupOffline	Error for Archive.	Retry.
Request or arg is not valid for this device.	Error from SCSI.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Request size exceeds Capacity or Threshold.	Error detected by Data Distribution.	Retry.
Requested file action not taken -- error in ftp #450	Error returned by the FTP protocol.	
Resource temporarily unavailable	Standard system error.	Either kill all unnecessary processes or wait for other processes to terminate.
RestartBackup() failed -- SP DsCStBSelectByNam e execute() failed	Error for Archive.	
RestartNotification function failed	Error for DsStArchiveProxy.	[No action necessary.]
RestartRestore() failed -- SP DsCStRSelectByNam e execute() failed	Error for Archive.	
Restore Offline failed	Error for Archive.	
Result too large	Standard system error.	
Retry error returned by Data Distribution.	Error detected by Data Distribution.	Retry.
SCSI device is busy	Error from SCSI.	Retry.
SCSI device is in check status	Error from SCSI.	Retry.
SCSI device is not accessible.	Error from SCSI.	
Server crashed	STMGT restart code.	1. Check the logs for the identified server to ascertain the cause of the crash. 2. Restart the server as soon as possible 3. Contact the ECS Help Desk for additional support.
Server crashed and is being automatically restarted (warm)	STMGT restart code.	Check the logs for the identified server to ascertain the cause of the crash.
Server is temporarily unavailable	STMGT restart code.	[The requested server is not running.} 1. If the server is expected to be running, check the logs to determine why the server is no longer running. 2. Restart the server. 3. Resubmit the request.
Service not available -- error in ftp #421	Error returned by the FTP protocol.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Slot number in database does not match any of the physical slot numbers.	Media error message.	
Socket operation on non-socket	Standard system error.	[Source code needs to be checked; program should not attempt to perform socket operations on non-socket file descriptors.] Submit a trouble ticket.
Socket type not supported	Standard system error.	
Software caused connection abort	Standard system error.	
Some physical I/O error has occurred.	Error from SCSI.	
Source file for a retrieve request was not found	Error for Archive.	1. Verify the spelling and pathname of the file to be retrieved. 2. Retry.
Source file for link or delete not found	Staging disk error message.	Verify the spelling and pathname of the file to be deleted or linked.
source parameters are not set	Error from DsStDistributionFtp.	[Could not find the parameter that indicates the source for the ftp transfer (source parameter is currently an empty string).] Ensure that the source is being supplied.
Space has not been reserved in cache for this file	Error returned from DsStCacheManagerServer.	1. Check for server cold start. 2. Resubmit request.
space not available on staging disk for inftp	Error from inftp.	1. If the file is bigger than the space allocated for staging disk, modify the staging disk configuration. 2. If the file is not bigger, wait for other requests to complete so that space will be freed on the staging disk. 3. Retry.
Srmount error	Standard system error.	
StagingMonitor object was not created in GetStagingMonitor()	Error for Archive.	Retry.
Stale NFS file handle	Standard system error.	
Stored procedure not found or invalid	Error from database.	1. Check the database and/or contact the Database Administrator. 2. Retry.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Sybase does not recognize the specified login name	Error from database.	1. Ensure that, if the DBLoginName parameter has been set in the Registry database, it has been set to a login that actually exists in the Sybase database. 2. Retry.
system compress 'compress' function failed	Error from DsStUnixCompress.	[There may not be enough space on the partition for the compressed and uncompressed versions to exist simultaneously.] 1. Temporarily move the file to a partition with more space. 2. Compress the file in the temporary location. 3. Move the compressed file back to the original location.
System copy function failed	Error from DsStFileCompress.	
system move 'mv' failed	Error from DsStUnixCompress.	1. Verify that the current user ID has write permission for the file. 2. Verify that the current user ID has write permission in the target directory. 3. Verify that the destination file does not exist already.
system symlink failed to make a symbolic link from a source file to the target filename	Error from DsStUtility.C.	
system uncompress 'uncompress' failed	Error from DsStUnixCompress.	[There may not be enough space on the partition for the compressed and uncompressed versions to exist simultaneously.] 1. Temporarily move the file to a partition with more space. 2. Compress the file in the temporary location. 3. Move the compressed file back to the original location.
Temporary Backup Failed EcUtFileCopy.Copy() failed	Error for Archive.	[No action necessary.]
Text file busy	Standard system error.	
The named file does not exist.	Error from SCSI.	
The Cache Manager Copy Into Cache function failed	Error for Archive.	Retry.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
The Cache Manager Reserve Space function failed	Error for Archive.	Retry.
The child of a daemon process servicing your request crashed	Error returned from DsStCacheManagerServer.	Retry.
The construction invoked is not valid for use.	Error for Archive.	
The database could not create a staging disk. Possible space limitations	Staging disk error message.	1. Check the available space of the staging disk server on the Storage Management Control GUI (Storage Config tab). 2. Retry.
The destination directory where the file is to be copied does not exist	Staging disk error message.	1. Check the SYSLOG for NFS errors. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).] 2. If the destination is a staging disk, verify that the staging disk exists. 3. Retry after problems have been corrected.
The execute() failed in Commit Transaction	Error for Archive.	Retry.
The execute() failed in DsStCommonDBIF	Error for Archive.	Retry.
The file could not be removed from the staging disk database inventory and no attempt will be made to remove the file from the file system	Staging disk error message.	1. Check the staging disk logs for database errors concerning the removal of the file from the database. 2. Retry.
The file does not exist and write permission is denied by the parent directory of the file to be created.	Error from SCSI.	
The file to be deleted does not exist in the file system	Staging disk error message.	1. Check the SYSLOG for NFS errors. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).] 2. Verify that the staging disk exists. 3. Retry after problems have been corrected.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
The file was deleted from the staging disk database inventory but was unable to be removed from the file system.	Staging disk error message.	1. Verify that the file exists. 2. Check for NFS errors in the SYSLOG. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).] 3. Retry after problems have been corrected.
The file was not found	DsSt error.	1. Verify that the file name is spelled correctly. 2. Verify that the path is correct. 3. Retry.
The host for ftp does not have a valid IP address and can not be connect to.	Media error message.	1. Verify the host name. 2. Retry.
The host for ftp exist [sic] but cannot be connected to. Check the FtpServers [sic] debug log for the errno.	Media error message.	1. Check the FtpServer debug log for the errno. 2. Respond to the error. 3. Retry.
The input path is neither a regular file nor a directory	Error from DsStUtility.C.	[It appears that a device-special file has been passed as a source path for a copy operation. This type of operation is not supported.] 1. Verify that the input path is correct. 2. Retry.
The length of the path argument exceeds {PATH_MAX}, or the length of a path component exceeds {NAME_MAX}.	Error from SCSI.	
The linked file created by the Cache Manger does not exist	Staging disk error message.	1. Check the SYSLOG for NFS errors. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).] 2. Check the CacheManager logs for errors. 3. Retry after problems have been corrected.
The method to suspend a request to be deleted failed	Error for DsStArchiveProxy.	Retry.
the mode the client passed does not match the mode the client is running in – backup mode should match primary mode	Error for Archive.	Retry.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
the move request failed during the copy	Error from DsStStagingMonitor.	Retry.
The move request was failed because it is a dupe of a failed request	Error from DsStStagingMonitor.	Retry.
The named file exists	Error from SCSI.	
The named file is a character special or block special file, and the device associated with this special file does not exist.	Error from SCSI.	
The named file is a directory and flag is write or read/write	Error from SCSI.	
The named file resides on a read-only file system.	Error from SCSI.	
the passed MasterList must be same size as retrieve from DB in ResumeStoreRequest or ResumeRetrieveRequest	Error for Archive.	
The process has too many open files	Error from SCSI.	
The request has invalid input parameters	Error for Archive.	
The request has invalid input parameters	Error from DsStStagingMonitor.	
The request has not completed in the maximum amount of time allocated	Error from DsStStagingMonitor.	Retry.
The request is already being serviced	Error returned from DsStCacheManagerServer.	[This is an internal error detected by STMGT. A request that is already being serviced by a thread was identified by a manager thread as being available for servicing. The attempt to assign the request to a second thread has failed.]

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
The request was cancelled because of a failure earlier in the processing.	Error for Archive.	1. Check the error code of all sub-requests of the main request. 2. Retry.
The requested function cannot be performed due to the permission settings on the file/directory	Staging disk error message.	1. Change the permissions on the file. 2. Retry.
The server was unable to allocate a socket for listening	Error returned from DsStCacheManagerServer.	[A UNIX error has occurred preventing the allocation of a socket for listening purposes. This is an extremely unusual circumstance.] 1. Document the error. 2. Refer the error to the System Administrator for investigation.
The slot or drive returned from allocate is invalid	Error for tape.	1. Check stacker/drive status. 2. If appropriate, refill stacker. 3. Retry.
The source file for a link does not exist	Staging disk error message.	1. Check the file system for the source file. 2. If the source file exists in the file system, check the SYSLOG for NFS errors. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).] 3. Retry after problems have been corrected.
The source file to be copied does not exist in the file system	Staging disk error message.	1. Check the SYSLOG for NFS error. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).] 2. Retry after problems have been corrected.
The specified tape drive is empty.	Media error message.	
The specified tape drive is occupied.	Media error message.	
The Staging Disk no longer exist [sic] in the Database	Staging disk error message.	1. Check whether the staging disk was cold started, which would have destroyed the disks. 2. If the disk was a virtual disk, check whether the path still exists. 3. Check the SYSLOG for file system errors. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).] 4. Retry if possible after problems have been corrected.
The Staging Monitor Move function failed	Error for Archive.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
The staging monitor request queue encountered an error retrieving or writing data.	Error from DsStStagingMonitor.	
The submission of a Cache Manager Copy Into Cache function failed	Error for Archive.	Retry.
The system file table is full.	Error from SCSI.	
The system is unable to allocate a send descriptor.	Error from SCSI.	
The system remove function failed in Delete()	Error for Archive.	[No action necessary.]
The thread pool is not configured for the server	Error returned from DsStCacheManagerServer.	1. Check the configuration of the server to be started (i.e., verify from the Storage Management Control GUI that the service thread pool has been defined.) 2. Retry.
This is not an error -- detailed portion is null	Error returned by the FTP protocol.	[Not an error.]
Timer expired	Standard system error.	
Too many links	Standard system error.	
Too many open files	Standard system error.	1. Direct the process to close some open files. 2. Retry.
Too many references: cannot splice	Standard system error.	
Too many symbolic links were encountered in translating path.	Error from SCSI.	
Too many users	Standard system error.	
Transport endpoint is already connected	Standard system error.	[It may not be necessary to attempt to establish a connection.] 1. If necessary, disconnect. 2. Retry.
Transport endpoint is not connected	Standard system error.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Type mismatch in retreiving [sic] data from database	Error for Archive.	[A stored procedure is returning a different type of data than is expected by the code.] 1. Set the debug level (for the relevant server) at 3 in the Registry database. 2. Reproduce the error.
Type mismatch in retreiving [sic] data from database	Error from DsStDistributionFtp.	[A stored procedure is returning a different type of data than is expected by the code.] 1. Set the debug level (for the relevant server) at 3 in the Registry database. 2. Reproduce the error.
Unable to allocate a stream.	Error from SCSI.	
Unable to attach/stat [sic] to source location	Error returned from DsStCacheManagerServer.	1. Create/verify source path. 2. Retry.
Unable to checkpoint file -- SP DsCStSPCheckpointFile execute() failed	Error from DsStFileParameters.	[No action necessary.]
Unable to checkpoint inftp request as generic request -- SP DsCStSPCheckpointGenericRequest execute() failed	Error from inftp.	[No action necessary.]
Unable to checkpoint inftp request as inftp request	Error from inftp.	[No action necessary.]
Unable to checkpoint retrieve request as generic request	Error for Archive.	[No action necessary.]
Unable to checkpoint store request as generic request	Error for Archive.	[No action necessary.]
Unable to clean files from destination dir when cancelling a push	Error from DsStNetworkResource.	1. Check destination permissions. 2. Retry.
Unable to clean files from pull cache when cancelling a pull	Error from DsStNetworkResource.	1. Check pull cache permissions. 2. Retry.
Unable to create entry for link	Error returned from DsStCacheManagerServer.	1. Check the database for permissions/errors. 2. Verify that the entry exists. 3. Retry.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Unable to free sufficient space	Error returned from DsStCacheManagerServer.	1. Manually expire cache files to free more space. 2. Retry.
Unable to get the temporary directory from Backup -- SP DsCStBSelectTempDir execute() failed	Error for Archive.	
Unable to get the temporary directory from restore -- SP DsCStRSelectTempDir execute() failed	Error for Archive.	
Unable to insert BackupID -- BackupID is Null	Error from DsStFileParameters.	1. Modify the BackupID. (A valid BackupID is required. It must be a string with at least one character.) 2. Retry.
Unable to insert checkSum of file -- CheckSum = 0	Error from DsStFileParameters.	If possible, rerun the checksum on the file. (A checksum of 0 is meaningless.)
Unable to insert current position of a search of a volume group	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Unable to insert file size of file -- file size = 0	Error from DsStFileParameters.	Try to get file size again. (File size of 0 represents a file containing no information.)
Unable to insert managed directory entry	Error returned from DsStCacheManagerServer.	1. Check the database for permissions/errors. 2. Verify that the entry exists. 3. Retry
Unable to insert OffsiteID -- OffsiteID is Null	Error from DsStFileParameters.	1. Modify the ArchiveID. (A valid ArchiveID is required. It must be a string with at least one character.) 2. Retry.
Unable to insert the archive unique name of file -- UniqueFileName is Null	Error from DsStFileParameters.	[A non-empty unique file name must be entered here.]
Unable to Insert the ArchiveID -- ArchiveID is Null	Error from DsStFileParameters.	1. Modify the ArchiveID. (A valid ArchiveID is required. It must be a string with at least one character.) 2. Retry.

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Unable to insert the checkpoint state of the request -- CheckpointState is Null	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Unable to insert the file index of the request -- EventMessage is Null	Error from DsStFileParameters.	
Unable to insert the file index of the request -- file index is less than 0	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Unable to insert the location of a source file.	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Unable to insert the serverid of a remote archive server.	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Unable to Insert the StagingID -- StagingID is Null	Error from DsStFileParameters.	1. Modify the ArchiveID. (A valid StagingID is required. It must be a string with at least one character.) 2. Retry.
Unable to insert the status of the file (success or failure) -- errorMsg is Null	Error from DsStFileParameters.	[No action necessary.]
Unable to insert the user(client) name of file -- UserFileName is Null	Error from DsStFileParameters.	1. Modify the path/filename. (The file name must have a full path or staging disk ID and must be non-empty.) 2. Retry.
Unable to insert the VolumeGroupId.	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Unable to insert type of search on a retrieve request.	Error from DsStFileParameters.	[This is an internal error in ECS.] 1. Note all circumstances associated with the error (including capturing the Debug.log and ALOGs for both the reporting server and the Request Manager). 2. Submit a high-priority trouble ticket against STMGT. (Send logs in support of the trouble ticket.)
Unable to make the directory	Staging disk error message.	1. Check the SYSLOG for errors. [For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).] 2. Retry after problems have been corrected.
Unable to mark request as suspended	Error returned from DsStCacheManagerServer.	[The stored procedure used to mark a request as suspended (or internally pending) failed. The request cannot be marked as suspended. This may result in the request needlessly being processed repeatedly.] Retry.
Unable to mark server as up in the database	Error returned from DsStCacheManagerServer.	[The database could not be updated to reflect that the server is up.] 1. Check for previous errors that might indicate why the stored procedure could not be executed. 2. Correct the errors.
Unable to read files from source directory when storing a file	DsSt error.	Check the source directory file.
Unable to remove a stored file from the archive.	Error from DsStFileParameters.	1. Check the archive for permission errors. 2. Submit a request to the System Administrator to correct permission errors. 3. Retry when permission errors have been corrected.
Unable to remove link entry	Error returned from DsStCacheManagerServer.	1. Check the database for permissions/errors. 2. Verify that the entry exists. 3. Retry
Unable to remove managed directory entry	Error returned from DsStCacheManagerServer.	1. Check the database for permissions/errors. 2. Verify that the entry exists. 3. Retry
Unable to restore checkpointed IngestFtp request from DB	Error from inftp.	
Unable to restore checkpointed retrieve request from database	Error for Archive.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Unable to restore checkpointed store request from database	Error for Archive.	
Unable to retrieve the base block size value from configuration file	Error from DsStFtpResourceConfig.	1. Ensure that the block size has been queried on a valid device. 2. Ensure that the ftp resource config file exists. 3. Ensure that the ftp resource config file contains a value for BLOCKSIZE.
Unable to retrieve the number of FTP retries from configuration file	Error from DsStFtpResourceConfig.	1. Ensure that the number of retries has been queried on a valid device. 2. Ensure that the ftp resource config file exists. 3. Ensure that the ftp resource config file contains a value for RETRIES.
Unable to retrieve the pause time from the resource configuration file	Error from DsStFtpResourceConfig.	1. Ensure that the sleep time has been queried on a valid device. 2. Ensure that the ftp resource config file exists. 3. Ensure that the ftp resource config file contains a value for SLEEPTIME.
Unable to retrieve the value for Pullfile from the configuration file	Error from DsStFtpResourceConfig.	1. Ensure that the pullfile name has been queried on a valid device. 2. Ensure that the ftp resource config file exists. 3. Ensure that the ftp resource config file contains a value for PULLFILENAME.
Unable to update checkpoint state for checkpointed request	Error for Archive.	[No action necessary.]
Unable to update checkpoint state for checkpointed request	Error from inftp.	[No action necessary.]
Unable to update checkpoint state for file -- SP DsCStSPCheckpointFileState execute() failed	Error from DsStFileParameters.	[No action necessary.]
Unable to update checkpoint status for checkpointed request	Error for Archive.	
Unable to update checksum for file -- SP DsCStSPCheckpointChecksum execute() failed	Error from DsStFileParameters.	[A checksum is a way of validating a file. From this point, it may not be possible to verify the file's completeness and genuineness.] [No action necessary.]

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Unable to update file index for checkpointed request	Error for Archive.	[No action necessary.]
Unable to update file size	Error returned from DsStCacheManagerServer.	1. Check the database for permissions/errors. 2. Verify that the entry exists. 3. Retry.
Unable to update file state	Error returned from DsStCacheManagerServer.	1. Check the database for permissions/errors. 2. Verify that the entry exists. 3. Retry
Unable to update fileSize for file -- SP DsStFUpdateFileSize execute() failed	Error from DsStFileParameters.	N/A
Unable to update physical location for file -- SP DsCStSPCheckpointFileLoc execute() failed	Error from DsStFileParameters.	[No action necessary.]
Unable to update stage and status in DsStBackup table -- SP DsCStBUpdStageAndStatus execute() failed	Error for Archive.	[No action necessary.]
Unable to update stage and status in DsStRestoreTable -- SP DsCStRUpdStageAndStatus execute() failed	Error for Archive.	[No action necessary.]
Unable to update staging disk tag for file -- SP DsCStSPCheckpointSDTag execute() failed	Error from DsStFileParameters.	[No action necessary.]
Unable to update status(failed) for file -- SP DsCStSPCheckpointFileFailure execute() failed	Error from DsStFileParameters.	

Table 8. Storage Management User Messages

Message Text	Impact	Cause and Corrective Action
Unable to write a block of data. Check if the destination directory is full or if there are network errors	Error from DsStNetworkResource.	1. Check whether the destination directory has space available. 2. Check for network errors. 3. Retry when sufficient space exists or network errors have been corrected.
Unauthenicated [sic] kftp user -- error in ftp #705	Error returned by the FTP protocol.	
Unknown command -- error in ftp #500	Error returned by the FTP protocol.	
Unknown device error returned.	Error from SCSI.	
Unknown Error	Error returned by the FTP protocol.	
Unknown RPC failure	Staging disk error message.	Retry.
UnMountTape Failed	Media error message.	
Update of multiple row selects not supported	Error from database.	[This is an internal STMGT error.] 1. Note all circumstances associated with the error, including the identity of the server reporting the error. 2. Report the error to the ECS DAAC Help Desk as soon as possible.
Users [sic] quota full	Error from SCSI.	
Value too large for defined data type	Standard system error.	
Your request is still in process – please be patient	Error returned from DsStCacheManagerServer.	1. Wait. 2. Retry if necessary.

Table 9. Order Manager GUI User Messages.

Message Text	Impact	Cause and Corrective Action
!!! ERROR: It appears that all granules have been failed. You can not submit or partition a request with all FAILED granules. This request should be failed. To do this, Select "Fail Request" from the Request Disposition section and try again. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page. If all the granules in a request have been failed, the request can no longer be submitted or partitioned. The only corrective action is to fail the entire request or place it on hold. 1. Click on the **OK** button to dismiss the dialogue box. 2. Either fail the entire request or place it on hold. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]
All of the granules for this request have been failed. You can not submit or partition the request because the submission will fail and another operator intervention will be created for it. This request should be failed. Return to the previous page and select "Fail Request" under the Request Disposition section.	Intervention cannot be resolved.	The operator failed all the granules for a particular request and tried to submit or partition it. Since there are no granules, there is nothing to submit or partition. The entire request should be failed. 1. Click on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** (**Intervention for Request *x***) page. 2. Fail the entire request. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]
An error has occurred with the page you are requesting. Error Message: <message>	Various.	The message appears on the **Error** page and is displayed in response to a stored procedure or system fault. Although the previously attempted operation can be retried, in most cases the error is a fatal one (e.g., a binary was installed incorrectly or is missing). 1. If feasible, retry the operation that resulted in the error message. 2. If repeated attempts to perform the operation fail, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 9. Order Manager GUI User Messages.

Message Text	Impact	Cause and Corrective Action
An error message was not available. Please contact the system administrator for further assistance.	Various.	The message appears on the **Error** page when there is a problem with the Perl code or a stored procedure that did not give a specific reason as to why it failed. There is no operator-level corrective action to take in this case. Call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
An undefined error occurred executing the stored procedure	Various.	The problem is an internal error due to a bad database connection, incorrect stored procedure arguments, or a system fault. It is not due to operator error. The first possible solution is to resubmit the changes for the Intervention (essentially retrying the database connection). 1. Resubmit the changes for the intervention. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).] 2. If resubmitting the changes for the intervention is not successful, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
Error executing SweeperStart: <message>	Server Statistics or Queue Status page does not display correct information, or the affected pages do not display at all.	The message appears either on the **Error** page, **OM Queue Status** page, or **OM Server Statistics** page. **SweeperStart** is a shell script that runs the Sweeper binary, which tells the system whether or not certain servers are up and running. If either the shell script or the Sweeper binary is corrupt, missing, not executable, or has the wrong permissions, the error message is displayed. The **OM GUI** must be reinstalled or the binary or shell script must be manually copied to its proper location and given the proper permissions. Call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
Error: <VALUE> is an invalid number for this parameter." [Displayed in a dialogue box]	A parameter value does not get modified.	The error message can appear on the **Media Configuration** page or **Server Configuration** page. It is probably the result of trying to change a parameter value (which requires a number) to a value that either contains non-numeric characters, is outside the valid range for the parameter, or contains a decimal point when the value should be an integer. 1. Click on the **OK** button to dismiss the dialogue box. 2. Enter a valid value for the parameter. [For detailed instructions refer to the procedure for **Checking/Modifying OM Configuration Parameters** (previous section of this lesson).]

Table 9. Order Manager GUI User Messages.

Message Text	Impact	Cause and Corrective Action
Error: A worker must be assigned to this intervention before any actions may be taken. [Displayed in a dialogue box]	Actions cannot be taken on an intervention.	The message appears on the **Open Intervention Detail** page if the operator attempted to take an action on an open intervention before assigning a name in the **Worked by:** text box. (No worker name is required to view the intervention without taking any action.) A real name or a user ID must be entered in the field. Numbers and spaces are allowed. 1. Click on the **OK** button to dismiss the dialogue box. 2. Enter a valid name in the **Worked by:** text entry box on the **Open Intervention Detail** page. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]
ERROR: An [sic] database error was encountered: deadlock could not be resolved after <NUMBER> tries	An action requiring a call to a stored procedure or access to a database table is not taken.	The message appears on the **Error** page after a stored procedure could not be executed due to a database (or table) deadlock. The command is retried a number of times (depending on the DEADLOCK_RETRIES parameter in the configuration file) before the message is displayed. Retrying later may be successful. However, it may be that the OMS or MSS database is experiencing a heavy load or is corrupt in some way. If the problem cannot be quickly resolved, there might be a performance issue or the stored procedure may contain an error. 1. At a later time retry the operation that resulted in the error message. 2. If the operation fails again, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
ERROR: Can't open session file: <message>	Requested page does not display.	This error message can occur on any page. The session file is like a cookie – it can expire or become corrupt. For this reason, bookmarks should not be saved for specific **OM GUI** pages. If a session is more than five (5) days old, and the GUI has not been restarted in that amount of time, the error is certain to occur. 1. Reload the GUI by starting it from a bookmark or manually typing the base URL (without a session ID). [For detailed instructions refer to the procedure for **Launching the Order Manager GUI** (previous section of this lesson).]

Table 9. Order Manager GUI User Messages.

Message Text	Impact	Cause and Corrective Action
ERROR: Invalid name entered into Worked by field. You must enter a name into this field before proceeding. [Displayed in a dialogue box]	Actions cannot be taken on an intervention.	The message appears on the **Open Intervention Detail** page when the operator attempts to enter non-alphanumeric characters, nothing, or just white space into the **Worked by:** field. A real name or a user ID must be entered in the field. Numbers and spaces are allowed. 1. Click on the **OK** button to dismiss the dialogue box. 2. Enter a valid name in the **Worked by:** text entry box on the **Open Intervention Detail** page. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]
ERROR: It appears that all granules have been failed. You can not submit or partition a request with all FAILED granules. This request should be failed. To do this, Select "Fail Request" from the Request Disposition section and try again. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page. If all the granules in a request have been failed, the request can no longer be submitted or partitioned. The only corrective action is to fail the entire request or place it on hold. 1. Click on the **OK** button to dismiss the dialogue box. 2. Either fail the entire request or place it on hold. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]
Error: Not that many rows or invalid row number. [Displayed in a dialogue box]	The Operator is unable to navigate through rows (on various pages).	An invalid row number was entered in the navigation box at the top of a listing. The error can appear on any page with the navigation feature. 1. Click on the **OK** button to dismiss the dialogue box. 2. In the navigation box type a row number within the range of rows displayed on the GUI screen. 3. Click on the **ok** button.

Table 9. Order Manager GUI User Messages.

Message Text	Impact	Cause and Corrective Action
ERROR: Partition days must be an integer. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page if the operator was partitioning the request and entered a fractional number (or some garbage characters) in the **days** field. The number of days should be entered as a whole number only. 1. Click on the **OK** button to dismiss the dialogue box. 2. Verify that the **Partition (current size is *x* MB)** button has been selected (click on the button if necessary). 3. Type the appropriate value (as a whole number) in the **days** text box to specify the time period. 4. Complete the intervention. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]
ERROR: Partition hours must be an integer. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page if the operator was partitioning the request and entered a fractional number (or some garbage characters) in the **hours** field. The number of hours should be entered as a whole number only. 1. Click on the **OK** button to dismiss the dialogue box. 2. Verify that the **Partition (current size is *x* MB)** box has been selected (click on the box if necessary). 3. Type the appropriate value (as a whole number) in the **hours** text box to specify the time period. 4. Complete the intervention. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]

Table 9. Order Manager GUI User Messages.

Message Text	Impact	Cause and Corrective Action
ERROR: You can not change the media type and update the FTP Push parameters. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page, probably due to inadvertently checking the **Update FtpPush Parameters** box. Either the button should be un-checked or the distribution medium should be changed the proper way. 1. Click on the **OK** button to dismiss the dialogue box. 2. If the **Update FtpPush Parameters** box was inadvertently checked, click on the box to uncheck it. 3. If the **Update FtpPush Parameters** box was checked on purpose, verify that the **Change Media to:** box is not checked. (Click on it if necessary). 4. If the **Update FtpPush Parameters** box was checked on purpose, verify that the **New Medium** option button is displaying "**- -**". [If necessary, click and **hold** the **New Medium** option button to display a menu of media, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.] 5. Complete the intervention. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]
ERROR: You can not change the media type from <MEDIA> to <MEDIA> - the media types are the same. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page if the operator tried to change the media type to whatever it already is. If the media type should not be changed, the **New Medium** option button should be set to "**- -**". 1. Click on the **OK** button to dismiss the dialogue box. 2. Verify that the **Change Media to:** box is not checked. (Click on it if necessary). 3. Verify that the **New Medium** option button is displaying "**- -**". [If necessary, click and **hold** the **New Medium** option button to display a menu of media, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.] 4. Complete the intervention. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]

Table 9. Order Manager GUI User Messages.

Message Text	Impact	Cause and Corrective Action
ERROR: You can not modify request-level attributes and place the intervention on hold. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page if the operator attempted to modify request-level attributes (e.g., change the media type, update ftp push parameters, or disable limit checking) and then tried to place the intervention on hold. If the selected request-level attribute(s) should be implemented, the request should either be submitted or partitioned. If the selected request-level attribute(s) should not be implemented, the intervention may be placed on hold. 1. Click on the **OK** button to dismiss the dialogue box. 2. If the selected request-level attribute(s) should be implemented, either submit or partition the request. 3. If the selected request-level attribute(s) should not be implemented, click on the **Reset** button, then place the intervention on hold. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]
ERROR: You can not modify request-level attributes if you are failing the request. [Displayed in a dialogue box]	Intervention cannot be resolved.	The message appears on the **Open Intervention Detail** page if the operator attempted to modify request-level attributes (e.g., change the media type, update ftp push parameters, or disable limit checking), then tried to fail the entire request. If the request should be failed, the request-level attribute changes should be deselected, then the request can be failed. 1. Click on the **OK** button to dismiss the dialogue box. 2. If the selected request-level attribute(s) should be implemented, either submit or partition the request. 3. If the request should be failed, first deselect the request-level attribute(s), then fail the request. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]

Table 9. Order Manager GUI User Messages.

Message Text	Impact	Cause and Corrective Action
ERROR: You must assign a worker to this intervention before proceeding. [Displayed in a dialogue box]	Actions cannot be taken on an intervention.	The message appears on the **Open Intervention Detail** page if the operator attempted to take an action on an open intervention before assigning a name in the **Worked by:** text box. (No worker name is required to view the intervention without taking any action.) A real name or a user ID must be entered in the field. Numbers and spaces are allowed. 1. Click on the **OK** button to dismiss the dialogue box. 2. Enter a valid name in the **Worked by:** text entry box on the **Open Intervention Detail** page. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]
ERROR: You must enter a name into the Worked by field before proceeding. [Displayed in a dialogue box]	Actions cannot be taken on an intervention.	The message appears on the **Open Intervention Detail** page if the operator attempted to take an action on an open intervention before assigning a name in the **Worked by:** text box. (No worker name is required to view the intervention without taking any action.) A real name or a user ID must be entered in the field. Numbers and spaces are allowed. 1. Click on the **OK** button to dismiss the dialogue box. 2. Enter a valid name in the **Worked by:** text entry box on the **Open Intervention Detail** page. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]
INPUT ERROR: There was a problem with the input parameter for a User Profile. Please contact your system's administrator to fix this problem.	Information about a User profile is not displayed.	The error message is rare; it appears when the UserId parameter (usually embedded in the URL) is empty. It indicates that the page was probably accessed directly (i.e., the operator did not arrive at the page via a link). If the operator did arrive at the page through a link, there could be a serious database error or a problem with the Perl code, since the User ID associated with the order was not passed to the page. 1. Click on the Netscape browser **Back** button to redisplay the previous page. 2. Attempt to access the desired page by clicking on the appropriate link. 3. If the same error message is displayed again, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 9. Order Manager GUI User Messages.

Message Text	Impact	Cause and Corrective Action
INPUT ERROR: There was a problem with the input parameter for ECS Order. Please contact your system's administrator to fix this problem.	Information about an ECS Order does not get displayed.	The error message is rare; it appears when the ecs_order parameter (usually embedded in the URL) is empty. It indicates that the page was accessed directly (i.e., the operator did not arrive at the page via a link). If the operator did arrive at that page through a link, there could be a serious database error or a problem with the Perl code, since the ECS Order ID was not passed to the page. 1. Click on the Netscape browser **Back** button to redisplay the previous page. 2. Attempt to access the desired page by clicking on the appropriate link. 3. If the same error message is displayed again, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
Please hit your browser's Back button and enter a valid name into the "worked by" field and click on "Override Current Worker	Intervention cannot be resolved.	No name has been entered in the **Worked by:** field on the **Open Intervention Detail** page . Before any action on the intervention will be accepted, a name must be entered. 1. Click on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. Enter a valid name in the **Worked by:** text entry box on the **Open Intervention Detail** page. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]
Please hit your browser's Back button and select a disposition.	Intervention cannot be resolved.	No disposition was selected on the **Open Intervention Detail** page. Go to the previous page and select a disposition. 1. Click on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. Select an appropriate disposition on the **Open Intervention Detail** page. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]

Table 9. Order Manager GUI User Messages.

Message Text	Impact	Cause and Corrective Action
Sweeper error: <message>	Server Statistics or Queue Status page does not display correct information, or the affected pages do not display at all.	The message appears either on the **Error** page, **Queue Status** page, or **OM Server Statistics** page. **SweeperStart** is a shell script that runs the Sweeper binary, which tells the system whether or not certain servers are up and running. If either the shell script or the Sweeper binary is corrupt, missing, not executable, or has the wrong permissions, the error message is displayed. The **OM GUI** must be reinstalled or the binary or shell script must be manually copied to its proper location and given the proper permissions. Call the help desk and submit a trouble ticket in accordance with site Problem Management policy.
The e-mail text box is empty – it should contain a message to the user if you want e-mail sent out. [Displayed in a dialogue box]	Intervention resolution cannot be submitted.	The message appears if there is an e-mail text box on the **Close Confirmation** page and the operator did not enter any message text. Some text should be entered and the form should be resubmitted. 1. Click on the **OK** button to dismiss the dialogue box. 2. Enter appropriate text in the e-mail text box or click on the **Don't send e-mail** box (as applicable). 3. Complete the intervention. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]
You can not change the FTP Push parameters and change the media type at the same time. Please hit your browser's Back button and correct this	Intervention cannot be resolved.	The message appears if the media type for the request is ftp push. The operator probably elected to change the media type and checked the **Update FtpPush Parameters** box at the same time. The operator should go back to the previous page and uncheck the box. 1. Click on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. Click on the **Update FtpPush Parameters** box to uncheck it. 3. Complete the intervention. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]

Table 9. Order Manager GUI User Messages.

Message Text	Impact	Cause and Corrective Action
You can not update the FTP Push parameters for this request because the media type is <old media>. Please hit your browser's Back button and correct this.	Intervention cannot be resolved.	This message appears if the operator inadvertently checked the **Update FtpPush Parameters** box, even though the media type for the request is not ftp push. The operator should go back and uncheck this box. The error message should be quite rare, because normally the **Update FtpPush Parameters** box does not appear if the media type is not ftp push. 1. Click on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. Click on the **Update FtpPush Parameters** box to uncheck it. 3. Complete the intervention. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]
You have entered partitioning days/hours, but have not indicated that you want to spread the request over this time period! (you probably forgot to check the AND box). Hit your browser's Back button to correct this.	Intervention cannot be resolved.	The operator probably intended to partition the request but forgot to check the "and" box. The redundancy is intended to ensure that the correct action is taken. 1. Click on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. Click on the box in front of **and spread request over**. 3. Complete the intervention. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]

Table 9. Order Manager GUI User Messages.

Message Text	Impact	Cause and Corrective Action
You have indicated you want to change the media, but did not select the media type. Hit your browser's Back button to correct this	Intervention cannot be resolved.	The operator checked the **Change Media to:** but did not select a different medium from the **New Medium** option button. The operator should go back to the previous page and either select a new medium or uncheck the **Change Media to:** box and ensure that the **New Medium** option button is set to "**- -**". 1. Click on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. If a new distribution medium is being selected, verify that the **Change Media to:** box is checked. (Click on it if necessary). 3. If a new distribution medium is being selected, verify that the **New Medium** option button is displaying the appropriate medium. [If necessary, click and **hold** the **New Medium** option button to display a menu of media, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.] 4. If the old distribution medium is being retained, verify that the **Change Media to:** box is not checked. (Click on it if necessary). 5. If the old distribution medium is being retained, verify that the **New Medium** option button is displaying "**– –**". [If necessary, click and **hold** the **New Medium** option button to display a menu of media, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.] 6. Complete the intervention. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]

Table 9. Order Manager GUI User Messages.

Message Text	Impact	Cause and Corrective Action
You have selected a new media type, but not did indicate you actually wanted the media changed. Hit your browser's Back button to correct this.	Intervention cannot be resolved.	The operator changed the distribution medium for the request on the **Open Intervention Detail** page but did not check the **Change Media to:** box. The redundancy is intended to ensure that the operator does indeed want to change the distribution medium. The operator should go back to the previous page and either check the **Change Media to:** box or ensure that the **New Medium** option button is set to "**- -**". (indicating no change). 1. Click on the Netscape browser **Back** button to redisplay the **Open Intervention Detail** page. 2. If a new distribution medium is being selected, verify that the **Change Media to:** box is checked. (Click on it if necessary). 3. If a new distribution medium is being selected, verify that the **New Medium** option button is displaying the appropriate medium. [If necessary, click and **hold** the **New Medium** option button to display a menu of media, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.] 4. If the old distribution medium is to be retained, verify that the **Change Media to:** box is not checked. (Click on it if necessary). 5. If the old distribution medium is to be retained, verify that the **New Medium** option button is displaying "**– –**". [If necessary, click and **hold** the **New Medium** option button to display a menu of media, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.] 6. Complete the intervention. [For detailed instructions refer to the procedure for **Responding to an Open Intervention** (previous section of this lesson).]

Table 10. Hosts, Servers, Clients and Other Software Relevant to Data Distribution and the Order Manager GUI

HOST	SERVER/CLIENT/OTHER SOFTWARE
Sun internal server (e.g., x0acs06)	Distribution Server (EcDsDistribution Server) 8mm Server (EcDsSt8MMServer) Storage Management Request Manager (EcDsStRequestManagerServer) Staging Disk Server (EcDsStStagingDiskServer) Granule Deletion Process (EcDsGranuleDelete) Science Data Server (EcDsScienceDataServer) Science Data Server Client (EcDsScienceDataServerClient) Subscription Server (EcSbSubServer)
Operations Workstation (e.g., x0acs02)	Data Distribution Operator GUI (EcDsDdistGui) Storage Management Control GUI (EcDsStmgtGui) Science Data Server GUI (EcDsSdSrvGui)
Access/Process Coordinators (APC) Server (e.g., x0acg01)	Archive Server (EcDsStArchiveServer) Cache Manager Servers (EcDsStCacheManagerServer) (including Pull Area Manager) FTP Server (EcDsStFtpServer) Staging Disk Server (EcDsStStagingDiskServer)
FSMS Server (e.g., x0drg01)	HDF EOS Server (EcDsHdfEosServer) Archive Server (EcDsStArchiveServer) Cache Manager Server (EcDsStCacheManagerServer) FTP Server (EcDsStFtpServer) Staging Disk Server (EcDsStStagingDiskServer)
Ingest Server (e.g., x0icg01)	Name Server (EcCsIdNameServer) Registry Server (EcCsRegistry)
Data Pool Server (e.g., x0dps01)	Order Manager GUI (EcOmGuiHomePage.pl)

DDIST Troubleshooting Procedures

The following procedures for correcting DDIST or STMGT problems are provided in this section:

- Checking Connections to Hosts/Servers
- Recovering from a Data Distribution Failure
- Responding to Requests that Exceed the Distribution Request Threshold
- Checking the Request Manager Server Debug Log

- Checking the Science Data Server Log Files
- Checking the Archive Server Log Files
- Checking the Staging Disk
- Checking the Staging Disk ALOG File
- Checking the Space Available in the Staging Area
- Checking Log Files
- Checking Database Connections

Checking Connections to Hosts/Servers

The procedure for checking connections to hosts/servers is a part of the general troubleshooting process for data distribution failures. The procedure starts with the assumption that the applicable hosts are operational and the Distribution Technician has logged in to a workstation or X-term that has access to the applicable network in the ECS system.

Checking Connections to Hosts/Servers

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1 Access a terminal window logged in to the Distribution Server host.

- Examples of Distribution Server host (Sun internal server host) names include **e0acs06**, **g0acs06**, **l0acs06**, and **n0acs06**.
- Most other ECS hosts are acceptable for checking connections.
- Log-in is described in the **Log in to ECS Hosts** procedure (previous section of this lesson).

2 At the command line prompt type **cd /usr/ecs/*MODE*/CUSTOM/utilities** then press **Return/Enter**.

- Change directory to the directory containing the utility scripts.

3 At the command line prompt type **EcCsIdPingServers *MODE*** then press **Return/Enter**.

- The following type of response is displayed (only a few representative lines are shown):

  /usr/ecs/TS2/CUSTOM/bin/CSS/Sweeper -nsh x0icg01 -nsp 18202
  FoSwSweeper application started...
  We made a connection with EntryId =x0acs06:38709:23057 --- EcSrTransportSubServer

We made a connection with EntryId =x0acs06:38712:23057 --- EcSrTransportSubEventServer
We made a connection with EntryId =x0acs06:33379:17033 --- DsShQuitIDL
[…]

4 Observe the results displayed on the screen to determine whether connections can be made with the necessary local hosts and servers.

- The necessary local hosts and servers are listed in Table 10, Hosts, Servers, Clients and Other Software Relevant to Data Distribution and the Order Manager GUI.

5 If pinging the servers (Step 3) indicated a problem with any connection, ping the servers again (at the command line prompt type **EcCsIdPingServers** ***MODE*** then press **Return/Enter**).

6 Observe the results displayed on the screen to determine whether connections can be made with the necessary hosts and servers.

7 If it is not possible to connect to any needed local host(s)/server(s), notify the Operations Controller/System Administrator to check the hosts/servers and bring them back up if necessary.

8 Return to the procedure that recommended checking connections to hosts.

Recovering from a Data Distribution Failure

The automated data distribution processes (push and pull) normally do not require intervention by the Distribution Technician. However, when a data distribution fault (error) occurs, there may be a requirement for action to recover from the error. For example, recovery actions may be made necessary by the failure of storage management to acquire granules from the archive so they can be distributed. When a fault (error) occurs, the request status on the **Distrib'n Requests** tab of the **Data Distribution Operator GUI** is likely to change to "Suspended with Errors."

The Distribution Technician may use the **Data Distribution Operator GUI Distrib'n Requests** tab (refer to the section on Monitoring/Controlling Data Distribution Requests) and/or log files on various host machines to review the failure event.

When recovering from a data distribution failure, use the procedure that follows. The procedure starts with the assumption that all applicable servers and the **Data Distribution Operator GUI** are currently running and the **Distrib'n Requests** screen (Figure 10) is being displayed.

Recovering from a Data Distribution Failure

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1 Observe the information displayed on the **Distrib'n Requests** tab of the **Data Distribution Operator GUI** to identify distribution requests with a status of "Suspended with Errors."

2 If a suspended request has the error mnemonic **DsEDdXLargeRequest** associated with it, perform the procedure for **Responding to Requests that Exceed the Distribution Request Threshold** (subsequent section of this lesson).

3 If a suspended request is an FtpPush request to a remote host (e.g., ftp.averstar.com) and the connection to the remote host has not been checked, check the connection to the remote host.

- For detailed instructions refer to the procedure for **Checking the Connection to the Remote FTP Host** (subsequent section of this lesson).

4 Perform the procedure for **Handling an Acquire Failure** (subsequent section of this lesson).

5 If additional information is needed, open and read the appropriate log file in the **/usr/ecs/*MODE*/CUSTOM/logs** directory on the appropriate host machine(s).

- Applicable host machines are listed in Table 10. Hosts, Servers, Clients and Other Software Relevant to Data Distribution and the Order Manager GUI.
- For detailed instructions refer to the procedure for **Checking Log Files** (subsequent section of this lesson).

6 If the problem could not be identified through any of the preceding steps, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

7 When the problem has been corrected, review the information displayed on the **Distrib'n Requests** tab of the **Data Distribution Operator GUI** to determine whether the distribution request resumed processing.

8 If the distribution request does not resume processing after the problem has been corrected, return to Step 4.

Responding to Requests that Exceed the Distribution Request Threshold

When a distribution request exceeds the corresponding distribution request threshold (e.g., FtpPushThreshold or FtpPullThreshold), the request is suspended in DDIST with the following error mnemonic:

- DsEDdXLargeRequest

The procedure for responding to requests that exceed the distribution request threshold starts with the assumption that all applicable servers and the **Data Distribution Operator GUI** are currently running and the **Distrib'n Requests** screen (Figure 10) is being displayed.

Responding to Requests that Exceed the Distribution Request Threshold

1 Record (e.g., write down) the Request ID (as displayed on the **Distrib'n Requests** tab of the **Data Distribution Operator GUI**) for the request that exceeds the distribution request threshold.

2 Cancel the request using the procedure for **Canceling Data Distribution Requests** (previous section of this lesson).

3 Contact User Services to determine whether or not the user's request should be processed.

- User Services may contact the requester to verify whether or not the requester intended to order so much data.

4 If User Services responds that the request should be completed, determine whether User Services or Distribution will partition and resubmit the request.

5 If User Services responds that the request should be completed and that Distribution should partition the request, partition and resubmit the request using the procedure for **Monitoring/Controlling Distribution Request Information on the OM GUI** (previous section of this lesson).

Checking the Connection to the Remote FTP Host

The problem is that a distribution request for FtpPush of data to a remote host (e.g., ftp.averstar.com) shows a status of "Suspended with Errors" and it is suspected that it may not be possible to connect to the remote host.

The procedure starts with the following assumptions:

- The applicable local hosts are operational.
- The Distribution Technician has logged in to a workstation or X-term that has access to the APC Server host (e.g., **e0acg11**, **g0acg01**, **l0acg02,** or **n0acg01**) and the applicable network in the ECS system.
- The necessary script to support pinging (e.g., "st") is available on ECS and the Distribution Technician knows its location.
  - For example, at one DAAC script "st" might be available in the home directory for the "train1" user.
    - The script was written to be run in OPS mode.

Checking the Connection to the Remote FTP Host

1 Access a terminal window logged in to the APC Server host.

- Examples of APC Server host names include **e0acg11**, **g0acg01**, **l0acg02**, and **n0acg01**.
- Log-in is described in the **Logging in to ECS Hosts** procedure (previous section of this lesson).

2 At the command line prompt type **cd *path*** then press **Return/Enter**.

- ***path*** represents the directory path (e.g., /home/train1) to the directory containing the necessary script.
- As stated in the assumptions preceding this procedure, the necessary script (e.g., "st") to support pinging the remote host through the firewall must be available and the Distribution Technician must know its location.

3 At the command line prompt type **./st -ping *remotehost*** then press **Return/Enter** to check the accessibility of the remote host.

- ***remotehost*** represents the remote host to be checked.
- For example:

  ./st -ping ftp.averstar.com

- The following type of response indicates successful pinging of the remote host:

  PING 192.5.114.4: (192.5.114.4): 56 data bytes
  64 bytes from 192.5.114.4: icmp_seq=0 ttl=247 time=26 ms
  64 bytes from 192.5.114.4: icmp_seq=1 ttl=247 time=23 ms
  64 bytes from 192.5.114.4: icmp_seq=2 ttl=247 time=23 ms
  64 bytes from 192.5.114.4: icmp_seq=3 ttl=247 time=28 ms
  64 bytes from 192.5.114.4: icmp_seq=4 ttl=247 time=25 ms

- If there is no such response within a few seconds (no more than 20 seconds), it is likely that pinging has failed and the remote host is not currently accessible.
- The same general syntax can be used to perform a trace; i.e., type **./st -trace *remotehost*** then press **Return/Enter**.

4 Type **Ctrl-c** to stop sending packets to the remote host.

- The following type of response after typing **Ctrl-c** is another type of indication that pinging failed:

  ----ftp.averstar.com PING Statistics----
  43 packets transmitted, 0 packets received, 100.0% packet loss

5 If pinging the remote host failed, go to Step 12.

6 If pinging the remote host was successful, at the command line prompt type **ftp** ***firewall-host*** then press **Return/Enter**.

- ***firewall-host*** represents the firewall host.
  - The System Administrator can identify the firewall host if necessary.
- The following type of response should be displayed:

Connected to x0host0.daac.ecs.nasa.gov.
220-*
220-***
220-*** THIS U.S. GOVERNMENT COMPUTING SYSTEM IS FOR AUTHORIZED USERS
220-*** ONLY. ANYONE USING IT IS SUBJECT TO MONITORING AND RECORDING
220-*** OF ALL KEYSTROKES WITHOUT FURTHER NOTICE. THIS RECORD MAY BE
220-*** PROVIDED AS EVIDENCE TO LAW ENFORCEMENT OFFICIALS.
220-***
220-***
220 [002-0018] x0host0.daac.ecs.nasa.gov FTP proxy 4.0.1 ready.
Name (x0host0:user1):**

7 At the **Name (…):** prompt press the **Enter** key.

- The following type of response should be displayed:

  230- user user1 logged in.
  230 [002-0024] Specify Remote Destination with: quote site hostname
  Remote system type is UNIX.
  ftp>

8 At the **ftp>** prompt type **quote site** ***remotehost*** then press **Return/Enter**.

- ***remotehost*** represents the remote host to be checked.

- For example:

  quote site ftp.averstar.com

- The following type of response should be displayed:

```
220-(    [002-0059] Firewall connected to ftp.averstar.com (192.5.114.4).)
220-(220 ftp FTP server (Version wu-2.4(3) Thu Jan 9 12:48:46 EST 1997)
ready.)
220 [002-0060] login with: user name
ftp>
```

9 At the **ftp>** prompt type **user anonymous** then press **Return/Enter**.

- Log in to the remote host for anonymous ftp.
- The following type of response should be displayed:

```
331 Guest login ok, send your complete e-mail address as password.
Password:
```

10 At the **Password:** prompt type ***password*** then press **Return/Enter**.

- Use a valid e-mail address as the password.
- The following type of response should be displayed:

```
230 Guest login ok, access restrictions apply.
ftp>
```

11 At the **ftp>** prompt type **ls** then press **Return/Enter**.

- The following type of response should be displayed:

```
200 PORT command successful.
150 Opening ASCII mode data connection for /bin/ls.
total 16
dr-xr-xr-x     6 root    other      512 Feb 11  1997 .
dr-xr-xr-x     6 root    other      512 Feb 11  1997 ..
-r--------     1 root    other        0 Feb 10  1997 .forward
-r--------     1 root    other        0 Feb 10  1997 .rhosts
lrwxrwxrwx     1 root    other        7 Feb  7  1997 bin -> usr/bin
dr-xr-xr-x     2 root    other      512 Feb  7  1997 dev
d--x--x--x     2 root    other      512 Feb  7  1997 etc
dr-xr-sr-x    57 root    ftp       1536 Jan  8  2002 pub
d--x--x--x     5 root    other      512 Feb  7  1997 usr
226 Transfer complete.
ftp>
```

- The purpose of this step is to verify accessibility to directories on the remote host.

12 At the **ftp>** prompt type **quit** then press **Return/Enter**.

- The connection to the ftp host is terminated.

13 If a connection could not be made with the remote ftp server or if pinging was successful but the ftp could not be negotiated, notify the remote system's point of contact of the problem.

14 If the remote system's point of contact has been notified of a problem pinging or making an ftp connection, wait until the communication problem has been resolved.

15 When the communication problem has been resolved (or after waiting a reasonable period of time), return to Step 1.

- If necessary, the supervisor can provide guidance concerning what is a "reasonable" period of time to wait.

16 After a successful ftp test of the connection with the remote host, resume the affected distribution request(s).

- For detailed instructions refer to the procedure for **Suspending/Resuming Data Distribution Requests** (previous section of this lesson).

17 If the same distribution request(s) show(s) a status of "Suspended with Errors" again, recover from the data distribution failure using the procedure for **Recovering from a Data Distribution Failure** (previous section of this lesson).

Handling an Acquire Failure

Diagnosing an acquire failure involves examining the following system log files and directories involved in the process:

- Request Manager server debug log file (EcDsStRequestManagerServerDebug.log), if available.
- Science Data Server ALOG file (EcDsScienceDataServer.ALOG) and/or Science Data Server debug log file (EcDsScienceDataServerDebug.log).
- Archive Server ALOG file (EcDsStArchiveServer*HWCIn*.ALOG) and/or Archive Server debug log file (EcDsArchiveServerDebug.log).
  - *HWCIn* represents a particular hardware configuration item; for example, EcDsStArchiveServerACM1.ALOG would be located on the APC Server x0acg01.

- Staging Area.
  - Presence of the relevant file(s).
  - Staging disk log files (EcDsStStagingDiskServer*HWCIn*.ALOG, EcDsStagingDiskServerDebug.log) or cache manager log files (EcDsStCacheManagerServer*HWCIn*.ALOG, EcDsCacheManagerServerDebug.log).
  - Space available in the staging area.

Checking the Request Manager Server Debug Log

The Request Manager server processes requests from external clients (processes outside of Storage Management). Requests between Storage Management servers are passed directly from one server to another.

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

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

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

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

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

Trivial requests typically involve the following types of activities:

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

- Service thread hands the results to the inbound RPC thread.
  - A "Notifying the client" message is recorded in the Request Manager server debug log.
- Inbound RPC thread silently returns to the client with the results.

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

- Some of the same types of entries are made in the Request Manager server debug log for non-trivial requests as for trivial requests.
  - For example:
    - "Waking up service thread" (Request Manager is preparing to process the request).
    - "Done servicing" (request processing has been completed).
    - "Unable to service" (the request has failed).
- Although some trivial requests include "token" statements, tokens are characteristic of non-trivial requests.
  - A token includes request information that varies with the type of operation to be performed.
  - For example, a token for an ftp request might include the following types of data:
    - Stored procedure (e.g., DsStFRInsert) [other types of stored procedures include DsStSDRInsert and DsStGRMapLogicalArchiveId].
    - RPC ID (e.g., RPCId=1821_535_1109-1124464729_171062001_x0acs06.xdc.ecs.nasa.gov:SBSVSDSV1DSDD1DSDD4:).
    - Username.
    - Encrypted password.
    - Host.
    - Source path.
    - Destination path.
    - External request ID.
    - Server name (e.g., EcDsStFtpServerNONE) [other types of operations might involve the EcDsStStagingDiskServerDRP1 for example].

- Type of operation (e.g., FtpPush) [other types of operations include ArRetrieve, SDAllocateDisk, SDLinkFile].
- Submitter (e.g., DSDD) [other types of operations might involve SDSV].
- Priority.

– The server to which the request was sent is identified by name (ServerName).

– Transaction ID is embedded in the RPC ID (the portion before the first colon in the RPC ID).

A "transaction" may involve multiple operations on a host or several hosts. Consequently, multiple threads may be used on each relevant host.

The procedure for checking the Request Manager server debug log files starts with the assumption that the operator has logged in to the ECS system.

Checking the Request Manager Server Debug Log

---

1 Access a terminal window logged in to the Distribution Server host.

- Examples of Distribution Server host (Sun internal server host) names include **e0acs06**, **g0acs06**, **l0acs06,** and **n0acs06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/logs** then press **Return/Enter**.

3 Type **pg *filename*** then press **Return/Enter**.

- ***filename*** refers to the appropriate Request Manager debug log.
- For example:

  pg EcDsStRequestManagerServerDebug.log
- The content of the first page of the specified file is displayed.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view**, **more**) can be used to review the log file.

4 At the **:** prompt type **/*date time*** then press **Return/Enter**.

- ***date time*** refers to the approximate date and time of the problem.
  – For example:

  06/18/01 12:17:31

- The file is searched for the specified text.
  - If the specified text is in the log file, the following type of response is displayed.

    ...skipping forward
    06/18/01 12:17:31: Thread ID : 105 : DsShTSStorage: creating the MutexVec for this thread
    […]

  - If the specified text is not in the log file, the following type of response is displayed.

    Pattern not found:

  - If the specified text is not in the log file, verify the following aspects of Steps 3 and 4:
    - Date and time were entered correctly (Step 4).
    - Proper file was opened (Step 3).

5 At the **:** prompt type **/Unable to service** then press **Return/Enter**.

- **pg** searches the file for the specified text.
  - If the specified text is in the log file, the following type of response is displayed.

    ...skipping forward
    2:IngestRQ409GR1 Unable to service | Thread 52
    […]

  - If the specified text is not in the log file, the following type of response is displayed.

    Pattern not found:

- If the specified text is in the file, go to Step 7.
- If the specified text is not in the file, go to Step 6.

6 Examine the contents of the log file to determine which thread is associated with the problem being investigated.

- The following **pg** commands (at the **:** prompt) are useful:
  - ***n*** then **Return/Enter** (go to Page *n*).
  - **Return/Enter** or **+1** then **Return/Enter** (go down to the next page).
  - **-1** then **Return/Enter** (go back to the preceding page).
  - **+*n*** then **Return/Enter** (go down *n* number of pages).
  - **-*n*** then **Return/Enter** (go back *n* number of pages).

- **+*n*l** then **Return/Enter** (go down *n* number of lines).
- **-*n*l** then **Return/Enter** (go back *n* number of lines).
- **$** then **Return/Enter** [go to the last page (end of file)].
- **q** then **Return/Enter** (exit from **pg**).

7 At the **:** prompt type the appropriate text (depending on the direction of the desired search) then press **Return/Enter**:

Type **^Waking up service thread *n*^** then press **Return/Enter** to search back toward the beginning of the file.

Type **/Waking up service thread *n*** then press **Return/Enter** to search toward the end of the file.

- For example:

  ^Waking up service thread 52^

  - The file is searched back toward the beginning of the file for the specified text.

- If the specified text is in the log file, the following type of response is displayed.

  ...skipping backward
  06/18/01 12:17:31: Thread ID : 102 : Waking up service thread 52 | Thread 102 […]

- If the specified text is not in the log file, the following type of response is displayed.

  Pattern not found:

- The entries "Waking up service thread *n*" and "Unable to service | Thread *n*" bracket the thread servicing in which an error occurred.

NOTE: Thread IDs are reused frequently. There are likely to be many processes with the same thread ID in any particular log file. It is important to follow the correct instance of the thread.

NOTE: It is likely that the Request Manager would try again to process a failed request. Subsequent request processing may use the same thread ID or a different thread ID. However, it would involve the same transaction ID.

- A "No checkpointing required -- going straight to responded" entry associated with the thread ID indicates that the request is "trivial."

8 At the **:** prompt type **/SEARCHING** then press **Return/Enter**.

- The file is searched for the specified text.
  - If the specified text is in the log file, the following type of response is displayed.

    ...skipping forward
    06/18/01 12:17:31: Thread ID : 52 : SEARCHING FOR: 30148 (Found) | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : SEARCHING FOR: 30148 (Found) | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : DsStStoredProcedures::Execute - ERROR: Could not execute stored procedure | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : Error encountered in stored procedure | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : DBIF:Execute: Ultimate SQL: ROLLBACK TRANSACTION OUTER_7077776 | Thread 52
    06/18/01 12:17:32: Thread ID : 52 : 1_4501810_1217-1124633447_169062001_x0icg01.xdc.ecs.nasa.gov:IPOBIPOB1INRM1IGSA15:IngestRQ409GR1 Done servicing | Thread 52
    06/18/01 12:17:32: Thread ID : 52 : 1_4501810_1217-1124633447_169062001_x0icg01.xdc.ecs.nasa.gov:IPOBIPOB1INRM1IGSA15:IngestRQ409GR1 Unable to service | Thread 52
    06/18/01 12:17:32: Thread ID : 52 : 1_4501810_1217-1124633447_169062001_x0icg01.xdc.ecs.nasa.gov:IPOBIPOB1INRM1IGSA15:IngestRQ409GR1 Marked as unassigned | Thread 52
    06/18/01 12:17:32: Thread ID : 52 : 1_4501810_1217-1124633447_169062001_x0icg01.xdc.ecs.nasa.gov:IPOBIPOB1INRM1IGSA15:IngestRQ409GR1 Notifying the client | Thread 52
    06/18/01 12:17:32: Thread ID : 52 : Waiting for work | Thread 52
    06/18/01 12:17:32: Thread ID : 52 : Waking up manager thread | Thread 52
    […]

    - In the preceding example the expression **SEARCHING** is associated with Thread ID 52.
    - The context of the SEARCHING statement indicates the type and source of the problem; in this case there appears to be a problem executing a stored procedure.
  - If the specified text is not in the log file, the following type of response is displayed.

    Pattern not found:

9 If the expression **SEARCHING** is not associated with the specified thread in the lines displayed, repeat Step 8.

10 If necessary, at the **:** prompt type **-2l** [lower-case letter l] then press **Return/Enter**.

- **pg** simulates scrolling the screen backward two lines (or any other number of lines that is typed at the prompt).
  - The file is redisplayed to include the two lines that preceded the page previously displayed.
  - For example:

    ...skipping backward
    06/18/01 12:17:31: Thread ID : 52 : DBIF:Execute: Ultimate SQL: exec DsStSDAttachDisk "/usr/ecs/TS2/CUSTOM/pdps/x0spg01/data/DpPrRm/x0spg01_disk", "SDSV", 0 | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : SEARCHING FOR: 30148 (Found) | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : SEARCHING FOR: 30148 (Found) | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : DsStStoredProcedures::Execute - ERROR: Could not execute stored procedure | Thread 52
    06/18/01 12:17:31: Thread ID : 52 : Error encountered in stored procedure | Thread 52
    […]

  - The additional lines preceding "SEARCHING FOR" in the example indicate that the stored procedure in which the error was encountered is DsStSDAttachDisk.

11 At the **:** prompt type **q** then press **Return/Enter**.

- **pg** exits from the Request Manager server debug log file.

12 If the request is a trivial request, go to Step 22.

13 If the request is a non-trivial request, open a separate UNIX window.

- The results of related operations on the server involved in performing copy or ftp functions for the transaction are going to be checked in a separate UNIX window.

14 In the new UNIX window log in to the appropriate server host (e.g., e0drg11, g0drg01, l0drg01, or n0drg01) for the server involved in performing copy or ftp functions for the transaction.

- Logging in to a server host is described in Steps 1 through 5 of the procedure for **Launching the Data Distribution Operator and Storage Management Control GUIs** (previous section of this lesson).

15 At the shell prompt type **grep *'TransactionId' filename* | grep 'LogProgress'** then press **Return/Enter**.

- For example:

  grep 'af610628-' EcDsStArchiveServerDebug.log | grep *'LogProgress'*

- ***filename*** refers to the name of the log file for the process involved in performing copy or ftp functions for the transaction.
- ***TransactionId*** refers to the Transaction ID associated with the applicable request.
- In this example af610628-1dd1-11b2-a047-af3a589fd88e is the relevant Transaction ID.
  - However, usually it is not necessary to use the entire Transaction ID in the command; a representative sample (e.g., af610628- from the example) should be sufficient.
  - References to other Transaction IDs and entries that do not contain the string "LogProgress" are filtered out so references to the specified Transaction ID that contain the string "LogProgress" are the only log entries displayed.
    - The string "LogProgress" is a filter for references to stored procedure DsStGRLogProgress.
  - Progress is logged for copy and ftp input/output at each block.
  - The following type of response is displayed:

    06/26/01 12:46:00: Thread ID : 65674 : myTransactionList[1]: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732", 0, 1, "files" | Thread 65674

    06/26/01 12:46:00: Thread ID : 65674 : DBIF:Execute: Ultimate SQL: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732", 0, 1, "files" | Thread 65674

    06/26/01 12:46:43: Thread ID : 65674 : : 06/26/01 12:46:43: read ID : 2:46:43: myTransactionmyTransactionList[1]: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732", 60, 60, "MB"List[1]: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-

af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732", 60, 60, "MB"65714read 65674 : 74

06/26/01 12:46:43: Thread ID : 65674 : DBIF:Execute: Ultimate SQL: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732", 60, 60, "MB"0DBIF:Execute: Ultimate SQL: exec DsStGRLogProgress "af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732", 60, 60, "MB"06/26/01 12:46:43: 6/26/01 12:46:43: | Thread : 65714read 65674 : 74

- If no progress is indicated, go to Step 22.

16 Click in the UNIX window for the Distribution Server host (Sun internal server host).

17 In the UNIX window for the Distribution Server host (Sun internal server host) type **cd /usr/ecs/*MODE*/CUSTOM/logs** then press **Return/Enter**.

18 Type **grep *'TransactionId' filename* | grep 'Done servicing'** then press **Return/Enter**.

- ***filename*** refers to the appropriate Request Manager debug log.
- For example:

  grep 'af610628-' EcDsStRequestManagerServerDebug.log | grep 'Done servicing'

- If the operation has been completed, the following type of response is displayed:

  06/26/01 12:46:00: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52

  06/26/01 12:46:44: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD10DSDD1DSDD1:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52

  06/26/01 12:46:45: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD2DSDD1DSDD3:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52

  06/26/01 12:46:47: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD2DSDD1DSDD3:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52

  06/26/01 12:46:47: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD2DSDD1DSDD7:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52

06/26/01 12:46:50: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD2DSDD1DSDD7:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52

06/26/01 12:46:51: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD4:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52

06/26/01 12:46:56: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD4:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52

06/26/01 12:46:56: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD8:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52

06/26/01 12:46:59: Thread ID : 52 : af610628-1dd1-11b2-a047-af3a589fd88e:PDPSSDSV1DSDD1DSDD8:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Done servicing | Thread 52

- The statement "Done servicing" shows that the operation has been completed; however, it provides no indication as to whether the operation succeeded or failed.
- If "Done servicing" is followed by "Unable to service," (as described in Step 19) the operation failed.

- If the operation has not been completed, no file entries are displayed (the UNIX prompt is displayed).
  - It may just be slow to complete.
- If the operation has been completed, go to Step 19.
- If the operation has not been completed, go to Step 20.

19 Type **grep *'TransactionId' filename* | grep 'Unable to service'** then press **Return/Enter**.

- ***filename*** refers to the appropriate Request Manager debug log.
- For example:

  grep '2a7d4168-' EcDsStRequestManagerServerDebug.log | grep 'Unable to service'

- If the request has failed, the following type of response is displayed:

  06/26/01 12:56:22: Thread ID : 52 : 2a7d4168-1dd2-11b2-8c52-99d0f708dce5:PDPSSDSV1:MoPGE02#sy14182000TS2MOD02OBC Unable to service | Thread 52

06/26/01 12:56:22: Thread ID : 52 : 2a7d4168-1dd2-11b2-8c52-99d0f708dce5:PDPSSDSV4:MoPGE02#sy14182000TS2MOD02OBC Unable to service | Thread 52

  - If the operation has failed, return to Step 7.

- If the operation has not failed, no file entries are displayed (the UNIX prompt is displayed).

20 If the operation has not failed, at the shell prompt type **tail -f *filename* | grep '*TransactionId*'** then press **Return/Enter**.

- ***filename*** refers to the appropriate Request Manager debug log.
- ***TransactionId*** refers to the Transaction ID associated with the applicable request.
- For example:

  tail -f EcDsStRequestManagerServerDebug.log | grep 'af610628-'

- If new entries are being posted to the log, the operation has not finished yet.
  - If the same entries continue to be repeated over and over, there could be a problem with the server.
  - Notify the Operations Controller/System Administrator of suspected server problems.
- If it is necessary to exit from a tailed log, type **^c** [Ctrl c] then press **Return/Enter**.

21 If the operation has not finished yet, monitor the tailed log for a while.

- If the operation does not seem to finish (i.e., if entries continue to be made to the tailed log) after a reasonable period of time (e.g., 30 minutes), notify the Operations Controller/System Administrator of the problem.
- If it is necessary to exit from a tailed log, type **^c** [Ctrl c] then press **Return/Enter**.

22 If problems were detected in the Request Manager server debug log and/or the log file for the process involved in performing copy or ftp functions for the transaction, notify the Operations Controller/System Administrator of the problem.

- Return to the procedure for **Recovering from a Data Distribution Failure** after the problem has been corrected.

23 If no problems were detected in the Request Manager server debug log or the log file for the process involved in performing copy or ftp functions for the transaction, continue with the procedure for **Checking the Science Data Server Log Files**.

Checking the Science Data Server Log Files

The procedure for checking the Science Data Server log files starts with the assumption that the operator has logged in to the ECS system.

Checking the Science Data Server Log Files

---

1 Access a terminal window logged in to the SDSRV Server host.

- Examples of SDSRV Server host (Sun internal server host) names include **e0acs06, g0acs06, l0acs06**, and **n0acs06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/logs** then press **Return/Enter**.

3 Type **view *filename*** then press **Return/Enter**.

- For example:

  view EcDsScienceDataServer.ALOG

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

4 Review the log file to determine whether the relevant file was successfully acquired.

- The EcDsScienceDataServer.ALOG file should contain entries identifying the file to be acquired by the ShortName of the corresponding ESDT.
- The EcDsScienceDataServer.ALOG file should contain entries regarding the acquire activity. The following types of messages should be included in the ALOG file:

  PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDistributeOneDistributFile

  Msg: File 1 to be distributed: :SC:MOD03.001:55732:1.HDF-EOS, rpcID = 4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov:PDPS: MoPGE 02#sy14182000TS2SC:MOD03.001:55732 Priority: 0 Time : 06/18/01 17:27:47

  PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDistributeOneDistributFile

  Msg: File 2 to be distributed: SCMOD03.00155732.met, rpcID = 4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov:PDPS:MoPGE02# sy14182000TS2SC:MOD03.001:55732 Priority: 0 Time : 06/18/01 17:27:47

PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDoDitributeCreateDsDdRequestMgrC

Msg: Calling routine to execute DsDdRequestMgrC::Create, ddistRpcID=4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov: PDPSSDSV1:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Priority: 0 Time :

06/18/01 17:27:47

PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDoDitributeSubmitAcquireToDDist

Msg: Calling routine to execute DsDdRequestMgrC::Submit(), ddistRpcID=4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov: PDPSSDSV1:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Priority: 0 Time : 06/18/01 17:27:47

PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDDISTSubmitDDistSubmitReturned

Msg: Calling routine to execute DsDdRequestMgrC::Submit, DDistRpcID=4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov: PDPSSDSV1:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Priority: 0 Time : 06/18/01 17:27:47

PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDDISTSubmitDDistSubmitReturned

Msg: Returned from DsDdRequestMgrC::Submit(), DDistRpcID=4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov: PDPSSDSV1:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Priority: 0 Time : 06/18/01 17:28:16

PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrWorkingCollectionDoDitributeDistributeFile

Msg: Acquire Succeeded - DISTRIBUTED 2 filecount, rpcID = 4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov:PDPS:MoPGE02#sy14182000TS2SC:MOD03.001:55732 Priority: 0 Time : 06/18/01 17:28:16

PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsSrSessionExecuteCommandComplt

Msg: Command 1/1 execution complete for Request ID 4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov:PDPS:MoPGE02#sy14182000TS2SC:MOD03.001:55732, Success: 1 Priority: 0 Time : 06/18/01 17:28:16

PID : 5497:Thread ID : 525 : MsgLink :0 meaningfulname :DsShSRequestRealSetStateSettingState

Msg: Request 4_18442_1727-1124614837_169062001_x0sps06.xdc.ecs.nasa.gov: PDPS:MoPGE02#sy14182000TS2SC:MOD03.001:55732 state set to DONE Priority: 0 Time : 06/18/01 17:28:16

- If the ShortName does not appear in the ALOG file, with a timestamp corresponding to the time of the attempted acquire, SDSRV may not be running, or may not be communicating with other servers.
- If the ALOG file does contain entries for that ShortName and indicates that two files (the file and its associated metadata file) are being distributed, SDSRV has completed its role in the acquire.
- If the ALOG contains the ShortName and also contains an error showing that the data file time stamp does not match the time stamp required by the acquire, the data file needs to be removed from the Science Data Server and reinserted.
  - This is usually done using a script called DsDbCleanGranules.

5 Type **:q!** then press **Return/Enter** to quit the view application.

6 If the ShortName does **not** appear in the ALOG file, with a timestamp corresponding to the time of the attempted acquire, ensure (e.g., using EcCsIdPingServers) that it is possible to connect to the necessary hosts and servers (listed in Table 10).

- If it is not possible to connect to any needed host(s)/server(s), notify the Operations Controller/System Administrator to check the hosts/servers and bring them back up if necessary.
- Return to the procedure for **Recovering from a Data Distribution Failure** after the problem has been corrected.

7 If the ALOG contains the ShortName and also contains an error showing that the data file time stamp does not match the time stamp required by the acquire, notify the Archive Manager to have the data file removed from the Science Data Server and reinserted.

- Return to the procedure for **Recovering from a Data Distribution Failure** after the problem has been corrected.

8 If the ALOG file does contain entries for the ShortName and indicates that two files (the file and its associated metadata file) are being distributed, continue with the procedure for **Checking the Archive Server Log Files**.

Checking the Archive Server Log Files

Acquire success from the Science Data Server is only part of the acquire process. Since any file entered into SDSRV is stored in the archive, the Archive Server must be involved during an acquire. Consequently, it may be useful to inspect the Archive Server log files (e.g., EcDsStArchiveServer*HWCIn*.ALOG) to check for error messages associated with the ShortName of the file type.

The procedure for checking the archive server log files starts with the assumption that the operator has logged in to the ECS system.

Checking the Archive Server Log Files

---

1 Access a terminal window logged in to the appropriate host.

- Examples of appropriate host names include **e0acg11, g0acg01, l0acg02**, and **n0acg01**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/logs** then press **Return/Enter**.

3 Type **view *filename*** then press **Return/Enter**.

- For example:

  view EcDsStArchiveServerACM1.ALOG

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

4 Review the log file to determine whether the relevant file was successfully acquired.

5 Type **:q!** then press **Return/Enter** to quit the view application.

6 If the relevant file was **not** successfully acquired, notify the Archive Manager to have the data file reacquired for Data Processing.

- Return to the procedure for **Recovering from a Data Distribution Failure** after the problem has been corrected.

7 If the relevant file was successfully acquired, continue with the procedure for **Checking the Staging Disk**.

Checking the Staging Disk

During an acquire, files are copied to a staging area as an intermediate step before distributing them to their destination. As part of diagnosing an acquire failure it is useful to check the staging area to ascertain whether the files have completed part of their journey. A subdirectory containing both the data granule and metadata file should have been written to the staging area.

The procedure for checking the staging disk starts with the assumption that the operator has logged in to the ECS system.

Checking the Staging Disk

---

1 Access a terminal window logged in to the Distribution Server host.

- Examples of Distribution Server host (Sun internal server host) names include **e0acs06**, **g0acs06**, **l0acs06,** and **n0acs06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/drp/*archivehost*/data/staging/*disk#*** then press **Return/Enter**.

3 Type **ls -lrt** then press **Return/Enter**.

4 Review the directory to determine whether the relevant file was successfully staged.

5 If the relevant file was successfully staged, ensure (e.g., using EcCsIdPingServers) that it is possible to connect to the necessary hosts and servers (listed in Table 10).

- If it is not possible to connect to any needed host(s)/server(s), notify the Operations Controller/System Administrator to check the hosts/servers and bring them back up if necessary.
- Return to the procedure for **Recovering from a Data Distribution Failure** after the problem has been corrected.

6 If the relevant file was **not** successfully staged, continue with the procedure for **Checking the Staging Disk ALOG File** to determine why it was not successfully staged.

Checking the Staging Disk ALOG File

If a failure occurs in copying files to the staging area, then the staging disk ALOG files (e.g., EcDsStStagingDiskServer.ALOG or EcDsStCacheManagerServer.ALOG) may reveal the cause.

The procedure for checking the staging disk ALOG file starts with the assumption that the operator has logged in to the ECS system.

Checking the Staging Disk ALOG File

---

1 Access a terminal window logged in to the Distribution Server host.

- Examples of Distribution Server host (Sun internal server host) names include **e0acs06**, **g0acs06**, **l0acs06,** and **n0acs06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/logs** then press **Return/Enter**.

3 Type **view EcDsStStagingDiskServer.ALOG** or **EcDsStCacheManagerServer.ALOG** then press **Return/Enter**.

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

4 Review the log file to determine whether the relevant file was successfully staged.

5 Type **:q!** then press **Return/Enter** to quit the view application.

6 If the relevant file was successfully staged, ensure (e.g., using EcCsIdPingServers) that it is possible to connect to the necessary hosts and servers (listed in Table 10).

- If it is not possible to connect to any needed host(s)/server(s), notify the Operations Controller/System Administrator to check the hosts/servers and bring them back up if necessary.
- Return to the procedure for **Recovering from a Data Distribution Failure** after the problem has been corrected.

7 If the relevant file was **not** successfully staged, continue with the procedure for **Checking the Space Available in the Staging Area**.

Checking the Space Available in the Staging Area

Failure can be caused by a lack of space in the staging area.

The procedure for checking the space available in the staging area starts with the assumption that the operator has logged in to the ECS system.

Checking the Space Available in the Staging Area

---

1 Access a terminal window logged in to the Distribution Server host.

- Examples of Distribution Server host (Sun internal server host) names include **e0acs06**, **g0acs06**, **l0acs06,** and **n0acs06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/drp/*archivehost*/data/** then press **Return/Enter**.

3 Type **df -k .** (being sure to include the dot) then press **Return/Enter**.

4 Review the available space listed to determine whether there is adequate space for staging the relevant file.

5 If there is **not** adequate space for staging the relevant file, notify the Operations Controller/System Administrator of the lack of space.

6 If there is adequate space for staging the relevant file, notify the Archive Manager to have the data file reacquired for Data Processing.

7 Return to the procedure for **Recovering from a Data Distribution Failure** after the problem has been corrected.

Checking Log Files

Log files can provide indications of the following types of problems:

- Communication problems.
- Database problems.
- Lack of disk space.

The procedure for checking log files starts with the assumption that the operator has logged in to the ECS system and the appropriate host.

Checking Log Files

---

1 Access a terminal window logged in to the appropriate host.

- Sun internal server (e.g., e0acs06, g0acs06, l0acs06, or n0acs06) host has the following data distribution, storage management, science data server, and subscription server (SBSRV) ALOG files:

  - EcDsDistributionServer.ALOG.
  - EcDsSt8MMServerNONE.ALOG.
  - EcDsStRequestManagerServer.ALOG
  - EcDsStStagingDiskServerDIP1.ALOG.
  - EcDsGranuleDelete.ALOG.
  - EcDsScienceDataServer.ALOG.
  - EcDsScienceDataServerClient.ALOG.
  - EcDsSdSrvGui.ALOG.
  - EcSbSubServer.ALOG.
- APC Server (e.g., e0acg11, g0acg01, l0acg02, or n0acg01) host has the following storage management ALOG files:
  - EcDsStArchiveServerACM1.ALOG.
  - EcDsStCacheManagerServerACM1.ALOG.
  - EcDsStFtpServerNONE.ALOG.
  - EcDsStStagingDiskServerACM1.ALOG.
- FSMS Server (e.g., e0drg11, g0drg01, l0drg01, or n0drg01) host has the following storage management ALOG files:
  - EcDsHdfEosServer.ALOG.
  - EcDsStArchiveServerDRP1.ALOG
  - EcDsStCacheManagerServerDRP1.ALOG.
  - EcDsStFtpServerDRP1.ALOG.
  - EcDsStStagingDiskServerDRP1.ALOG.
- Operations Workstation (e.g., e0acs03, g0acs02, l0acs01, or n0acs03) host has the following GUI ALOG files:
  - EcDsDdistGui.ALOG.
  - EcDsStmgtGui.ALOG.
  - EcDsSdSrvGui.ALOG.
- In addition to the ALOG files mentioned the preceding hosts have corresponding debug log files.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **cd /usr/ecs/*MODE*/CUSTOM/logs** then press **Return/Enter**.

- Change directory to the directory containing the data distribution, science data server, or storage management log files (e.g., EcDsDdistGui.ALOG, EcDsDistributionServer.ALOG).

3 Type **pg *filename*** then press **Return/Enter**.

- ***filename*** refers to the data distribution, science data server, or storage management log file to be reviewed (e.g., EcDsDdistGui.ALOG, EcDsDistributionServer.ALOG).
- The first page of the log file is displayed.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view, more**) can be used to review the log file.

4 Review the log file to identify problems that have occurred.

5 Respond to problems as follows:

- DDIST- or STMGT-related problems.
  - Perform the appropriate procedure(s) from the list near the beginning of the **DDIST Troubleshooting Procedures** section.
- Communication problems.
  - Notify the Operations Controller/System Administrator of suspected communication problems.
- Database problems.
  - Verify that relevant database servers are running.
  - Check for lack of (or corruption of) data in the database using either a database browser or isql commands.
  - Notify the Database Administrator of suspected database problems.
- Lack of disk space.
  - Remove unnecessary files.
  - Notify the Operations Controller/System Administrator of recurring disk space problems.

Checking Database Connections

The storage management/data distribution shared database is the repository of data concerning data distribution requests. If applications (including the Data Distribution Operator GUI) are unable to connect to the database, the data distribution request data cannot be retrieved or (in the

case of the GUI) displayed. Consequently, if the GUI does not display data or if the display does not refresh, checking the database connections is a logical step in trying to isolate the problem.

The procedure for checking database connections starts with the assumption that the operator has logged in to the ECS system.

Checking Database Connections

---

1 Submit a request to the Database Administrator to identify the values for the following parameters associated with the EcDsDistributionServer:

- **DBName.**
- **DBServer.**
- **DBMaxConnections.**

2 Access a terminal window logged in to the APC Server host.

- Examples of APC Server host names include **e0acg11**, **g0acg01**, **l0acg02,** and **n0acg01**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).
- APC Server typically hosts Sybase for the storage management/data distribution shared database.

3 Type **isql –U*userID* -S*DBServer*** then press **Return/Enter**.

- For example:

  isql –Ustmgt_role –Sx0acg01_srvr

4 At the **Password:** prompt type ***dbpassword*** then press **Return/Enter**.

- The ***dbpassword*** is the password for logging in to the database using the specified ***userID***.

5 Type **sp_who** at the **1>** prompt then press **Return/Enter**.

6 Type **go** at the **2>** prompt then press **Return/Enter**.

- A listing similar to the following one is displayed (some lines have been deleted):

```
 spid  status     loginame                hostname   blk
     dbname                   cmd
------ ------------ ------------------------------ ---------- -----
     ------------------------------ ----------------
   1 recv sleep   stmgt_role                x0acs03     0
     stmgtdb1_TS1                AWAITING COMMAND
```

```
 2 sleeping    NULL                          0
   master                  NETWORK HANDLER
 3 sleeping    NULL                          0
   master                  DEADLOCK TUNE
 4 sleeping    NULL                          0
   master                  MIRROR HANDLER
 5 sleeping    NULL                          0
   master                  HOUSEKEEPER
 6 sleeping    NULL                          0
   master                  CHECKPOINT SLEEP
 7 sleeping    NULL                          0
   master                  AUDIT PROCESS
 8 recv sleep   stmgt_role                 x0ais01   0
   stmgtdb1_TS1                AWAITING COMMAND
 9 recv sleep   EcDsStArchiveServer                  0
   stmgtdb1_TS2                AWAITING COMMAND
10 recv sleep   EcInReqMgr                           0
   Ingest_TS3                  AWAITING COMMAND
11 recv sleep   EcDsStCacheManagerServer             0
   stmgtdb1_TS2                AWAITING COMMAND
12 recv sleep   EcDsStStagingDiskServer              0
   stmgtdb1_TS2                AWAITING COMMAND
13 recv sleep   EcInGran                  x0icg01   0
   Ingest_TS3                  AWAITING COMMAND
14 recv sleep   EcDsStFtpServer                      0
   stmgtdb1_TS2                AWAITING COMMAND
15 recv sleep   EcDsStArchiveServer                  0
   stmgtdb1_TS1                AWAITING COMMAND
16 recv sleep   EcDsStCacheManagerServer             0
   stmgtdb1_TS1                AWAITING COMMAND
17 recv sleep   EcDsStStagingDiskServer              0
   stmgtdb1_TS1                AWAITING COMMAND
18 recv sleep   EcInGran                             0
   Ingest_TS3                  AWAITING COMMAND
19 recv sleep   EcDsStStagingDiskServer              0
   stmgtdb1_TS1                AWAITING COMMAND
20 recv sleep   EcInGUI                              0
   Ingest_TS1                  AWAITING COMMAND
21 recv sleep   EcDsDistributionServer               0
   stmgtdb1_TS1                AWAITING COMMAND
22 recv sleep   EcDsDistributionServer               0
   stmgtdb1_TS1                AWAITING COMMAND
```

```
23 recv sleep   EcDsDistributionServer          0
   stmgtdb1_TS1            AWAITING COMMAND
24 recv sleep   EcDsDistributionServer          0
   stmgtdb1_TS1            AWAITING COMMAND
25 recv sleep   EcDsDistributionServer          0
   stmgtdb1_TS1            AWAITING COMMAND
26 recv sleep   EcDsDistributionServer          0
   stmgtdb1_TS1            AWAITING COMMAND
27 recv sleep   EcDsDistributionServer          0
   stmgtdb1_TS1            AWAITING COMMAND
28 recv sleep   EcDsDistributionServer          0
   stmgtdb1_TS1            AWAITING COMMAND
29 recv sleep   EcDsDistributionServer          0
   stmgtdb1_TS1            AWAITING COMMAND
30 recv sleep   EcDsDistributionServer          0
   stmgtdb1_TS1            AWAITING COMMAND
31 recv sleep   EcDsDistributionServer          0
   stmgtdb1_TS1            AWAITING COMMAND
32 recv sleep   EcDsDistributionServer          0
   stmgtdb1_TS1            AWAITING COMMAND
33 recv sleep   EcDsDistributionServer          0
  stmgtdb1_TS1            AWAITING COMMAND
34 recv sleep   EcDsDistributionServer          0
   stmgtdb1_TS1            AWAITING COMMAND
35 recv sleep   EcDsDistributionServer          0
   stmgtdb1_TS1            AWAITING COMMAND
36 recv sleep   EcInPolling                     0
   Ingest_TS1              AWAITING COMMAND
[…]
49 recv sleep   EcDsStmgtGui                    0
   stmgtdb1_TS1            AWAITING COMMAND
50 recv sleep   EcDsDdistGui                    0
   stmgtdb1_TS1            AWAITING COMMAND
51 recv sleep   EcDsDdistGui                    0
   stmgtdb1_TS1            AWAITING COMMAND
52 recv sleep   EcDsDdistGui                    0
   stmgtdb1_TS1            AWAITING COMMAND
53 recv sleep   EcDsDdistGui                    0
   stmgtdb1_TS1            AWAITING COMMAND
54 running      stmgt_role          x0icg01     0
   stmgtdb1                SELECT
55 recv sleep   EcDsStArchiveServer             0
```

```
      stmgtdb1                AWAITING COMMAND
(55 rows affected)
(return status = 0)
```

7 Type **sp_configure "user connections"** at the **1>** prompt then press **Return/Enter**.

8 Type **go** at the **2>** prompt then press **Return/Enter**.

- A listing similar to the following one is displayed:

```
Parameter Name              Default     Memory Used Config Value
      Run Value
----------------------------- ----------- ----------- ------------
      -----------
number of user connections          25      20195       255
            255
(1 row affected)
(return status = 0)
```

9 Type **quit** at the **1>** prompt then press **Return/Enter**.

10 Compare the number of actual connections (results of **sp_who**) with the number of connections for which the database has been configured (results of **sp_configure "user connections"**).

11 If the number of actual connections is very close to the number of connections for which the database has been configured, notify the Database Administrator of the fact.

12 If the number of actual connections is **not** very close to the number of connections for which the database has been configured, compare the number of actual connections with the value for DBMaxConnections that the Database Administrator specified (Step 1).

13 If the number of actual connections is very close to the value for DBMaxConnections, notify the Database Administrator of the fact.

- It may be advisable to increase the value assigned to the DBMaxConnections parameter in the Configuration Registry.

PDS Operations

Operator Tools

The following operator tools have been provided to support PDS operations:

- PDS Operator Interface (PDSOI).
- PDSIS Operator Interface (PDSIS OI)
- PDS Job Monitor.
- Rimage CD Production Software.
  - Data Publisher.
  - Production Server.
- PDS Quality Check GUI.
- PDS Maintenance Module.
- PDSIS Maintenance Module.
- PDS Cleanup Manager.
- PDSIS Cleanup Manager.

The sections that follow describe the tools in some detail.

PDS Operator Interface (PDSOI)

The PDS Operator Interface (PDSOI) module resides on machines that are capable of generating customer products. The operators start up the operator interface (OI) using either a shell script (e.g., pdsoi_prod.sh) or using an alias (i.e., pdsoi) that references the script. The script then makes a connection to the Oracle database. The connection is made using the Oracle SQL*Net communication mechanism. The script ensures that all operators log on to Oracle with the same usercode and password. The usercode has privileges against only those database tables used specifically by PDS. Any data needed to produce the product is included in the accessible tables.

The PDSOI module generates several reports dealing with order status and jewel-case inserts. Some of the information used is stored in the Oracle database tables and Oracle Report generator is used to create the reports. The Oracle report modules reside on the PDS machine and use the SQL*Net connection to get any data needed for the reports.

The communication philosophy employed allows for multiple copies of the PDS code to reside anywhere as long as they have SQL*Net and the physical communication means to connect to the PDS machine.

Communication between the OI module and the product generation code are handled via ASCII files. The OI module generates appropriate ASCII parameter files using Oracle Form's TEXT_IO package, which allows both reading and writing of operating system files. The PDSOI module looks for returning ASCII files from the product generation code on a timed basis and processes them appropriately.

Additional reports and listings are generated which use ASCII files stored on the PDS machine. The reports are generated by UNIX scripts, which are on the PDS machine and are called from both the OI module and the product generation code.

The source data needed to produce a customer's request can come from several sources. Although it might come from offline media that is mounted by an operator, from a mass storage device, or from some value-added processing system, in the ECS implementation of PDS the data are retrieved from local disks where PDSIS will have had ECS stage the data.

The PDS back end consists of a set of production modules. A production module is a piece of software that generates products for one particular product line. For example, if the PDS operator activates an order with a product code of G001, the OI invokes the corresponding production module (e.g., "genericout"), which in turn generates the media to ship to the customer. The production modules and OI communicate through status files that allow the back end to indicate either a success or failure to the front end. For the ECS implementation, only one generic production module (i.e., "genericout") was used initially. Some additional production modules have been developed.

Product generation code within PDS generates customer products on magnetic tape or recordable optical media. It has the potential for preparing products for delivery via ftp.

The product generation software is started (via a top-level PDS process called "PDSTOP") by a system call from the PDSOI when a job is activated. A production parameter file (PPF) is created in the PDS root directory (identified by the environmental variable PDSROOT) for the current PDS user ID. The PPF file name structure is <order number>_<first unit number>.ppf (e.g., 0110101310123_0001.ppf).

Each product generation module generates an order status file for passing back to the OI. The file is named <OI ID>_<PPF KEY>.status (e.g., PDS1_test_0110101310123_0001.status) and is placed within the $PDSROOT/status directory after product completion. The OI ID in the status file name is composed of the PDS Machine name, an underscore, and the Console ID. (The operator enters values for PDS Machine and Console ID when starting an instance of the PDSOI.) The PPF Key is made up of the order number, an underscore, and a zero-padded unit number.

There is one record per line in the status file for each unit that was produced in the specified job run. Each line has the format |<ORDNUM>|<unit>|<status>|<media_id>|<ncopies>|1| where ORDNUM is the order number from the PDT_PDSINFO table, unit is the unit processed, status is the resulting status of the unit, media_id is the unique media identification number, and ncopies is the number of copies produced for the media_id. The lines in the status file are sorted by media_id.

The relevant instance of PDSOI picks up the status files that pertain to the OI ID of that instance and determines the status of the units; i.e., either 'F' for units that are successfully produced or 'G' for units that had errors. If the output product is CD or DVD, the PDS generation software creates a label on the CD or DVD itself. For an 8mm or DLT product the PDS generation software creates a label file that is sent to a label printer.

PDSIS Operator Interface (PDSIS OI)

The PDSIS Operator Interface (PDSIS OI) is used in communicating with the PDSIS database. One of the principal uses of the PDSIS OI is marking a job shipped when the media have been produced, verified, and assembled with the packing lists and shipping labels. Another is investigating the status of orders outside of PDSSA.

The operators start up the PDSIS OI using either a shell script (pdsisoi_*mode*.sh) or an alias (pdsisoi). The script makes a connection to the Oracle database. The connection is made using the Oracle SQL*Net communication mechanism. The script ensures that all operators log on to Oracle with the same usercode and password. The usercode has privileges against only those tables used specifically in PDSIS operations.

PDS Job Monitor

While the PDSOI provides a mechanism for operators to start and complete jobs, and to separate those jobs that are active from those that are not, it does not reveal a lot of detail as to the status of running jobs. Similarly, it does not provide much information about the status of the PDS environment as a whole. This information is often useful and sometimes crucial.

The PDS Job Monitor is intended as a complement to the PDSOI. It lists the PDS jobs that are currently being processed by the production modules and indicates the specific stage of processing that each running job has reached. On request it displays the job log or the production parameter file (.ppf) file for any running job. Additionally, it displays information about available disk space and workload on the Rimage CD generation systems. This information should prove helpful to the operator in using PDS in an efficient manner.

An additional use of the Job Monitor is in verifying the consistency between the jobs that the PDS Operator Interface reports as being active and the jobs that actually *are* active. For instance, if the PDS machine crashes and is brought back up, after the Operator Interface window is started all the jobs that were active at the time of the crash will still show up in an active state (even though none of them are actually running). Under normal operation, the number of active jobs in the PDS Operator Interface will match the number of active jobs in the Job Monitor. If any

discrepancies occur, they will be easy to spot through a comparison of the contents of the two windows.

Rimage CD Production Software

The Rimage CD production software includes the following programs:

- Data Publisher.
- Production Server.

Data Publisher

The Data Publisher runs on the Rimage PC and watches the PDS job control directory (i.e., /pdssa/rimage_jobcontrol) on the PDSSA RAID. (The PDS job control directory is mapped to a network drive on the Rimage PC.) The Data Publisher is looking for files to be transferred to the Rimage PC. The files are identified by a ".ORD" extension to the filename. The ".ORD" extension indicates that the data are ready to be transferred. Data Publisher transfers the data via ftp to a hard disk drive on the Rimage PC, updates the Rimage PowerTools log file (also located in the job control directory), and changes the ".ORD" extension on the file in the PDS job control directory to a ".dn0" extension. It also updates the PowerTools log file when the production is complete, which in turn places the order in QC-HOLD on PDSOI. Then PDS prints summaries and jewel-case inserts.

Production Server

The Production Server runs on the Rimage PC. When the Production Server is started, it does an initial hardware check on the Rimage CD/DVD burners, internal printer and the media carousel. The Production Server is responsible for producing the media (writing the data to disk) after Data Publisher has transferred the data (via ftp) onto one of the Rimage PC hard disk drives (e.g., the E: drive).

PDS Quality Check GUI

The PDS Quality Check GUI provides the Distribution Technician with a means of selecting a verification drive for checking a disk or tape when performing a QC check. The PDS Quality Check GUI reads the directories on the disk or tape and creates a listing that can be printed. The \verification report indicates whether the data have been recorded on the disk or tape.

PDS Maintenance Module

The PDS Maintenance Module contains Oracle Forms, which are used to look at and update the data within the database tables used by the PDSOI. Access to the forms is normally restricted to lead operators.

A UNIX script is used for starting up the PDS Maintenance Module. The script is in the $PDSROOT/run directory (e.g., /data1/pds_it/run). The script is named pdsmaint_*mode*.sh (e.g., pdsmaint_it.sh) and has an alias set to "pds_maint" so the operator just has to type "pds_maint"

to bring up the PDS Maintenance login window. The support maintenance for the PDS Maintenance Module requires an Oracle usercode and password that are different from those used to run the PDSOI module. The additional level of security is intended to prevent unauthorized personnel from modifying the maintenance tables or performing functions that require advanced training and knowledge.

Like the PDSOI the maintenance module resides on the PDS host.

PDSIS Maintenance Module

The PDSIS Maintenance Module contains Oracle Forms, which are used to look at and update the data within the database tables used by the PDSIS OI. Access to the forms is normally restricted to lead operators.

A UNIX script is used for starting up the PDSIS Maintenance Module. The script is in the $PDSROOT/run directory (e.g., /usr/local/pds_it/run or /data1/pds_it/run). The script is named pdsismaint_*mode*.sh (e.g., pdsismaint_it.sh) and has an alias set to "pdsismaint" so the operator just has to type "pdsismaint" to bring up the PDSIS Maintenance login window. As is the case for the PDS Maintenance Module, the support maintenance for the PDSIS Maintenance Module requires an Oracle usercode and password that are different from those used to run the PDSIS OI module. The additional level of security is intended to prevent unauthorized personnel from modifying the maintenance tables or performing functions that require advanced training and knowledge.

Like the PDS Maintenance Module the PDSIS Maintenance Module resides on the PDS machine.

PDS and PDSIS Cleanup Managers

The large number of files generated by PDSIS and PDSSA activities would overwhelm the system if some of the files were not removed from the working directories on a fairly frequent basis. However, there are some files that may be needed for some period of time to permit troubleshooting and recovery of orders/jobs in case of problems.

The PDS Cleanup Manager and PDSIS Cleanup Manager are GUIs that are used for specifying file cleanup strategies for PDSSA files (including summary files, log files, status files, and label files) or PDSIS files (including product request files, product result files, and socket log files).

The cleanup managers generate or modify Bourne shell scripts (i.e., cleanup.sh and pdsiscleanup.sh) that implement the file cleanup strategies. In addition, the cleanup managers may modify the crontab file to adjust the time intervals for deletion or archiving of files.

The PDS and PDSIS Cleanup Managers are not used very often, especially after a manageable retention period has been determined for PDS files and has been implemented through the cleanup scripts and crontab file.

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Starting Up PDS

PDS Start-Up Activities

Starting up PDS involves the following activities:

- Starting the PDSIS Server and PDSIS Cron.
- Starting the PDS Cron.
- Starting the PDS Operator Interface (PDSOI).
- Starting the PDSIS Operator Interface (PDSIS OI).
- Starting the PDS Job Monitor.
- Starting the Rimage CD Production Software.
  - Data Publisher.
  - Production Server.
- Starting the PDS Quality Check GUI.
- Starting the PDS Maintenance Module (as needed).
- Starting the PDSIS Maintenance Module (as needed).

Due to the relatively large number of GUIs involved in PDS operations, it is generally good practice to use separate workspaces on the workstation or X-Term for PDSIS and PDSSA applications.

For example, the following applications could be started in a workspace named PDSIS:

- PDSIS Server (if necessary).
- PDSIS Cron (if necessary).
- PDSIS OI.
- PDSIS Maintenance Module (when necessary).

The following applications could be started in a workspace named PDSSA:

- PDSOI.
- PDS Job Monitor.
- PDS Quality Check GUI.
- PDS Maintenance Module (when necessary).

In addition, it may be useful to have an instance of the following GUI running in a workspace named DDIST.

- Data Distribution Operator GUI.

Starting the PDSIS Server and PDSIS Cron

On rare occasions it may be necessary to start the PDSIS Server and/or the PDSIS cron processes. Starting the PDSIS Server and PDSIS cron processes starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and the Distribution Technician has logged in to the ECS system.

Starting the PDSIS Server and PDSIS Cron

NOTE: A **PDSIS** user ID (e.g., **pdsis**, **pdsis_ts1**, or **pdsis_ts2**) is used in this procedure.

1 Log in to the PDS Server host using the appropriate PDSIS user ID for the operating mode being used.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- PDSIS user IDs are **pdsis**, **pdsis_ts1**, and **pdsis_ts2**, which are used for PDSIS operations in the OPS, TS1, and TS2 modes respectively.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 To determine whether the PDSIS Server is running, type **ps -ef | grep *userID*** then press **Return/Enter**.

- For example:

  ps -ef | grep pdsis_ts2

- The following type of message is displayed:

```
pdsis_ts   13484969   13319855  0   Nov 17 ?       0:00 /tools/bin/perl -w
/usr/local/pdsis_ts2/utilities/EcPdIsPdsisActivator -load 10
pdsis_ts   26601639   26278381  0 13:34:34 pts/14  0:00 grep pdsis_ts2
pdsis_ts   24679415   26856424  0 17:01:00 pts/12  0:27
/usr/java/bin/../bin32/sgi/native_threads/java -classpath
/data1/pdsis_ts2/lib/
pdsis_ts   13319855        724  0   Nov 17 ?       0:00 /bin/ksh -
/usr/local/pdsis_ts2/utilities/EcPdIsStartActivateCron pdsis_ts2 sup
```

- If the PDSIS Server were **not** running, the following type of message only would be displayed:

  pdsis_ts 26601639 26278381 0 13:34:34 pts/14 0:00 grep pdsis_ts2

3 At the UNIX command line prompt type **cd /usr/local/pdsis_*mode*/utilities** then press the **Return/Enter** key on the keyboard.

- Change directory to the directory containing the PDSIS Server start-up script (e.g., EcPdPDSISServerStart).
- **pdsis_*mode*** refers to one of the following subdirectories:
  - pdsis (for OPS-mode operations).
  - pdsis_ts1 (for TS1-mode operations).
  - pdsis_ts2 (for TS2-mode operations).

4 If starting the PDSIS Server is desired, type **EcPdPDSISServerStart *MODE debug* &** then press **Return/Enter**.

- ***MODE*** is one of the following values:
  - **pdsis.**
  - **pdsis_ts1.**
  - **pdsis_ts2.**
- ***debug*** is one of the following values:
  - **false.**
    - No debug information is printed to the debug log.
  - **true.**
    - Debug information is printed to the debug log.
  - **super.**
    - Maximum debug information is printed to the debug log.
- The PDSIS Server starts.

5 If starting the PDSIS cron jobs is desired, type **crontab EcPdIsCrontab** then press **Return/Enter**.

- The PDSIS cron jobs will start at the appropriate times (as specified in the cronfile **EcPdIsCrontab**).

- If an error message is displayed, verify that the proper PDSIS log-in was used (refer to Step 1).

6 To verify that the crons were started, type **crontab -l** then press **Return/Enter**.

- The following type of response is displayed:

```
0,5,10,15,20,25,30,35,40,45,50,55  * * * *
/usr/local/$USER/utilities/EcPdPDSISCronStart $USER scli super >>
/usr/local/$USER/logs/EcPdPDSISCronStartScli.log 2>&1
#
0,2,4,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,5
6,58  * * * *  /usr/local/$USER/utilities/EcPdPDSISCronStart $USER
status super >> /usr/local/$USER/logs/EcPdPDSISCronStartStatus.log
2>&1
#
0,2,4,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,5
6,58  * * * *  /usr/local/$USER/utilities/EcPdPDSISCronStart $USER
cleanup super >> /usr/local/$USER/logs/EcPdPDSISCronStartCleanup.log
2>&1
#
# Midnight cleanup cron
0 0 * * * /usr/local/$USER/utilities/EcPdPDSISMidnightCronStart $USER
super >> /usr/local/$USER/logs/EcPdPDSISMidnightCronStart.log 2>&1
#
# Auto activation script
# Skip Thursday
2,22,42 * * * 0,1,2,3,5,6 /usr/local/$USER/utilities/EcPdIsStartActivateCron
$USER super >> /usr/local/$USER/logs/EcPdIsActivateCronStart.log 2>&1
#
# Thursday's activation cron (deactivated from 1142 - 2002)
2,22,42 0,1,2,3,4,5,6,7,8,9,10,11,20,21,22,23 * * 4
/usr/local/$USER/utilities/EcPdIsStartActivateCron $USER super >>
/usr/local/$USER/logs/EcPdIsActivateCronStart.log 2>&1
```

7 If verifying that the crons were started, type **pg EcPdIsCrontab** then press **Return/Enter**.

- The response should be identical to the response from the **crontab –l** command.
  - If the response is not identical to that of the **crontab –l** command, verify that the proper **PDSIS** log-in was used (refer to Step 1).
- To exit from **pg** type **q** then press **Return/Enter**.

Starting the PDS Cron

On rare occasions it may be necessary to start the PDS cron processes. There are three CRONs that need to be started for each PDS user account. The CRONs check flags in the database and automatically update tables during product generation. The CRONs are defined in a file named "pdscrontbl" and are started with the UNIX **crontab** command.

Starting the PDS cron processes starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and the Distribution Technician has logged in to the ECS system.

Starting the PDS Cron

NOTE: A **PDS** user ID (e.g., **pds**, **pds_st**, or **pds_it**) is used in this procedure.

1 Log in to the PDS Server host using the appropriate PDS user ID for the operating mode being used.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- PDS user IDs are **pds**, **pds_st**, and **pds_it**, which are used for PDS operations in the OPS, TS1, and TS2 modes respectively.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 At the UNIX command line prompt type **cd /usr/local/pds_*mode*/pdscrons** then press the **Return/Enter** key on the keyboard.

- Change directory to the directory containing the appropriate pdscrontbl file.
- **pds_*mode*** refers to one of the following subdirectories:
  - pds (for OPS-mode operations).
  - pds_st (for TS1-mode operations).
  - pdsis_it (for TS2-mode operations).

3 Type **crontab pdscrontbl** then press **Return/Enter**.

- The PDS cron jobs will start at the appropriate times (as specified in the cronfile **pdscrontbl**).
- If an error message is displayed, verify that the proper PDS log-in was used (refer to Step 1).

4 To verify that the crons were started, type **crontab -l** then press **Return/Enter**.

- The following type of response is displayed:

```
0,5,10,15,20,25,30,35,40,45,50,55 * * * *
/data1/$USER/pdscrons/pds_insert.cron >>
/data1/$USER/logs/pds_insert.log 2>&1
0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54
,56,58 * * * * /data1/$USER/pdscrons/pds_job.cron >>
/data1/$USER/logs/pds_job.log 2>&1
3,8,13,18,23,28,33,38,43,48,53,58 * * * *
/data1/$USER/pdscrons/pds_completion.cron >>
/data1/$USER/logs/pds_completion.log 2>&1
```

5 Type **pg pdscrontbl** then press **Return/Enter**.

- The response should be identical to the response from the **crontab –l** command.
  - If the response is not identical to that of the **crontab –l** command, verify that the proper **PDS** log-in was used (refer to Step 1).
- To exit from **pg** type **q** then press **Return/Enter**.

Starting the PDS Operator Interface (PDSOI)

Starting the PDS Operator Interface (PDSOI) starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and the Distribution Technician has logged in to the ECS system.

Starting the PDS Operator Interface (PDSOI)

---

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **pdsoi** then press **Return/Enter**.

- The **PDSOI Startup Window** (Figure 73) is displayed.
  - It may take a few seconds for the window to be displayed.
  - The following information is displayed near the top of the screen:

- Name of the Oracle Form (e.g., PDSMTOIX).

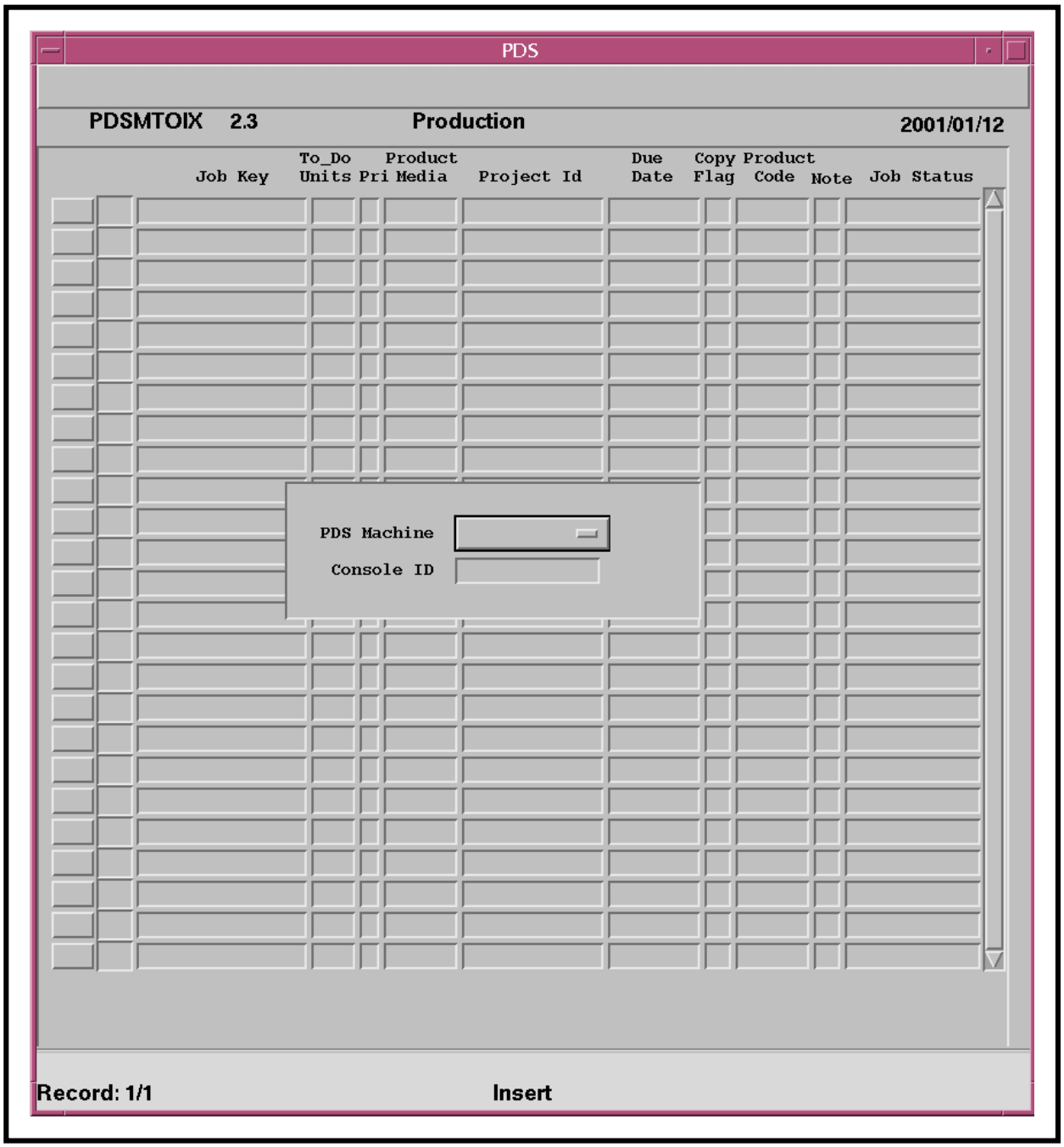


Figure 73. PDSOI Startup Window

- Current version of the PDS (e.g., 2.3).
- Database instance being run (e.g., PRODUCTION).

- Current date.

- **pdsoi** is an alias for a UNIX script (pdsoi_prod.sh) that is used to start up the PDSOI.
  - The script is located in the “run” directory (e.g., /data1/pds_it/run).
  - The alias may vary somewhat depending on the site set-up.

3 Click and **hold** the **PDS Machine** option button to display a menu of machines, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

- Selected machine is displayed on the **PDS Machine** option button when the mouse button is released.

4 Click in the **Console ID** window, type the appropriate console ID, then press **Return/Enter**.

- The **PDSOI Start-Up Selection Screen** (Figure 74) is displayed.
- The Machine ID and Console ID (linked with an underscore) are displayed in the header of the window.
  - For example, “PDS1_test” in the header of Figure 74 indicates that “PDS1” was chosen as the Machine ID and that “test” was typed in as the Console ID.
- Together the **PDS Machine** and **Console ID** constitute the **OI ID** for all jobs started up from the current window.
  - If the OI is shut down or goes down for some reason, it is necessary to log in to the system with the same Machine ID and Console ID to be able to continue work on any jobs started with the OI ID being used in the current session.

5 If all priorities are to be displayed on the **PDSOI**, verify that the **All** toggle button is selected in the **Priority** area.

- Click on the **All** button to change state from unselected to selected or vice versa.
  - When the **All** option is selected, the **All** button has a depressed or sunken appearance rather than a raised appearance.
- Proceed to Step 7.

6 If selecting a particular priority or set of priorities to be displayed on the **PDSOI**, click on the toggle button(s) corresponding to the desired priority(ies) in the **Priority** list.

- Priority meanings might be assigned (in the database) as follows (for example):

1 -	**Emergency -**	Eight-hour turn-around required.
2 -	**High Priority -**	Less than 24-hour turn-around.
3 -	**Priority -**	Turn around in less than five working days.

4 - 6 - Rush - Two-week turn-around.

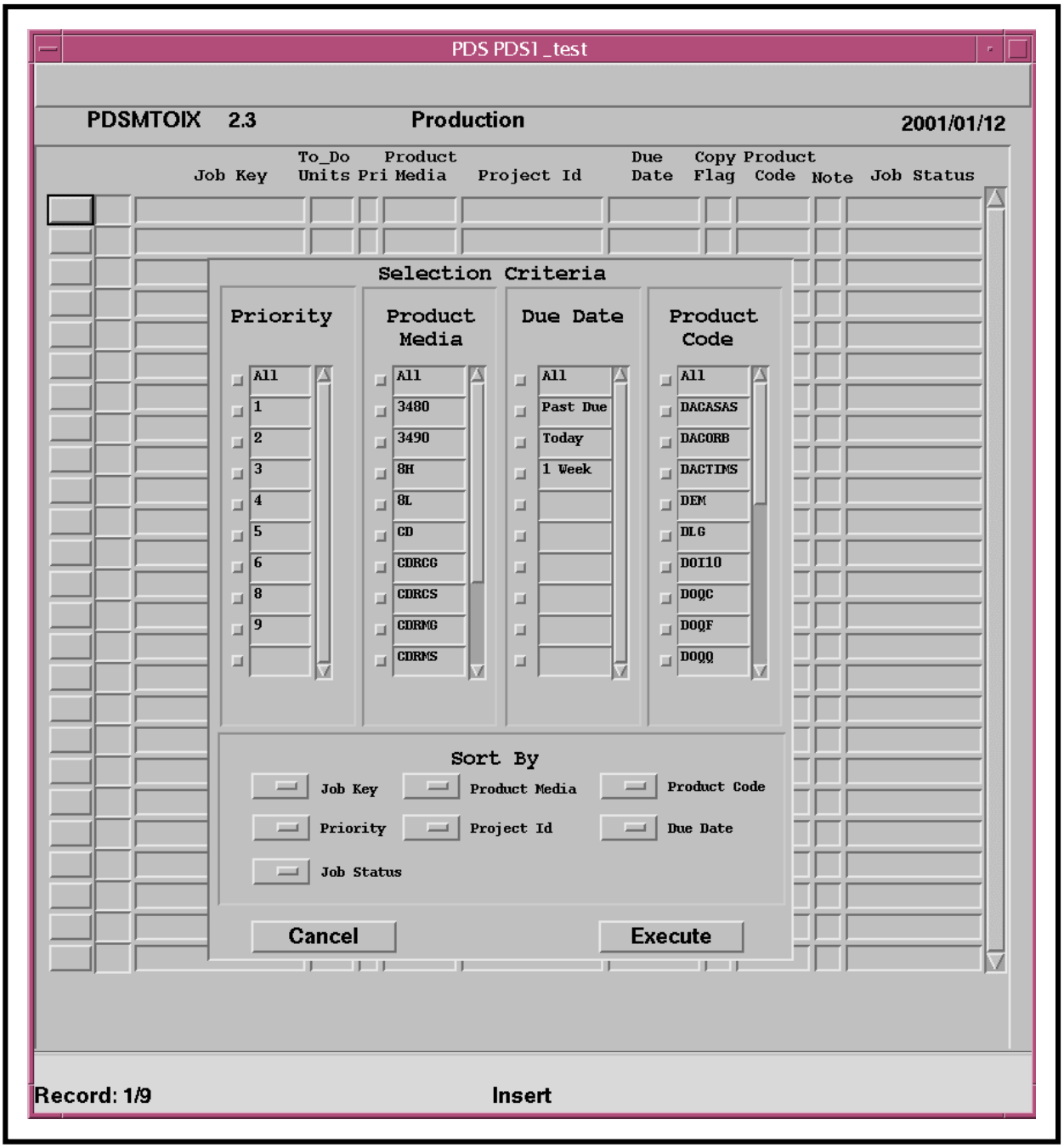


Figure 74. PDSOI Start-Up Selection Screen

7 - 9 - Standard Orders - Four- to six-week turn-around.

- One button or several buttons may be selected.

- Buttons have a depressed or sunken appearance rather than a raised appearance when selected.

7 If all product media types are to be displayed on the **PDSOI**, verify that the **All** toggle button is selected in the **Product Media** area.

- Click on the **All** button to change state from unselected to selected or vice versa.
- Proceed to Step 9.

8 If selecting a particular product media type or set of product media types to be displayed on the **PDSOI**, click on the toggle button(s) corresponding to the desired product media type(s) in the **Product Media** list.

- Product media types might be defined (in the database) as follows (for example):

  CD - CDROM.

  8H - 8mm tape.

  D7 - DLT.

  DVD - DVD.

- One button or several buttons may be selected.

9 If all due dates are to be displayed on the **PDSOI**, verify that the **All** toggle button is selected in the **Due Date** area.

- Click on the **All** button to change state from unselected to selected or vice versa.
- Proceed to Step 11.

10 If selecting a particular due date or set of due dates to be displayed on the **PDSOI**, click on the toggle button(s) corresponding to the desired due date(s) in the **Due Date** list.

- The following types of due date choices might be available (for example):

  Past Due.

  Today.

  1 Week.

- One button or several buttons may be selected.

11 If all product codes are to be displayed on the **PDSOI**, verify that the **All** toggle button is selected in the **Product Code** area.

- Click on the **All** button to change state from unselected to selected or vice versa.
- Proceed to Step 13.

12 If selecting a particular product code or set of product codes to be displayed on the **PDSOI**, click on the toggle button(s) corresponding to the desired product code(s) in the **Product Code** list.

- One button or several buttons may be selected.

13 Click and **hold** the appropriate **Sort By** option button to display a list of numbers indicating the order in which the sort criteria should be evaluated, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

- The following **Sort By** option buttons are available for indicating the order in which job information should be displayed on the **PDSOI**:
  - **Job Key -** Jobs will be sorted by job key on the screen.
  - **Priority -** Jobs will be sorted by priority on the screen (higher-priority jobs are displayed before lower priority jobs).
  - **Job Status -** Jobs will be sorted by status (jobs with a particular status are shown together on the screen).
  - **Product Media -** Jobs will be sorted by Product Media type.
  - **Project Id -** Jobs will be sorted by Project Id. This is an optional field, so all jobs with a null Project Id would be sorted together.
  - **Product Code -** Jobs will be by Product Code, keeping orders of a certain Product Code together.
  - **Due Date -** Jobs will be sorted by Date Due, displaying jobs with a closer Due Date before those with a later Due Date.
- Selected sort order number is displayed on the selected **Sort By** option button when the mouse button is released.
- It is not possible to select a sort order number for a sorting category if the number has already been assigned to another category.
  - For example, if Job Status was assigned Number 1, Product Media cannot be assigned Number 1 as well. If jobs should be sorted by Product Media first, it is necessary to change the Job Status assignment to some (unused) number other than one (1) then one (1) can be assigned to Product Media.

14 Repeat Step 13 as necessary to assign sorting order to additional categories.

- It is possible to select more than one **Sort By** item.

- If more than one **Sort By** option is selected the jobs will be selected by the sort order for the selection assigned Number 1, then within that sort order they would be sorted by the category assigned Number 2, etc.
  - For example, if Job Status were assigned the first sort order (1) and Due Date were assigned the second sort order (2), the jobs would be sorted by Job Status, then within each status the jobs would be sorted by Due Date. So the jobs containing the same status would be displayed together with the earliest due date for each status at the top of the list for that status.

15 Click on the **Execute** button.

- A **Querying Database** notice (Figure 75) is displayed temporarily in a blue box.
  - The **message line** at the bottom of the screen displays "Working" while the **Querying Database** notice is being displayed.
  - If there are status files waiting to be read, another blue box may be displayed indicating "Reading Status files. Please wait…"
  - If no selection criteria were selected, a **Selection Error Dialogue** (Figure 76) is displayed in a purple box.
    - Click on the **OK** button to dismiss the error window.
- The **Main OI Screen** (Figure 77) is displayed when the **Querying Database** notice quits (indicating that database has been queried and the results are being displayed).

16 Set timer intervals (for automatically refreshing the data displayed on the **Main OI Screen**) as described in the procedure for **Setting Timer Intervals** (subsequent section of this lesson).

Starting the PDSIS Operator Interface (PDSIS OI)

Starting the PDSIS Operator Interface (PDSIS OI) starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and the Distribution Technician has logged on to the PDS Server host and started the PDSOI as described in the procedure for **Starting the PDS Operator Interface (PDSOI)** (previous section of this lesson).

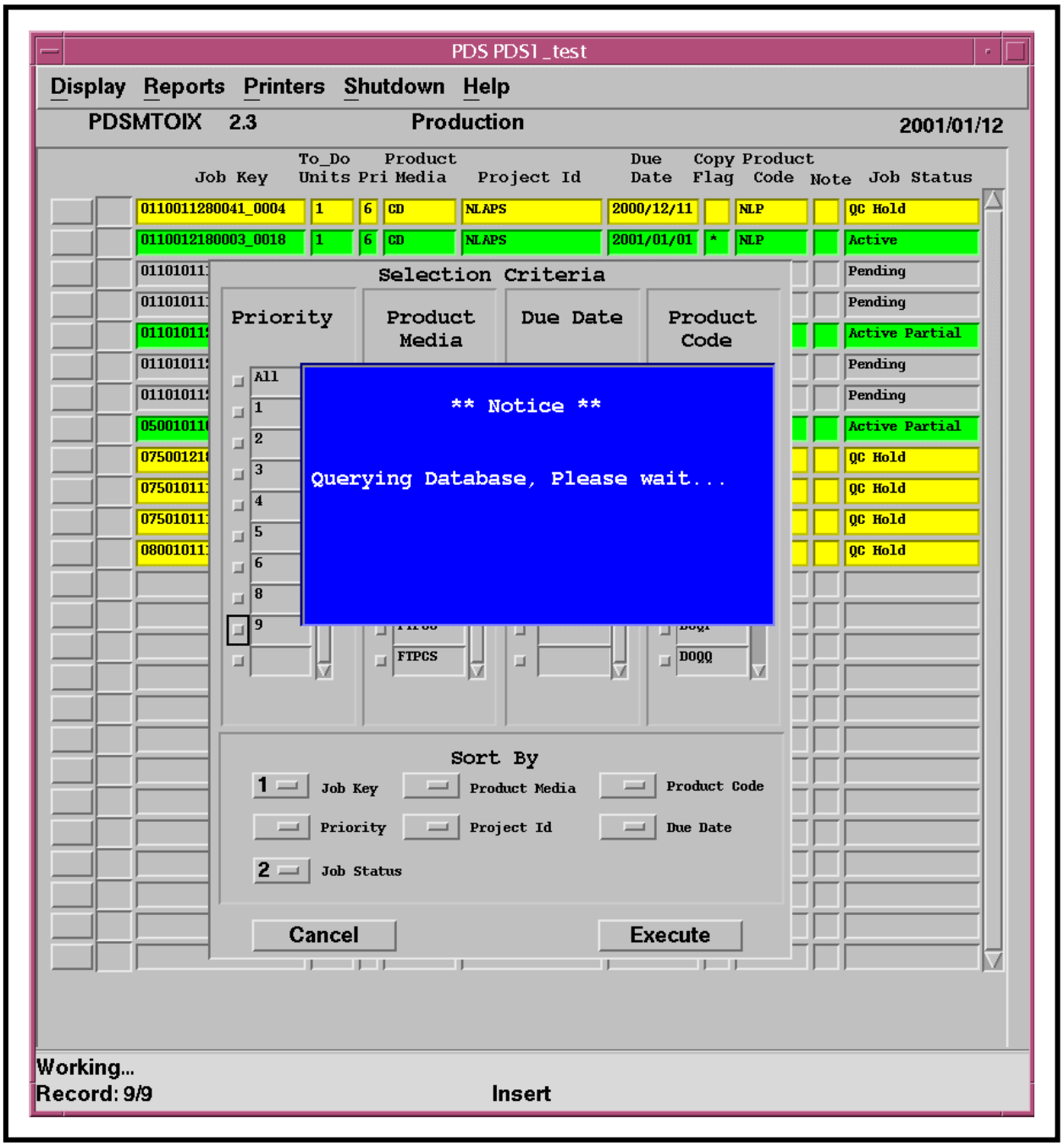


Figure 75. Querying Database Notice

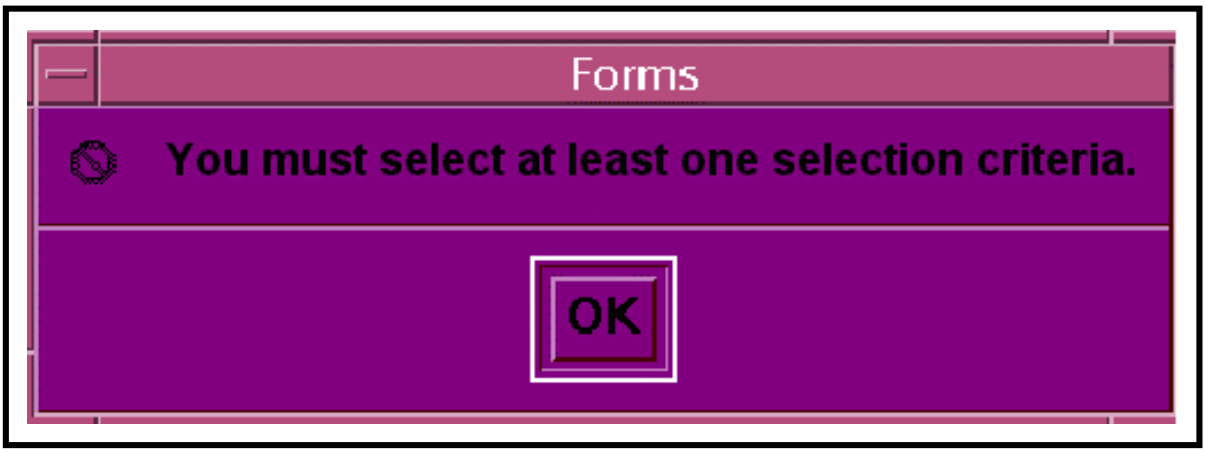
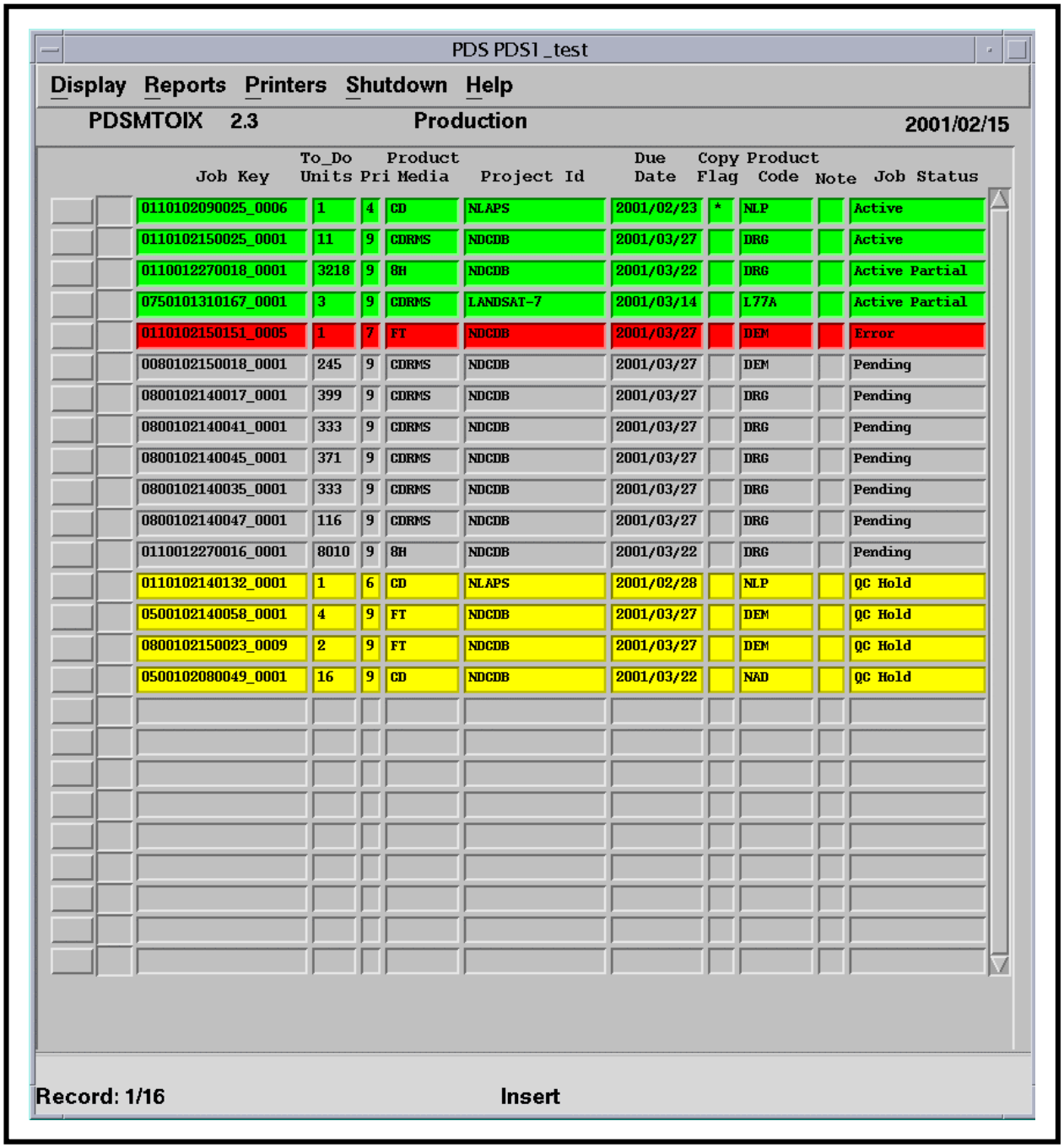


Figure 76. Selection Error Dialogue Box



Job Key	To_Do Units	Pri	Product Media	Project Id	Due Date	Copy Flag	Product Code	Note	Job Status
0110102090025_0006	1	4	CD	NLAPS	2001/02/23	*	NLP		Active
0110102150025_0001	11	9	CDRMS	NDCDB	2001/03/27		DRG		Active
0110012270018_0001	3218	9	8H	NDCDB	2001/03/22		DRG		Active Partial
0750101310167_0001	3	9	CDRMS	LANDSAT-7	2001/03/14		L77A		Active Partial
0110102150151_0005	1	7	FT	NDCDB	2001/03/27		DEM		Error
0080102150018_0001	245	9	CDRMS	NDCDB	2001/03/27		DEM		Pending
0800102140017_0001	399	9	CDRMS	NDCDB	2001/03/27		DRG		Pending
0800102140041_0001	333	9	CDRMS	NDCDB	2001/03/27		DRG		Pending
0800102140045_0001	371	9	CDRMS	NDCDB	2001/03/27		DRG		Pending
0800102140035_0001	333	9	CDRMS	NDCDB	2001/03/27		DRG		Pending
0800102140047_0001	116	9	CDRMS	NDCDB	2001/03/27		DRG		Pending
0110012270016_0001	8010	9	8H	NDCDB	2001/03/22		DRG		Pending
0110102140132_0001	1	6	CD	NLAPS	2001/02/28		NLP		QC Hold
0500102140058_0001	4	9	FT	NDCDB	2001/03/27		DEM		QC Hold
0800102150023_0009	2	9	FT	NDCDB	2001/03/27		DEM		QC Hold
0500102080049_0001	16	9	CD	NDCDB	2001/03/22		NAD		QC Hold

Figure 77. Main OI Screen

NOTE: Commands in Steps 1 and 2 are typed at a UNIX system prompt.

1 At the UNIX command line prompt type **cd** then press the **Return/Enter** key on the keyboard.

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID type **echo $PDSROOT** then press the **Return/Enter** key.

2 Type **pdsisoi** then press **Return/Enter**.

- The **PDSIS OI Main Screen** (Figure 78) is displayed.
  - It may take a few seconds for the window to be displayed.
  - The following information is displayed near the top of the screen:
    - Name of the Oracle Form (e.g., PDSISMTOIX).
    - Current version of the PDS (e.g., 1.0).
    - Database instance being run (e.g., PDSIS).
    - Current date.
- **pdsisoi** is an alias for a UNIX script (pdsisoi_prod.sh) that is used to start up the PDSIS OI.
  - The script is located in the "run" directory (e.g., /data1/pds_it/run).
  - The alias may vary somewhat depending on the site set-up.

Starting the PDS Job Monitor

The PDS **Job Monitor Main Window** is intended to run continually in conjunction with the PDS **Main OI Screen**.

Starting the PDS Job Monitor starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and the Distribution Technician has logged on to the PDS Server host and started the PDSOI.

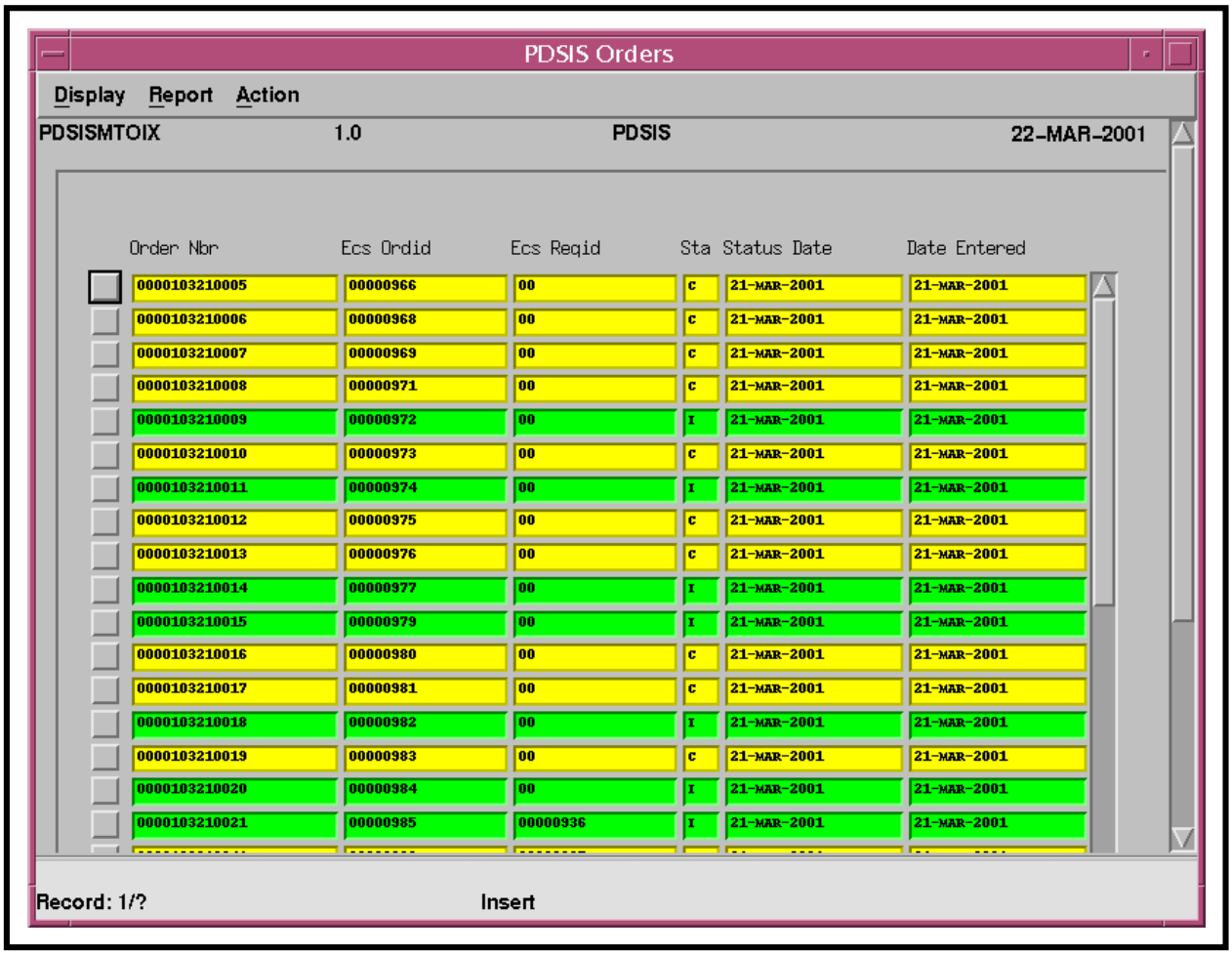


Figure 78. PDSIS Operator Interface (PDSIS OI) Main Screen

Starting the PDS Job Monitor

NOTE: Commands in Steps 1 and 2 are typed at a UNIX system prompt.

1 At the UNIX command line prompt type **cd** then press the **Return/Enter** key on the keyboard.

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID type **echo $PDSROOT** then press the **Return/Enter** key.

2 Type **cd jobmon** then press **Return/Enter**.

- Change to the "jobmon" subdirectory.

3 Type **jobmonitor &** then press **Return/Enter**.

- The **Job Monitor Main Window** (Figure 79) is displayed.
- The PDS **Job Monitor Main Window** is intended to run continually in conjunction with the PDS **Main OI Screen**.
- Hypothetically, there is no limit to the number of PDS Job Monitors that can be running at once; however, since the application consumes a small amount of resources, care should be taken to not run multiple instances excessively.

Starting the Rimage CD Production Software

The following Rimage CD production software programs have to be started on the Rimage personal computer (PC):

- Data Publisher.
- Production Server.

NOTE: A Network File System (NFS) mount is needed in order to see the job control directory (e.g., /pdssa/rimage_jobcontrol) on the PDS system. When the Windows NT system for the Rimage PC is set up, the PDS job control directory on the PDS Server host (e.g., x0dig06) is typically mapped to the PC's Z: drive. Data Publisher watches the job control directory looking for order files that describe data to be transferred (so they can be written to disk). The order files are identified by a ".ORD" extension, which indicates that data are ready to be transferred. Data Publisher transfers the data (i.e., image files) via ftp from PDSSA to the "CD-R_Images" folder (directory) on one of the Rimage PC hard disk drives (e.g., the E: drive) and changes the ".ORD" extension on the order file to a ".dn0" extension.

Starting the Rimage programs starts with the assumption that the Distribution Technician has logged on to the Rimage PC using an account that is valid on the PDS system.

Starting the Rimage CD Production Software

---

1 Double-click on the Data Publisher icon on the PC desktop.

- The program starts and a Data Publisher window is displayed on the PC.

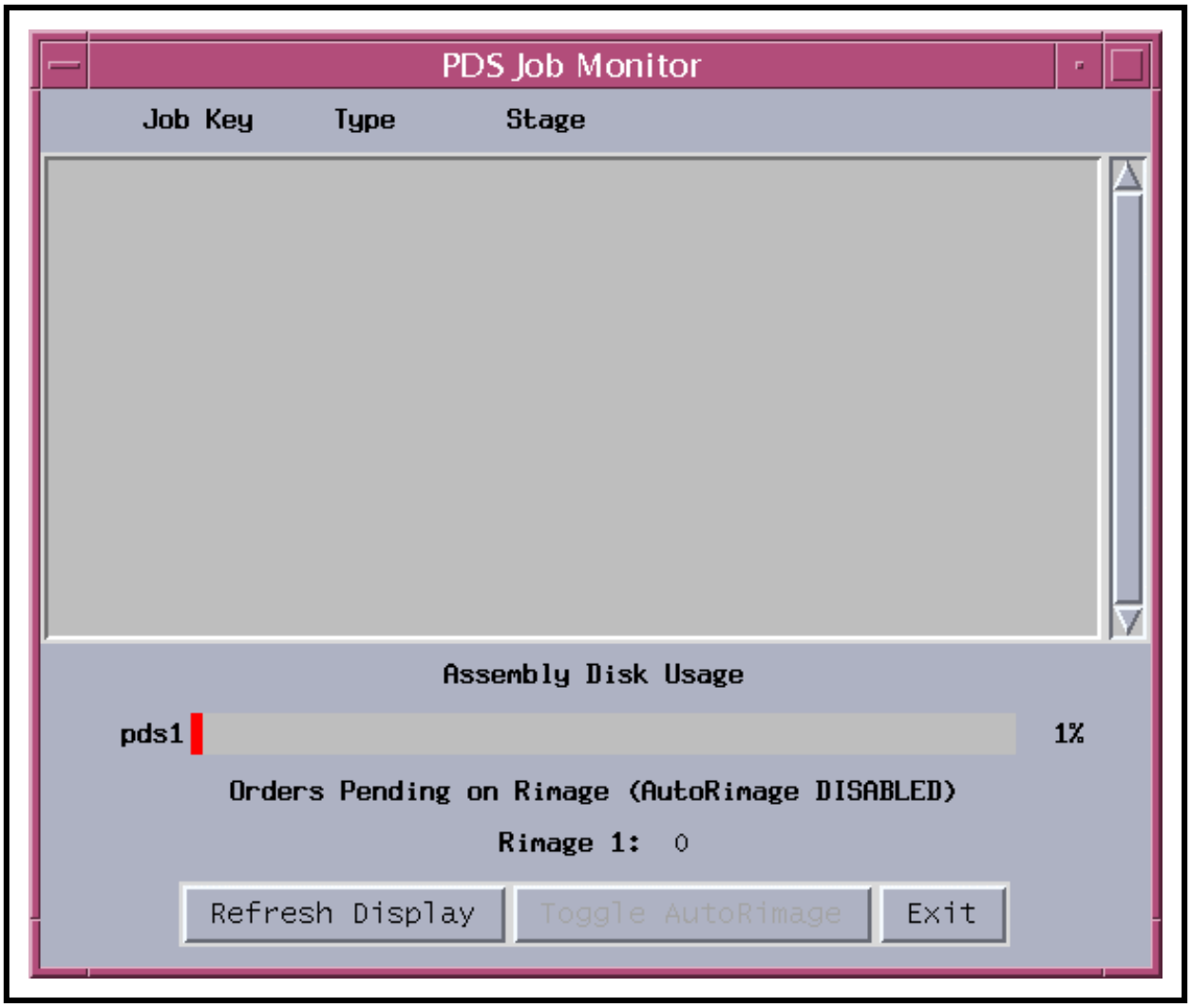


Figure 79. Job Monitor Main Window

- Data Publisher watches the job control directory looking for order files that describe data to be transferred (so they can be written to disk).
  - The order files are identified by a ".ORD" extension, which indicates that data are ready to be transferred.
- Data Publisher transfers data (i.e., image files) via ftp from PDSSA to the "CD-R_Images" folder (directory) on one of the Rimage PC hard drives (e.g., the E: drive) and changes the ".ORD" extension on the order file to a ".dn0" extension.

2 Double-click on the Production Server icon on the PC desktop.

- The program starts and a Production Server window is displayed on the PC.

- The Production Server does an initial hardware check on the Rimage CD/DVD burners, internal printer and the media carousel. The Production Server transfers data to disk media after Data Publisher has transferred the data onto one of the Rimage PC hard drives (e.g., the E: drive).

3 Click on the **Start** button in the Production Server window.

Starting the PDS Quality Check GUI

The **PDS Quality Check** GUI is intended to run continually in conjunction with the PDS **Main OI Screen**.

Starting the **PDS Quality Check** GUI starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and the Distribution Technician has logged on to the PDS Server host.

Starting the PDS Quality Check GUI

NOTE: Commands in Steps 1 through 3 are typed at a UNIX system prompt.

1 At the UNIX command line prompt type **cd $PDSROOT/run/verify** then press the **Return/Enter** key on the keyboard.

- Change the current directory to the "verify" subdirectory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID type **echo $PDSROOT** then press the **Return/Enter** key.

2 Type **EcPdSaQCGui &** then press **Return/Enter**.

- The **PDS Quality Check** GUI (Figure 80) is displayed.
- The **PDS Quality Check** GUI is intended to run continually in conjunction with the PDS **Main OI Screen**.

3 To check the printer selection click on **Printer** near the top of the **PDS Quality Check** GUI (Figure 80).

- A list of printers is displayed; for example:
  - x0dit09.
  - x0vch06.

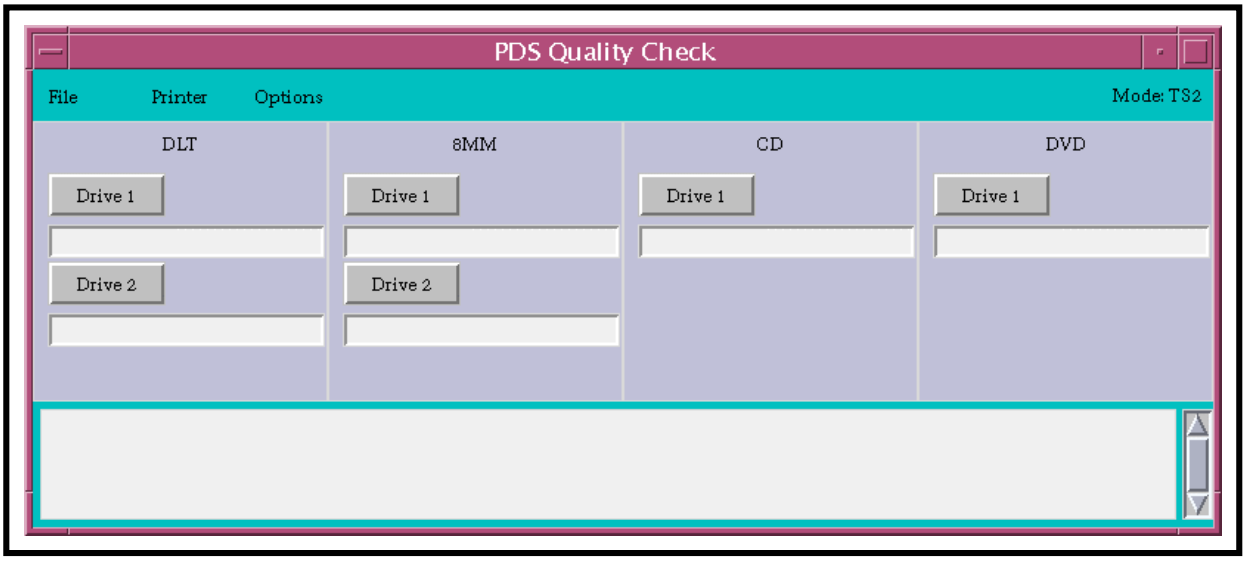


Figure 80. PDS Quality Check GUI

4 If checking the printer selection, verify that the proper printer has been selected to print verification reports.

- The shaded button next to a printer ID indicates which printer is the currently selected to print verification reports.
- Click on the button next to the proper printer if necessary.

5 To check the print options click on **Options** near the top of the **PDS Quality Check** GUI (Figure 80).

- The following options are displayed.
  - Print on Fail.
  - Print on Pass.
  - Test DLT's.

6 If checking the print options, verify that the proper option(s) has (have) been selected to print verification reports.

- The shaded box next to an option indicates that the option is currently selected.
- Multiple options are allowed.
- Click on the box next to each desired option if necessary.

Starting the PDS Maintenance Module

The PDS Maintenance Module contains Oracle Forms, which are used to look at and update the data within the database used by the PDSOI. The PDS **Maintenance Module** is intended to be run as it is needed to change data in certain fields in the database. It would not normally be running continuously.

Starting the PDS Maintenance Module starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and the Distribution Technician has logged on to the PDS Server host and started the PDSOI.

Starting the PDS Maintenance Module

NOTE: Commands in Steps 1 and 2 are typed at a UNIX system prompt.

1 At the UNIX command line prompt type **cd** then press the **Return/Enter** key on the keyboard.

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID type **echo $PDSROOT** then press the **Return/Enter** key.

2 Type **pds_maint** then press **Return/Enter**.

- The PDS **Maintenance Module Login Screen** (Figure 81) is displayed.
- **pds_maint** is an alias for a UNIX script (pdsmaint.sh) that is used to start up the PDS Maintenance Module.
  - The script is located in the $PDSROOT/run directory (e.g., /data1/pds_it/run).
  - The alias may vary somewhat depending on the site set-up.

3 Type ***userID*** in the **Username** field of the PDS **Maintenance Module Login Screen** then press **Tab**.

4 Type ***Password*** in the **Password** field of the PDS **Maintenance Module Login Screen** then press the **Return/Enter** key.

NOTE: It is not necessary to fill in the **Database** field on the PDS **Maintenance Module Login Screen**; it defaults to the correct database if left blank.

5 Click on the appropriate button from the following selections:

- **Connect** - to log in to the PDS Maintenance Module.
  - The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

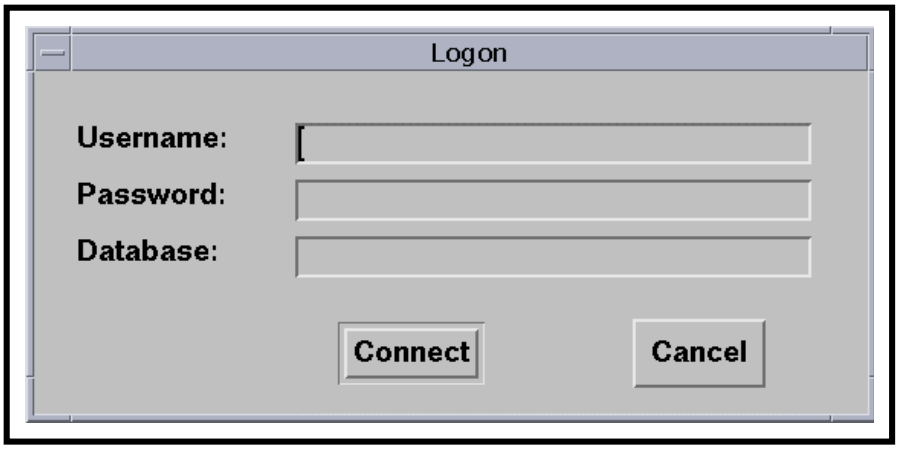


Figure 81. PDS Maintenance Module Login Screen

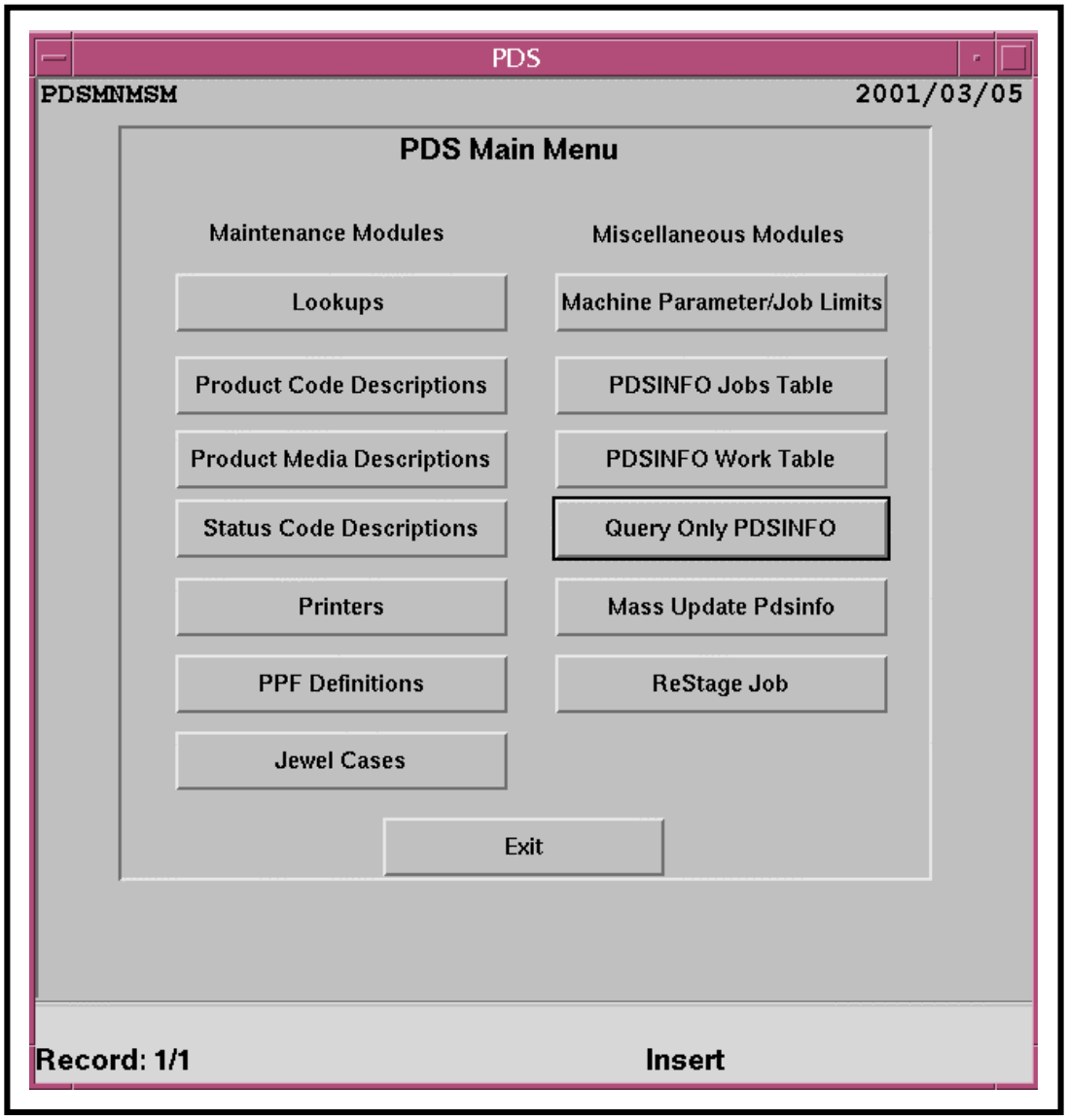


Figure 82. PDS Maintenance Module Main Menu

- **Cancel** - to dismiss the PDS **Maintenance Module Login Screen** (Figure 81) without logging in to the PDS Maintenance Module.

Starting the PDSIS Maintenance Module

The PDSIS Maintenance Module contains Oracle Forms, which are used to look at and update the data within the database tables used by the PDSIS OI. The **PDSIS Maintenance Module** is intended to be run as it is needed to change data in certain fields in the database. It would not normally be running continuously.

Starting the PDSIS Maintenance Module starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and the Distribution Technician has logged on to the PDS Server host and started the PDSIS OI.

Starting the PDSIS Maintenance Module

NOTE: Commands in Steps 1 and 2 are typed at a UNIX system prompt.

1 At the UNIX command line prompt type **cd** then press the **Return/Enter** key on the keyboard.

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID type **echo $PDSROOT** then press the **Return/Enter** key.

2 Type **pdsismaint** then press **Return/Enter**.

- The **PDSIS Maintenance Module Login Screen** is displayed (identical to the PDS Maintenance Module Login Screen in Figure 81).
- **pdsismaint** is an alias for a UNIX script (pdsismaint_*mode*.sh) that is used to start up the PDSIS Maintenance Module.
  - The script is located in the $PDSROOT/run directory (e.g., /data1/pds_it/run).
  - The alias may vary somewhat depending on the site set-up.

3 Type ***userID*** in the Username field of the PDSIS Maintenance Module Login Screen then press **Tab**.

4 Type ***Password*** in the **Password** field of the **PDSIS Maintenance Module Login Screen** then press the **Return/Enter** key.

NOTE: It is not necessary to fill in the **Database** field on the **PDSIS Maintenance Module Login Screen**; it defaults to the correct database if left blank.

5 Click on the appropriate button from the following selections:

- **Connect -** to log in to the PDSIS Maintenance Module.
  - The **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.
- **Cancel -** to dismiss the **PDSIS Maintenance Module Login Screen** (Figure 81) without logging in to the PDSIS Maintenance Module.

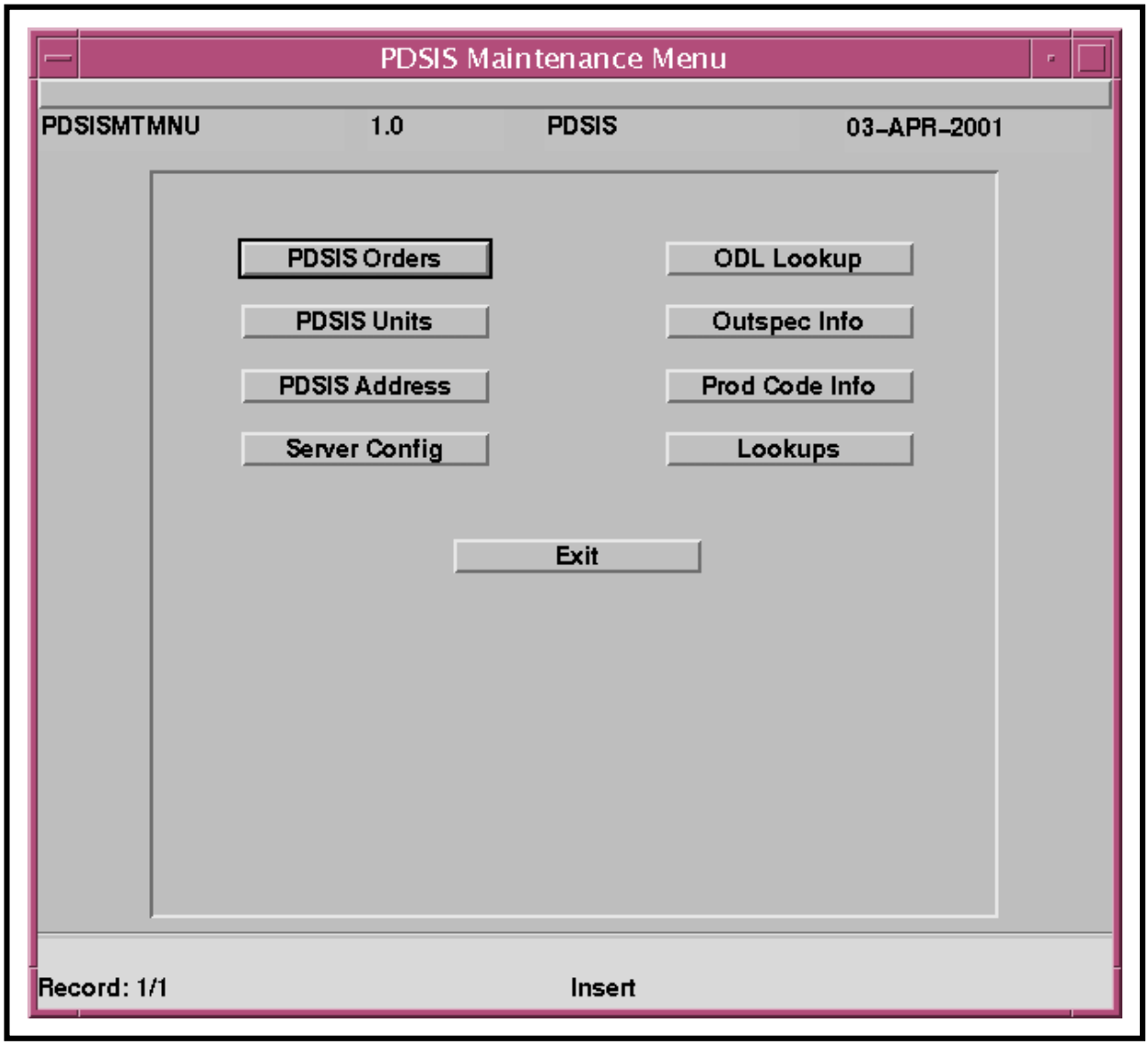


Figure 83. PDSIS Maintenance Module Main Menu

Shutting Down PDS

PDS Shutdown Activities

Shutting down PDS involves the following activities:

- Shutting down the PDS Maintenance Module (if it is running).
- Shutting down the PDS Job Monitor.
- Shutting down the PDS Operator Interface (PDSOI).
- Shutting down the Rimage CD production software.
- Shutting down the PDS Quality Check GUI.
- Shutting down the PDSIS Maintenance Module (if it is running).
- Shutting down the PDSIS Operator Interface (PDSIS OI)
- Shutting down the PDSIS Server.

Shutting down PDS is best done only after all executing PDS jobs have completed or are at a logical stopping point.

Shutting Down the PDS Maintenance Module

Shutting down the PDS Maintenance Module starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and either the PDS **Maintenance Module Main Menu** (Figure 82) or one of the maintenance modules is being displayed.

Shutting Down the PDS Maintenance Module

1 If one of the maintenance modules is being displayed, click on the **Exit** button at the bottom of the window.

- If the **Exit** button is not visible on the maintenance module form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.

- If the maintenance module window was dismissed, the PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

2 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, click on the appropriate button from the following selections:

- **Yes -** to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.
- **No -** to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

3 Click on the **Exit** button at the bottom of the PDS **Maintenance Module Main Menu** window.

- The PDS **Maintenance Module Main Menu** is dismissed.
- The PDS maintenance module has been shut down.

Shutting Down the PDS Job Monitor

Shutting down the PDS Job Monitor starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and the PDS **Job Monitor Main Window** (Figure 79) is being displayed.

Shutting Down the PDS Job Monitor

---

1 Click on the **Exit** button at the bottom of the **Job Monitor Main Window** (Figure 79).

- The **Job Monitor Main Window** (Figure 79) is dismissed.

Shutting Down the PDS Operator Interface (PDSOI)

Shutting down the PDS Operator Interface (PDSOI) starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and the PDS **Main OI Screen** (Figure 77) is being displayed.

1 Select **Shutdown** → **Stop All Jobs** from the pull-down menu.

- A yellow **Shutdown Confirmation** dialogue box (Figure 84) is displayed.

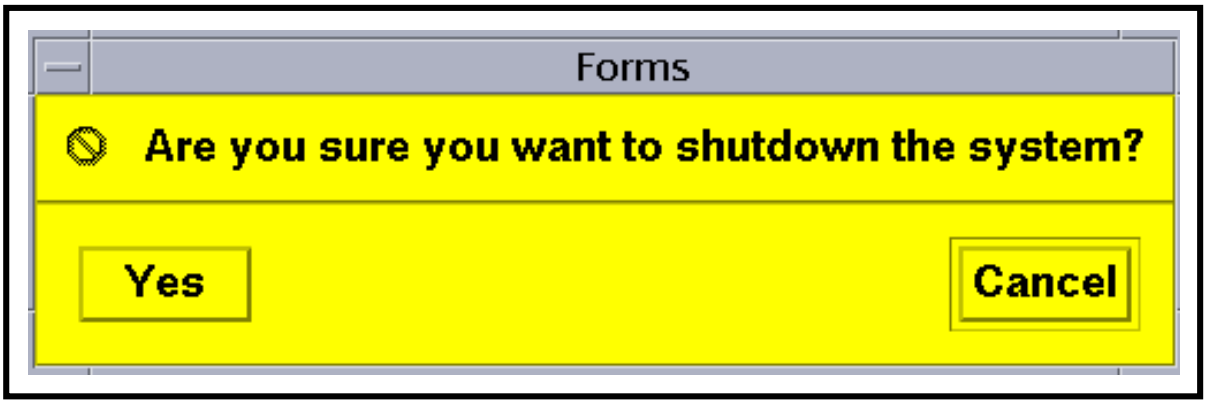


Figure 84. Shutdown Confirmation Dialogue Box

2 Click on the appropriate button from the following selections:

- **Yes** - to shut down the PDSOI and dismiss the **Shutdown Confirmation** dialogue box.
  - The message line at the bottom of the screen displays a message indicating that the system is in shutdown mode.
  - The OI stops checking the status of jobs or starting jobs; however, the products may continue to be produced and status files may be generated.
    - Any status files generated while the OI is shut down will not be processed until the OI is up and running.
- **Cancel** - to dismiss the **Shutdown Confirmation** dialogue box without shutting down the PDSOI.

Shutting Down the Rimage CD Production Software

Shutting down the Rimage CD production software starts with the assumption that the Rimage Data Publisher and Production Server windows are being displayed on the Rimage PC.

Shutting Down the Rimage CD Production Software

1 Click on the **X** in the box at the upper right-hand corner of the Rimage Production Server window.

- The Production Server window is dismissed.

2 Click on the **X** in the box at the upper right-hand corner of the Rimage Data Publisher window.

- The Data Publisher window is dismissed.

Shutting Down the PDS Quality Check GUI

Shutting down the **PDS Quality Check** GUI starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and the **PDS Quality Check** GUI (Figure 80) is being displayed.

Shutting Down the PDS Quality Check GUI

1 Select **File** → **Exit** from the pull-down menu on the **PDS Quality Check** GUI (Figure 80).

- The **PDS Quality Check** GUI (Figure 80) is dismissed.

Shutting Down the PDSIS Maintenance Module

Shutting down the PDSIS Maintenance Module starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and either the **PDSIS Maintenance Module Main Menu** (Figure 82) or one of the PDSIS maintenance modules is being displayed.

Shutting Down the PDSIS Maintenance Module

1 If one of the PDSIS maintenance modules is being displayed, click on the **Exit** button at the bottom of the window.

- If the **Exit** button is not visible on the maintenance module form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.

- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.

2 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, click on the appropriate button from the following selections:

- **Yes -** to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.
- **No -** to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.

3 Click on the **Exit** button at the bottom of the **PDSIS Maintenance Module Main Menu** window.

- The **PDSIS Maintenance Module Main Menu** is dismissed.
- The PDSIS maintenance module has been shut down.

Shutting Down the PDSIS Operator Interface (PDSIS OI)

Shutting down the PDSIS Operator Interface (PDSIS OI) starts with the assumption that the applicable servers (e.g., the Oracle DBMS server) are running and the **PDSIS OI Main Screen** (Figure 78) is being displayed.

Shutting Down the PDSIS Operator Interface (PDSIS OI)

---

1 Select **Action** → **Shutdown** from the pull-down menu.

- The **PDSIS OI** is shut down.

Shutting down the PDSIS Server

On rare occasions it may be necessary to shut down the PDSIS Server. Shutting down the PDSIS Server starts with the assumption that the Distribution Technician has logged in to the ECS system.

Shutting down the PDSIS Server

NOTE: A **PDSIS** user ID (e.g., **pdsis**, **pdsis_ts1**, or **pdsis_ts2**) is used in this procedure.

1 Log in to the PDS Server host using the appropriate PDSIS user ID for the operating mode being used.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- PDSIS user IDs are **pdsis**, **pdsis_ts1**, and **pdsis_ts2**, which are used for PDSIS operations in the OPS, TS1, and TS2 modes respectively.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 To identify the PDSIS Server that is running, at the UNIX command line prompt type **ps -ef | grep java | grep *userID*** then press **Return/Enter**.

- For example:

  ps -ef | grep java | grep pdsis_ts2

- The following type of message is displayed if the PDSIS Server is running:

  pdsis_ts 26947322 1 0 16:03:56 ? 1:52 /usr/java/bin/../bin32/sgi/native_threads/java -classpath /data1/pdsis_ts2/lib/

3 At the UNIX command line prompt type **kill -15 *processID*** then press the **Return/Enter** key on the keyboard.

- For example:

  kill -15 26947322

  – The command would kill the process in the example in Step 2.

- The PDSIS Server process should be terminated.

4 To verify that the PDSIS Server is no longer running, at the UNIX command line prompt type **ps -ef | grep java | grep *userID*** then press **Return/Enter**.

- For example:

  ps -ef | grep java | grep pdsis_ts2

- If the process is still running (if the same message as that received in Step 2 is displayed), return to Step 3 and use **kill –9** (kill) instead of **kill -15** (terminate).

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Monitoring/Controlling Product Processing Using PDS

PDSSA Monitoring Activities

Monitoring/controlling product processing using PDS (PDSSA) involves the following activities (among others):

- Determining the status of a job and/or taking action with respect to a job (using the Main OI Screen).
- Determining the status of units associated with a particular job or taking action with respect to units associated with a particular job (using the OI Detail Screen).
- Activating a job.
- Stopping a job[suspending a job] using the Main OI Screen display.
- Terminating a job using the Job Monitor Main Window.
- Responding to a status of QC-Hold (performing a QC check or verification).
- Completing a job.
- Entering notes about a job.
- Promoting a job.
- Generating PDS production reports.

PDS activities are monitored and controlled using the **Main OI Screen** (Figure 77), the **OI Detail Screen** (Figure 85), the **Job Monitor Main Window** (Figure 79) and the **PDS Quality Check** GUI (Figure 80).

The **Main OI Screen** (Figure 77) displays the following items for each individual PDS job:

- Action Button [not labeled].
  - Allows access to a list of actions that can be taken with respect to the job.
- Job Stopped [not labeled].
  - "STOP" is displayed in the field if the job has been stopped.
- Job Key.
  - Unique label for the job composed of the order number, an underscore and a zero-padded unit number of the first unit of the job.

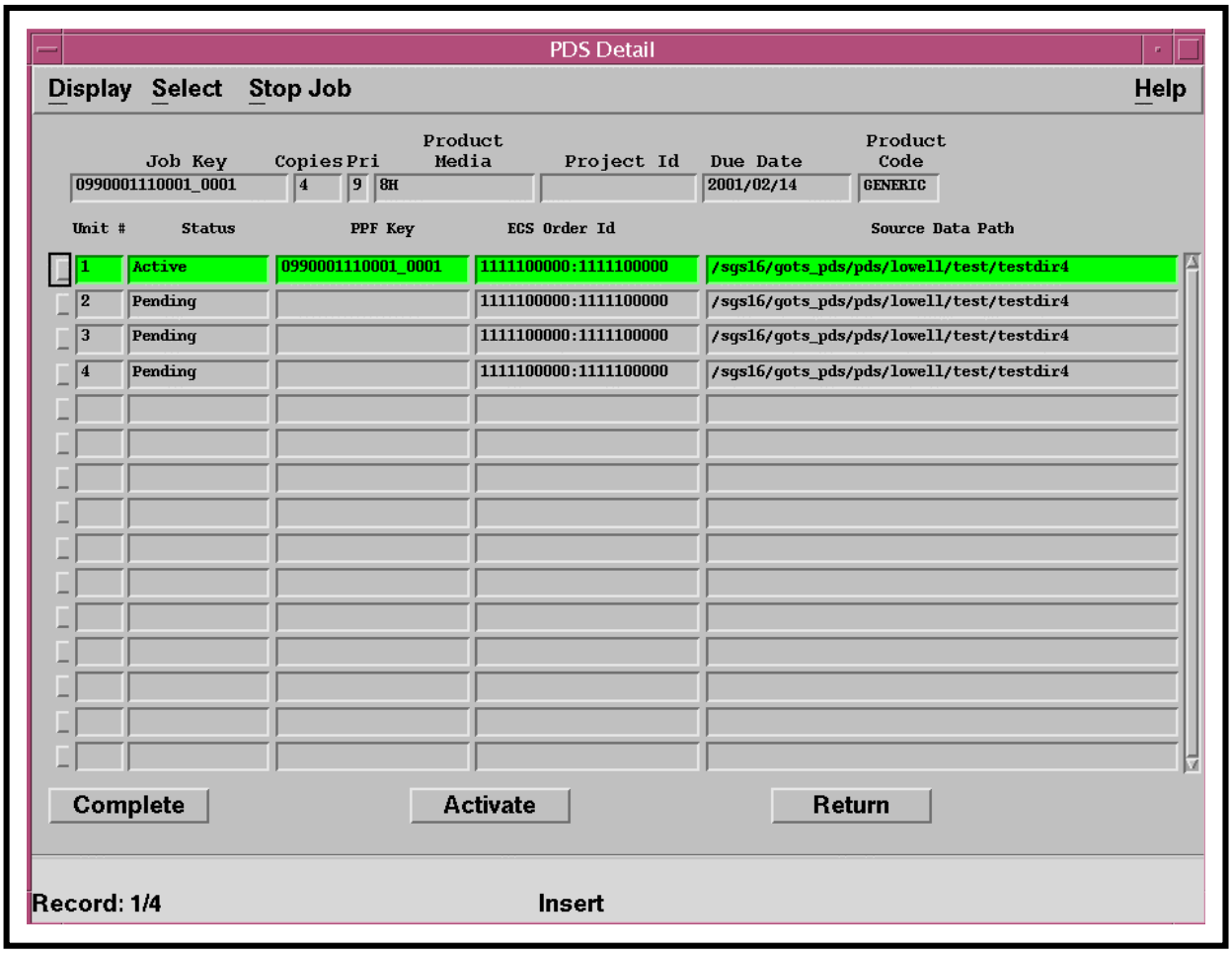

Figure 85. OI Detail Screen

- To_Do Units.
  - Number of units left in the job in either a pending, active or status of QC-Hold state.
- Pri.
  - Priority of the job from 1 to 9, with "1" the highest priority.
- Product Media.
  - The pds_description of the output specifications.
- Project Id.
  - An optional field that indicates whether there is a particular project associated with the job.

- Due Date.
  - Date that the order is due to the customer.
- Copy Flag.
  - An “*” is displayed if the total number of copies does not equal the total number of units. (Used if multiple copies are needed for a specific unit.)
- Product Code.
  - The pds_description of the product code.
- Note.
  - An “*” is displayed if there is a current note for the job.
- Job Status.
  - Status of the job.

The **OI Detail Screen** (Figure 85) displays the following items for the selected individual PDS job:

- Job Key.
  - The dynamically generated identifier tying the units in the job together.
- Copies.
  - Number of copies the customer wants for each unit.
- Pri.
  - Priority code for the job.
- Product Media.
  - PDS's description of the output specifications.
- Due Date.
  - Date that the job needs to be delivered to the customer.
- Product Code.
  - PDS's description of the product code.

The **OI Detail Screen** (Figure 85) displays the following items for each unit within the selected PDS job:

- "Select" button [not labeled].
  - Used for selecting or deselecting each individual unit to which an action (e.g., "Activate") will be applied.
- Unit # .
  - Unit number.
- Status.
  - PDS's description of the status.
- PPF Key.
  - Blank if the unit is in pending status; otherwise the PPF Key for the unit is displayed.
  - Ties to the .ppf file used during the product generation process.
  - Composed of the order number, an underscore and the zero-padded unit number.
- ECS Order ID.
  - ECS Order Id. (blank if there is no ECS Order ID in the PDT_PDSINFO table).
- Source Data Path.
  - Location of the source data needed to produce the customer's product.
  - Could be either a media storage identifier in the digital archive or a storage location on a mass media device or a location on a remote machine.

The **Job Monitor Main Window** (Figure 79) displays the following types of information:

- Running Jobs.
  - Job Key.
  - Type [of product].
  - Stage.
    - What the job is currently doing (if the information is available).
- Assembly Disk Usage.
  - Graphical displays of the free space remaining on the PDS assembly and ftp staging disks.

- Intended to give the operator advance warning when one (or more) of the disks is running low on available space.

- Rimage Pending Orders.
  - Displays how many orders are pending on the Rimage systems.
    - Refers to how many CD images are *waiting* to be pulled over to the Rimage system; it does *not* refer to the number of jobs that are actually active on the Rimage itself.
    - Useful when balancing the distribution of jobs among Rimage systems.
    - Displays whether PDS's AutoRimage mode is enabled or disabled.

The **PDS Quality Check** GUI (Figure 80) displays the following types of information:

- Drives available for or in use performing verification of disks and tapes.

Monitoring/Controlling Product Processing Using PDS

The procedure for monitoring/controlling product processing using PDS starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77), the **Job Monitor Main Window** (Figure 79), and the **PDS Quality Check** GUI (Figure 80) are being displayed.

Monitoring/Controlling Product Processing Using PDS

---

1 To set timer intervals (for automatically refreshing the data displayed on the **Main OI Screen**) perform the procedure for **Setting Timer Intervals** (subsequent section of this lesson).

2 Observe information displayed on the **Main OI Screen** (Figure 77).

- The following items are displayed on a **job line** for each individual PDS job:
  - Action Button [not labeled].
  - Job Stopped [not labeled].
  - Job Key.
  - To_Do Units.
  - Pri.
  - Product Media.
  - Project Id.

- Due Date.
- Copy Flag.
- Product Code.
- Note.
- Job Status.

- Each **job line** display is color-coded to draw attention to job status. The colors are interpreted as follows:
  - Red Either **Error** or **Error-Partial** status.
    - Error indicates that all units in the job are in error.
    - Error Partial indicates that part of the job is in error and there are no actives or QC-holds.
  - Green Either **Active** or **Active-Partial** status.
    - Active indicates that all units in the job are active.
    - Active-Partial indicates that part of the job is active.
  - Yellow Either **QC-Hold** or **QC-Hold-Partial** status.
    - QC-Hold indicates that all units in the job are in QC-hold.
    - QC-Hold-Partial indicates that part of the job is in QC-hold and there are no actives.
  - Grey **Pending** status.
    - Pending indicates that all units in the job are pending.
- If there are more records than can be displayed on the screen, use the scroll bar on the right hand side of the form to view the additional records.
- Selecting **Display** → **Refresh** from the pull-down menu provides a means of updating the data on the screen from the database without having to wait for the interval set on the timer.
- Selecting **Display** → **Repaint** from the pull-down menu causes the entire screen (borders, buttons, and data) to be redrawn without accessing the database for data.
  - The **Repaint** option is used in case the window becomes garbled.
- The **status line** at the bottom of the screen displays information about the form (for example, the status line in Figure 77 displays “Record: 1/16” and “INSERT").

- The **message line** near the bottom of the screen (just above the **status line**) displays informational messages and error messages pertinent to what is happening on the form.
  - For example, Figure 75 shows an informational message ("Working…").
  - Messages are displayed on the screen as long as they are pertinent.
- Selecting **Help → On Form** from the pull-down menu causes a web browser to pop up in another window, positioned to the start of the document about the Operator Interface.
- Selecting **Help → Show Error** from the pull-down menu causes a message to be displayed on the **message line** stating the last error encountered.
  - Frequently a "No errors encountered recently" message is displayed in response to the Show Error option.
- Selecting **Reports → Queue** from the pull-down menu causes the printing of a report that contains the data currently being displayed on the **Main OI Screen**.
  - The report is printed on the designated report printer.

3 If the list of jobs on the **Main OI Screen** needs to be filtered and/or sorted, perform the procedure for **Specifying Job Selection Criteria** (subsequent section of this lesson).

4 If more specific information is required or action should be taken with respect to units associated with a particular job, perform the procedure for **Using the OI Detail Screen** (subsequent section of this lesson).

5 Observe information displayed on the **Main OI Screen** (Figure 77) and **Job Monitor Main Window** (Figure 79).

- Refer to Step 2 for a description of features on the **Main OI Screen**.
- For each individual PDS job that is running the following items are displayed on a **running jobs** line on the **Job Monitor Main Window**:
  - Job Key.
  - Type [of product].
  - Stage.
- The following values are among those that may be displayed in the **Stage** field (based on data from the job log) on the **Job Monitor Main Window**:
  - **Unknown** - does not mean that there is anything wrong; it simply means that the job monitor was unable to determine what a particular job is currently doing.

- **Initializing -** getting job parameters from the PPF file, setting up data structures, and doing whatever else is required before the job can actually start producing the output media.
- **Retrieving Data From *Source* -** indicates that the job is assembling the data for the product.
  - The source varies depending on the type of product it is.
  - The stage may take quite some time, particularly for orders coming off peak loads systems.
- **Making Browse Image -** (for satellite and other types of raster data that require small browse images on the CD insert label) indicates that PDS is subsampling the image data and creating the browse image.
  - Typically does not take a large amount of time, although for sizable multi-scene Landsat-7 data, it can be a fairly lengthy process.
- **Waiting For Drive Selection -** currently waiting for the operator to respond to the **Media Drive Selection** window to select a tape drive or a CD writer.
  - The job has retrieved all data for the product.
  - If a job is in this stage but no selection window is visible, it may be "hidden" behind another window.
  - After locating the **Media Drive Selection** window go to Step 4 of the procedure for **Activating a Job** (subsequent section of this lesson).
- **Writing Data To *Tape Drive* -** currently writing the product to the specifically named tape drive.
- **Making ISO9660 Image(s) -** generating "raw" CD image files that will be passed to the Rimage systems for CD generation.
  - May be a somewhat lengthy process, depending on the size of the job and the load on the system.
- **Waiting For *Rimage* Status -** product has been submitted to the Rimage machine chosen by the operator and the job is waiting for the completion of the output CD(s).
  - May be a lengthy process depending on product size and/or system load.
- **Cleaning Up -** PDS is cleaning up the job after having generated the product media.
  - Generally involves removing the assembly directory from $PDSASSM, writing status and summary files, and removing the Rimage order files.

- The following items are displayed in the **Assembly Disk Usage** section of the **Job Monitor Main Window**:
  - Assembly disk usage bars, which display (graphically) the free space remaining on the PDS assembly staging disks.
    - Provide advance warning when one (or more) disk(s) is (are) running low on available space.
    - Disk bar changes color to yellow if the disk becomes unavailable for some reason.
    - If disk space becomes low, perform the procedure for **Responding to Low Disk Space** (subsequent section of this lesson).
- Clicking on the **Refresh Display** button near the bottom of the **Job Monitor Main Window** causes the job monitor to requery the status of running jobs and display the data.
  - Every two minutes the PDS Job Monitor provides an automatic update to the information displayed in the running jobs listbox, assembly disk usage bars, and Rimage pending orders sections.
- The **Toggle AutoRimage** button is for use with systems that have multiple Rimage units.
  - AutoRimage should be **disabled** at sites that have a single Rimage unit.

6 If it becomes necessary to perform any of the following actions, go to the corresponding procedure (subsequent sections of this lesson):

- **Setting Timer Intervals** (to set the amount of time between refresh events for the OI Main Screen and/or the amount of time between episodes of processing the status files from the product generation code).
- **Specifying Job Selection Criteria** (to specify the selection and sorting criteria for jobs to be displayed on the OI Main Screen).
- **Using the OI Detail Screen** (to determine the status of units associated with a particular job or take action with respect to units associated with a particular job).
- **Activating a Job** (to activate a job).
- **Stopping a Job Using the Main OI Screen Display** (to suspend processing of a job).
- **Terminating a Job Using the Job Monitor Main Window** (to halt processing of a job, typically in preparation for returning it to a “Pending” status).
- **Responding to a Status of QC-Hold (Performing a QC Check or Verification)** (to perform a QC check or media verification).

- **Completing a Job** (to complete a job after a QC check).
- **Entering Notes about a Job** (to enter comments or notes about a job).
- **Promoting a Job** (to process a job ahead of other jobs).
- **Canceling a Job** (not supported by the operator tools).
- **Generating PDS Production Reports** (to generate PDS reports).
- **Selecting an Alternate Printer** (to select an alternate printer for printing reports or jewel cases).
- **Troubleshooting PDS Problems** (to troubleshoot problems/failures affecting product processing).

7 Repeat Steps 3 through 6 as necessary to monitor/control jobs.

8 If it becomes necessary to shut down the Job Monitor, click on the **Exit** button at the bottom of the **Job Monitor Main Window** (Figure 79).

- The **Job Monitor Main Window** (Figure 79) is dismissed.

9 If it becomes necessary to shut down the operator interface, perform the procedure for **Shutting Down the PDS Operator Interface** (previous section of this lesson).

Setting Timer Intervals

The procedure for **Setting Timer Intervals** is performed as part of the procedure for **Monitoring/Controlling Product Processing Using PDS** (preceding section of this lesson). The **Main OI Screen Display** menu provides the Distribution Technician with a means of setting timer intervals. There are two timers that the technician can set:

- Refresh Timer.
  - Amount of time (in minutes) between refresh events for the **OI Main Screen**.
- Status Timer.
  - Amount of time (in minutes) between episodes of processing the status files from the product generation code.

Timer changes do not affect the default values for the timers. The changed values are in effect until they are changed again or a shutdown occurs. The default values in the database are used each time the OI is started up.

The procedure for setting timer intervals starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed.

1 Select **Display** → **Timers** from the pull-down menu.

- The **Set Timer Intervals** dialogue box (Figure 86) is displayed.

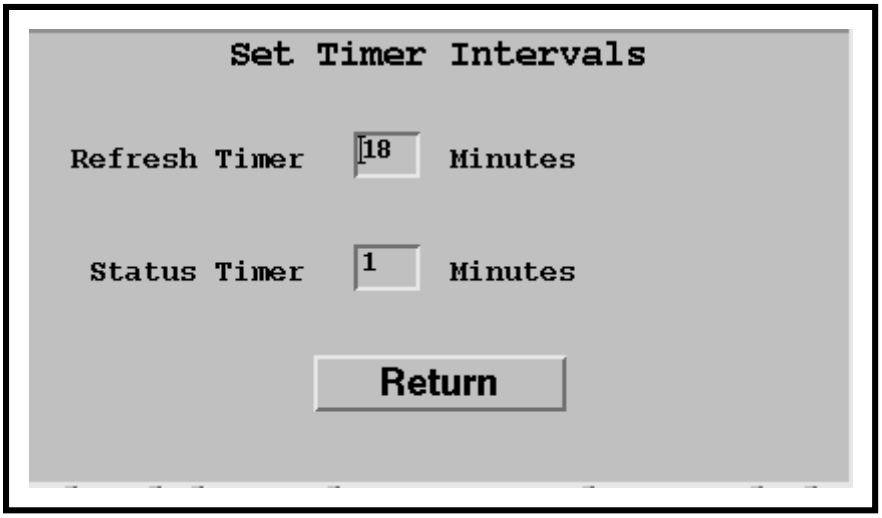

Figure 86. Set Timer Intervals Dialogue Box

2 To change the refresh timer setting type the desired value (in minutes) in the **Refresh Timer** field.

3 To change the status timer setting type the desired value (in minutes) in the **Status Timer** field.

4 When the appropriate data have been entered in the **Set Timer Intervals** dialogue box fields, click on the **Return** button.

5 Return to the procedure for **Monitoring/Controlling Product Processing Using PDS**.

Specifying Job Selection Criteria

The procedure for **Specifying Job Selection Criteria** is performed as part of the procedure for **Monitoring/Controlling Product Processing Using PDS** (preceding section of this lesson). The jobs to be displayed on the **Main OI Screen** (Figure 77) can be selected and/or sorted using the **PDSOI Selection Criteria Screen** (Figure 87). The selection can be done on the basis of the following criteria, either individually or in combination:

- Priority.
- Product Media [type].
- Due Date.
- Product Code.

Jobs can be sorted on the following fields, either individually or in combination:

- Job Key.
- Priority.
- Job Status.
- Product Media.
- Project Id.
- Product Code.
- Due Date.

The procedure for specifying job selection criteria starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Specifying Job Selection Criteria

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1 Select **Display** → **Data/Sort** from the pull-down menu.

- The **PDSOI Selection Criteria Screen** (Figure 87) is displayed.

2 If all priorities are to be displayed on the PDSOI, verify that the All toggle button is selected in the Priority area.

- Click on the **All** button to change state from unselected to selected or vice versa.
  - When the **All** option is selected, the **All** button has a depressed or sunken appearance rather than a raised appearance.
- Proceed to Step 4.

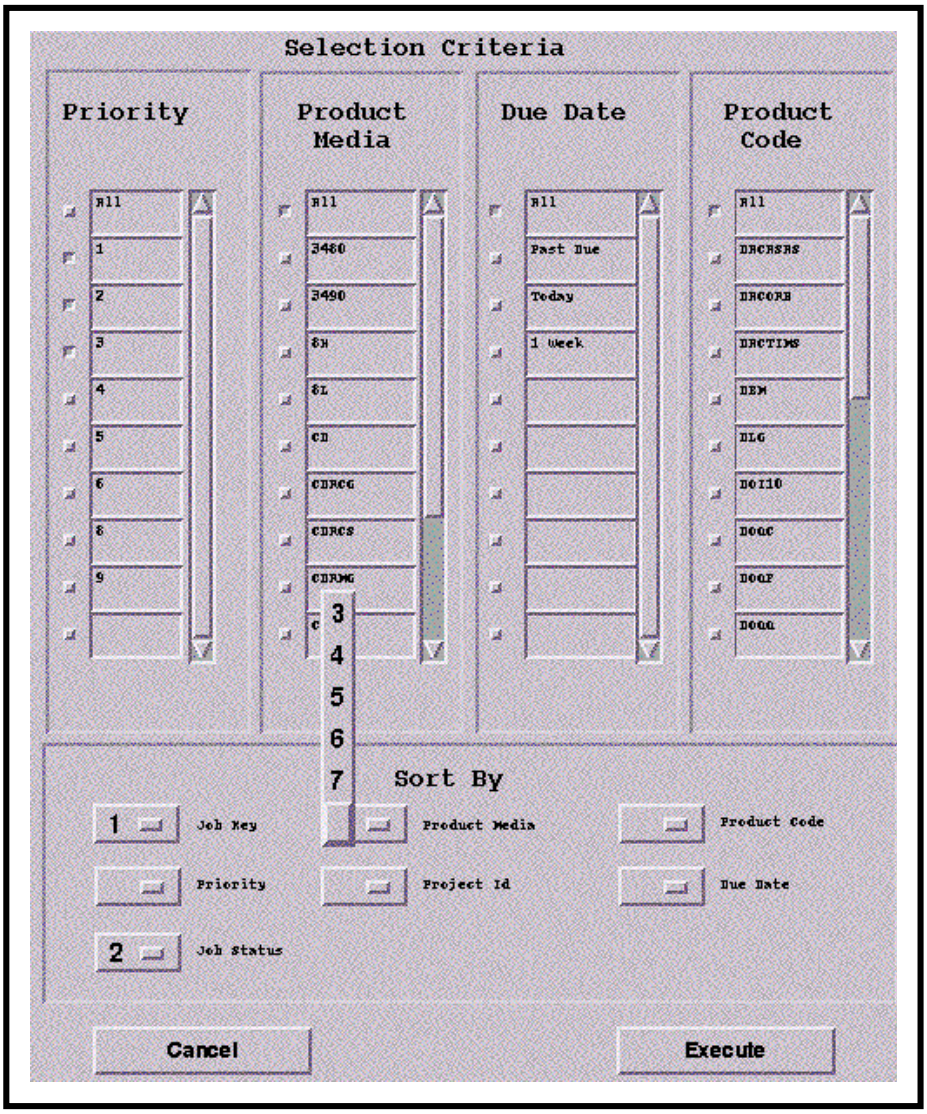

Figure 87. PDSOI Selection Criteria Screen

3 If selecting a particular priority or set of priorities to be displayed on the **PDSOI**, click on the toggle button(s) corresponding to the desired priority(ies) in the **Priority** list.

- Priority meanings might be assigned (in the database) as follows (for example):

1 -	**Emergency -**	Eight-hour turn-around required.
2 -	**High Priority -**	Less than 24-hour turn-around.
3 -	**Priority -**	Turn around in less than five working days.
4 - 6 -	**Rush -**	Two-week turn-around.

7 - 9 - Standard Orders - Four- to six-week turn-around.

- One button or several buttons may be selected.
- Buttons have a depressed or sunken appearance rather than a raised appearance when selected.

4 If all product media types are to be displayed on the **PDSOI**, verify that the **All** toggle button is selected in the **Product Media** area.

- Click on the **All** button to change state from unselected to selected or vice versa.
- Proceed to Step 6.

5 If selecting a particular product media type or set of product media types to be displayed on the **PDSOI**, click on the toggle button(s) corresponding to the desired product media type(s) in the **Product Media** list.

- Product media types might be defined (in the database) as follows (for example):

  CD - CDROM.

  8H - 8mm tape.

  D7 - DLT.

  DVD - DVD.

- One button or several buttons may be selected.

6 If all due dates are to be displayed on the **PDSOI**, verify that the **All** toggle button is selected in the **Due Date** area.

- Click on the **All** button to change state from unselected to selected or vice versa.
- Proceed to Step 8.

7 If selecting a particular due date or set of due dates to be displayed on the **PDSOI**, click on the toggle button(s) corresponding to the desired due date(s) in the **Due Date** list.

- The following types of due date choices might be available (for example):

  Past Due.

  Today.

  1 Week.

- One button or several buttons may be selected.

8 If all product codes are to be displayed on the **PDSOI**, verify that the **All** toggle button is selected in the **Product Code** area.

- Click on the **All** button to change state from unselected to selected or vice versa.
- Proceed to Step 10.

9 If selecting a particular product code or set of product codes to be displayed on the **PDSOI**, click on the toggle button(s) corresponding to the desired product code(s) in the **Product Code** list.

- One button or several buttons may be selected.

10 Click and **hold** the appropriate **Sort By** option button to display a list of numbers indicating the order in which the sort criteria should be evaluated, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

- The following **Sort By** option buttons are available for indicating the order in which job information should be displayed on the **PDSOI**:
  - **Job Key** - Jobs will be sorted by job key on the screen.
  - **Priority** - Jobs will be sorted by priority on the screen (higher-priority jobs are displayed before lower priority jobs).
  - **Job Status** - Jobs will be sorted by status [jobs with a particular status are shown together on the screen (this is most commonly selected as Number 1)].
  - **Product Media** - Jobs will be sorted by Product Media type.
  - **Project Id** - Jobs will be sorted by Project Id. This is an optional field, so all jobs with a null Project Id would be sorted together.
  - **Product Code** - Jobs will be sorted by Product Code, keeping orders of a certain Product Code together.
  - **Due Date** - Jobs will be sorted by Date Due, displaying jobs with a closer Due Date before those with a later Due Date.
- Selected sort order number is displayed on the selected **Sort By** option button when the mouse button is released.
- It is not possible to select a sort order number for a sorting category if the number has already been assigned to another category.
  - For example, if Job Status was assigned Number 1, Product Media cannot be assigned Number 1 as well. If jobs should be sorted by Product Media first, it is necessary to change the Job Status assignment to some (unused) number other than one (1) then one (1) can be assigned to Product Media.

11 Repeat Step 10 as necessary to assign sorting order to additional categories.

- It is possible to select more than one **Sort By** item.
- If more than one **Sort By** option is selected the jobs will be selected by the sort order for the selection assigned Number 1, then within that sort order they would be sorted by the category assigned Number 2, etc.
  - For example, if Job Status were assigned the first sort order (1) and Due Date were assigned the second sort order (2), the jobs would be sorted by Job Status, then within each status the jobs would be sorted by Due Date. So the jobs containing the same status would be displayed together with the earliest due date for each status at the top of the list for that status.

12 Click on the appropriate button from the following selections:

- **Execute -** to query the database for the specified selections and dismiss the **PDSOI Selection Criteria Screen**.
  - A **Querying Database** notice (Figure 75) is displayed temporarily in a blue box.
    - The **message line** at the bottom of the screen displays "Working" while the **Querying Database** notice is being displayed.
    - If there are status files waiting to be read, another blue box may be displayed indicating "Reading Status files. Please wait…"
  - If no selection criteria were selected, a **Selection Error Dialogue** (Figure 76) is displayed in a purple box.
    - Click on the **OK** button to dismiss the error window.
  - The **Main OI Screen** (Figure 77) is displayed when the **Querying Database** notice quits (indicating that database has been queried and the results are being displayed).
- **Cancel -** to dismiss the **PDSOI Selection Criteria Screen** without specifying any selection or sorting criteria.
  - The **Main OI Screen** (Figure 77) is displayed with the original selection/sorting criteria results.

13 Return to the procedure for **Monitoring/Controlling Product Processing Using PDS**.

Using the OI Detail Screen

The procedure for **Using the OI Detail Screen** is performed as part of the procedure for **Monitoring/Controlling Product Processing Using PDS** (preceding section of this lesson). The **OI Detail Screen** provides the Distribution Technician with a means of accomplishing the following objectives:

- Obtaining specific information with respect to units associated with a particular job.
- Taking action with respect to units associated with a particular job.

The procedure for using the **OI Detail Screen** starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Using the OI Detail Screen

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1 Click on the action button at the beginning of the job line for the relevant job.

- The **Action List** box (Figure 88) is displayed.

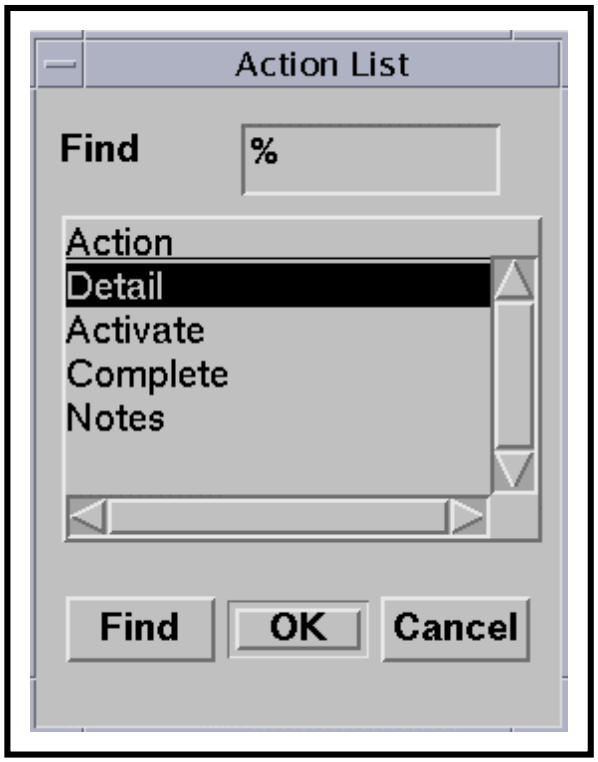

Figure 88. Action List Box

NOTE: It is recommended that the operator not stay in the Detail window for long periods of time because the processing initiated by the Main screen timers will not occur while the Detail window is open. If the Detail window is left open for a long time, the amount of processing that might occur when the Detail window was closed and control returned to the Main screen could be extensive and might cause the Main screen to be inactive for quite a period of time.

- Not all actions are available for every job.
  - The available actions depend on the job's current status and processing.

2 Select (highlight) **Detail** in the **Action List** box.

- **Detail** is highlighted.

3 Click on the appropriate button from the following selections:

- **OK** - to bring up the **OI Detail Screen** and dismiss the **Action List** box.
  - The **OI Detail Screen** (Figure 85) is displayed.
- **Cancel** - to dismiss the **Action List** box and return to the **Main OI Screen**.
  - The **Main OI Screen** (Figure 77) is displayed.

4 Observe information displayed on the **OI Detail Screen** (Figure 85).

- The following items are displayed on the **OI Detail Screen** for the selected individual PDS job:
  - Job Key.
  - Copies.
  - Pri.
  - Product Media.
  - Due Date.
  - Product Code.
- The following items are displayed on the **OI Detail Screen** for each unit within the selected PDS job:
  - "Select" button.
  - Unit # .
  - Status.
  - PPF Key.

  - ECS Order ID.
  - Source Data Path.
- Each **unit line** display is color-coded to draw attention to unit status. The colors are interpreted as follows:
  - Red **Error**.
  - Green **Active**.
  - Yellow **QC-Hold**.
  - Grey **Pending**.
- There is a "Select" button [not labeled] at the beginning of each unit line.
  - Used for selecting or deselecting each individual unit.
  - It is possible to select multiple units to be affected by the same action (e.g., "Activate") at the same time.
- If there are more records than can be displayed on the screen, use the scroll bar on the right hand side of the form to view the additional records.
- If the entire entry is not visible in a field, click in the field and use the arrow keys on the keyboard to scroll to the end of the entry.
- Selecting **Display → Refresh** from the pull-down menu causes the **OI Detail Screen** data in the database to be requeried and redisplayed using the current detail window default sort preference.
- Selecting **Display → Repaint** from the pull-down menu causes the entire screen (borders, buttons, and data) to be redrawn without accessing the database for data.
  - The **Repaint** option is used in case the window becomes garbled.
- The **status line** at the bottom of the screen displays information about the form (for example, the status line in Figure 85 displays “Record: 1/4” and “INSERT").
- The **message line** near the bottom of the screen (just above the **status line**) displays informational messages and error messages pertinent to what is happening on the form.
- Selecting **Help → On Form** from the pull-down menu causes a web browser to pop up in another window, positioned to the start of the document about the Operator Interface.

- Selecting **Help → Show Error** from the pull-down menu causes a message to be displayed on the **message line** stating the last error encountered.
  - Frequently a “No errors encountered recently” message is displayed in response to the Show Error option.
- The following three "Action" buttons are located at the bottom of the screen:
  - **Complete**.
    - The **Complete** button completes all appropriate unit status changes (for the selected units) in the system.
    - Units with current status either **QC-Hold** or **Error** are the only units that can be completed using the **Complete** button.
  - **Activate.**
    - The **Activate** button starts the data generation process (creates the .ppf file) for the selected units that are needed by product generation.
    - Units with current status either **Pending** or **Error** are the only units that can be activated using the **Activate** button.
  - **Return**
    - The **Return** button causes any selected units to be deselected, closes the **OI Detail Screen**, and returns control to the **Main OI Screen** (Figure 77).
    - If any timers went off while the **OI Detail Screen** was activated, the associated processing occurs upon selection of the **Return** button.

5 If the list of units on the **OI Detail Screen** needs to be sorted, perform the procedure for **Sorting Units** (subsequent section of this lesson).

6 If it is desirable to select a unit for the application of an action, click on the "Select" button at the beginning of the unit line for the relevant unit.

- To select multiple units for the application of the same action, perform the procedure for **Selecting Multiple Units** (subsequent section of this lesson).
- To deselect all currently selected units select **Select → Clear All** from the pull-down menu.
  - The "Select" buttons for all units go to the unselected state.

7 If it becomes necessary to activate unit(s), click on the **Activate** button near the bottom of the **OI Detail Screen** (Figure 85).

- Unit status before activation must be either **Pending** or **Error**.

- Clicking on the **Activate** button starts the data generation process (creates the .ppf file) for the selected unit(s) only.
- A pop-up window appears indicating that the activation is being performed.
- When the activation process has been completed, the database is queried, the **OI Detail Screen** is refreshed, all selected units are deselected and all active units are shown in green.
- If no units were selected for activation, a “No units were selected, no action taken” message is displayed in a purple box.
  - Click on the **OK** button to dismiss the error window.

8 If it becomes appropriate to complete unit(s) [e.g., the unit(s) has (have) passed the QC check], click on the **Complete** button near the bottom of the **OI Detail Screen** (Figure 85).

- Unit status before initiating a "complete" action must be either **QC-Hold** or **Error**.
- Clicking on the **Complete** button completes all appropriate unit status changes in the system for the selected unit(s) only.
- A pop-up window appears indicating that the "complete" action is being performed.
- When the "complete" action has finished, the database is queried, the **OI Detail Screen** is refreshed, all selected units are deselected and all completed units have been removed from the display (are no longer visible).
- If no units were selected for completion, a “No units were selected, no action taken” message is displayed in a purple box.
  - Click on the **OK** button to dismiss the error window.
  - When it is done, the database will be requeried causing the Detail Window to refresh and all selected units to be deselected, and completed units will no longer be visible.

9 If it becomes necessary to stop the job (that includes the units currently being displayed on the **OI Detail Screen**), select **Stop Job** from the pull-down menu.

- A confirmation dialogue box is displayed to inquire "Are you sure you want to stop this job?"

10 If **Stop Job** was selected from the pull-down menu, click on the appropriate button from the following selections:

- **Yes** - to stop the job and dismiss the confirmation dialogue box.
  - The system performs no further actions on the job except to process status files from the product generation code.

- Any status files generated while the OI is shut down will not be processed until the OI is up and running.

  - When the **Main OI Screen** is refreshed the next time, the field adjacent to the action button on the job line for the specified job displays the word **STOP**.

- **Cancel -** to dismiss the confirmation dialogue box without stopping the job.

11 Repeat Steps 4 through 10 as necessary to obtain additional information with respect to units associated with the selected job and/or take action with respect to units associated with the job.

12 To return to the **Main OI Screen** click on the **Return** button.

- Clicking on the **Return** button deselects any selected units, closes the **OI Detail Screen**, and returns control to the **Main OI Screen** (Figure 77).

  - If any timers went off while the **OI Detail Screen** was activated, the associated processing occurs upon selection of the **Return** button.

  - The **Main OI Screen** (Figure 77) is refreshed, showing any new information and status changes.

13 Return to the procedure for **Monitoring/Controlling Product Processing Using PDS**.

Sorting Units

The procedure for **Sorting Units** is performed as part of the procedure for **Using the OI Detail Screen** (preceding section of this lesson). The units to be displayed on the **OI Detail Screen** (Figure 85) can be sorted using the **Sort Dialogue Box** (Figure 89). The sorting can be done on the basis of the following criteria, either individually or in combination:

- Unit Nbr [number] (default sort preference that is used whenever the **OI Detail Screen** is opened).
- Unit Status.
- PPF Key.

The procedure for sorting units starts with the assumption that all applicable servers are currently running and the **OI Detail Screen** (Figure 85) is being displayed.

Sorting Units

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1 Select **Display** → **Sort** from the pull-down menu.

- The **Sort Dialogue Box** (Figure 89) is displayed.

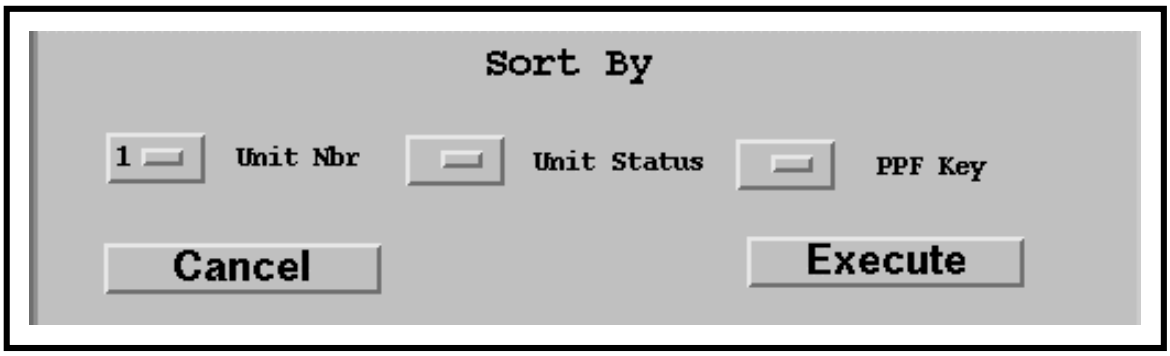

Figure 89. Sort Dialogue Box

2 Click and **hold** the appropriate **Sort By** option button to display a list of numbers indicating the order in which the sort criteria should be evaluated, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

- The following **Sort By** option buttons are available for indicating the order in which unit information should be displayed on the **OI Detail Screen**:
  - **Unit Nbr**.
  - **Unit Status**.
  - **PPF Key**.
- Selected sort order number is displayed on the selected **Sort By** option button when the mouse button is released.
- It is not possible to select a sort order number for a sorting category if the number has already been assigned to another category.

3 Repeat Step 2 as necessary to assign sorting order to additional categories.

- It is possible to select more than one **Sort By** item.
- If more than one **Sort By** option is selected the units will be selected by the sort order for the selection assigned Number 1, then within that sort order they would be sorted by the category assigned Number 2, etc.
  - For example, if Unit Status were assigned the first sort order (1) and Unit Nbr were assigned the second sort order (2), the jobs would be sorted by Unit Status, then within each status the jobs would be sorted by Unit Nbr. So the units containing the same status would be displayed together with the lowest unit number for each status at the top of the list for that status.

4 Click on the appropriate button from the following selections:

- **Execute -** to query the database for the specified selections and dismiss the **Sort Dialogue Box**.
  - A **Querying Database** notice (Figure 75) is displayed temporarily in a blue box.
    - The **message line** at the bottom of the screen displays "Working" while the **Querying Database** notice is being displayed.
    - If there are status files waiting to be read, another blue box may be displayed indicating "Reading Status files. Please wait…"
  - If no selection criteria were selected, a **Selection Error Dialogue** (Figure 76) is displayed in a purple box.
    - Click on the **OK** button to dismiss the error window.
  - The **OI Detail Screen** (Figure 85) is displayed when the **Querying Database** notice quits (indicating that database has been queried and the results are being displayed).
- **Cancel -** to dismiss the **Sort Dialogue Box** without specifying any sorting criteria.
  - The **OI Detail Screen** (Figure 85) is displayed with the original sorting criteria results.

5 Return to the procedure for **Using the OI Detail Screen**.

Selecting Multiple Units

The procedure for **Selecting Multiple Units** is performed as part of the procedure for **Using the OI Detail Screen** (preceding section of this lesson). Accordingly, the procedure for selecting multiple units starts with the assumption that all applicable servers are currently running and the **OI Detail Screen** (Figure 85) is being displayed.

Selecting Multiple Units

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1 Select **Select** → **Range** from the pull-down menu.

- The **Range Dialogue Box** (Figure 90) is displayed.

2 Type the unit number of the first unit in the range of units to be selected in the **Begin Unit** field.

3 Type the unit number of the last unit in the range of units to be selected in the **End Unit** field.

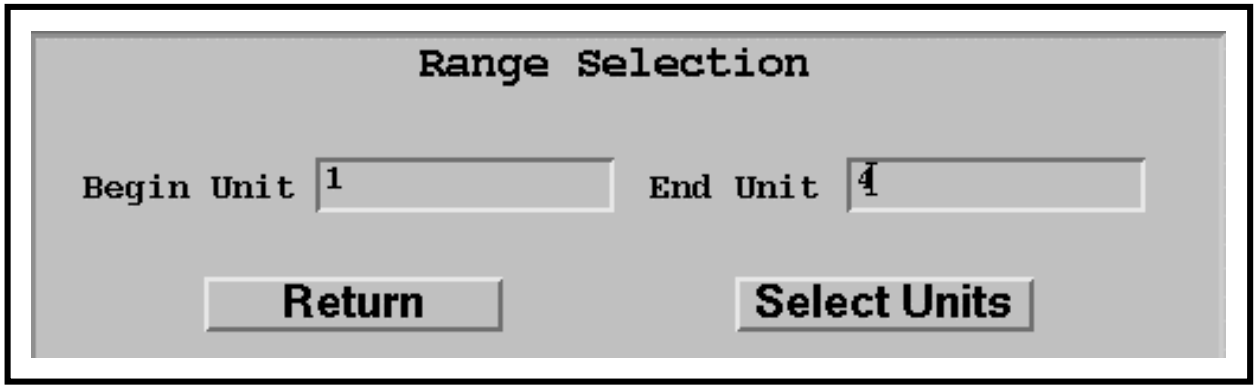


Figure 90. Range Dialogue Box

4 Click on the appropriate button from the following selections:

- **Select Units** - to query the database for the specified selections and dismiss the **Range Dialogue Box**.
  - The **OI Detail Screen** (Figure 85) is displayed and the "Select" buttons for all units within the specified range go to the selected state.
  - Already selected units remain selected and units that are not within the specified range are ignored.
- **Return** - to dismiss the **Sort Dialogue Box** without specifying any sorting criteria.
  - The **OI Detail Screen** (Figure 85) is displayed with the "Select" buttons in their original states.

5 Return to the procedure for **Using the OI Detail Screen**.

Activating a Job

The procedure for **Activating a Job** is performed as part of the procedure for **Monitoring/Controlling Product Processing Using PDS** (preceding section of this lesson). The **Main OI Screen** provides the Distribution Technician with a means of activating jobs that are in a **Pending** status. The **Activate** option is available just once for each job. If it is necessary to reactivate the same job, the activation must be done at the detail level, which is accomplished

using the **OI Detail Screen** (Figure 85) as described in the procedure for **Using the OI Detail Screen** (preceding section of this lesson).

The procedure for activating a job starts with the following assumptions:

- All applicable servers are currently running.
- The **Main OI Screen** (Figure 77) is being displayed.
- The **PDSIS OI Main Screen** (Figure 78) is being displayed.

Activating a Job

---

1 On the PDS **Main OI Screen** observe the number of units in the **To_Do Units** column for the pending job to be activated.

- The number of units in the **To_Do Units** column can provide a rough approximation of the size of the job.

2 If the job to be activated is a large job, determine whether all units for the order are included in the pending job that is displayed on the PDS **Main OI Screen**.

- For detailed instructions refer to the procedure for **Comparing the Number of Units in an Order and a Job** (subsequent section of this lesson).

3 Click on the action button at the beginning of the job line for the relevant job.

- The **Action List** box (Figure 88) is displayed.
- Not all actions are available for every job.
  - The available actions depend on the job's current status and processing.

4 Select (highlight) **Activate** in the **Action List** box.

- **Activate** is highlighted.
- The **Activate** option is available if the job status is **Pending** only.
- Once selected, the **Activate** option is no longer available for the selected job.
  - Subsequent activation/reactivation must be done at the detail level, which is accomplished using the **OI Detail Screen** (Figure 85) as described in the procedure for **Using the OI Detail Screen** (preceding section of this lesson).

5 Click on the appropriate button from the following selections:

- **OK** - to start the process of generating the data (.ppf file) that the product generation code needs by using this machine's job limitation information and other data stored in the database.

– A blue pop-up window is displayed with one of the following types of messages indicating that the activation is being performed:

  · Activating Job *job_key*.

  · Activating next units *job_key*.

– When the activation process has been completed, the database is queried, the **Main OI Screen** is refreshed and after the job has retrieved all data for the product the **Media Drive Selection** window (Figure 91) is displayed.

  · The **Media Drive Selection** window is not displayed for Rimage units if AutoRimage mode has been enabled.

  · AutoRimage may be enabled on systems that have multiple Rimage units only.

  · It should be disabled at sites that have a single Rimage unit.

- **Cancel -** to dismiss the **Action List** box and return to the **Main OI Screen**.

  – The **Main OI Screen** (Figure 77) is displayed.

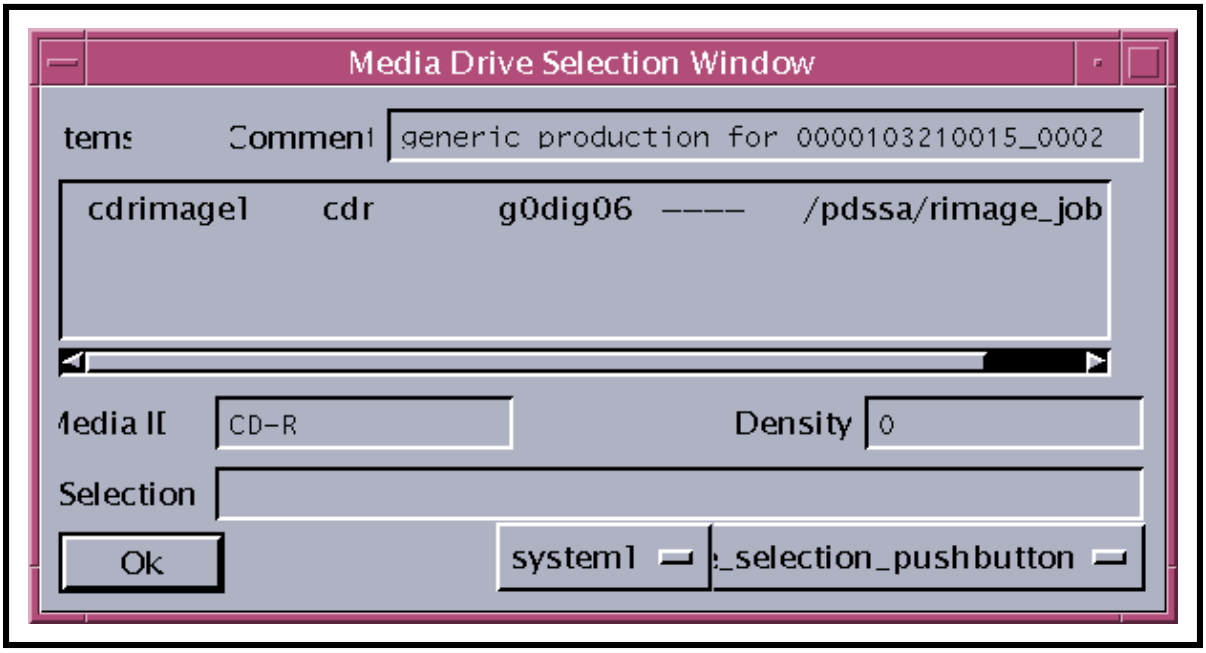


Figure 91. Media Drive Selection Window

6 If the job is a CD or DVD job, ensure that the input bins of the Rimage unit contain blank disks.

- Load the input bin(s) if necessary, ensuring that the disks are inserted right-side up (shiny side down).
  - For detailed instructions refer to the Rimage unit operating manual.

7 If the data are to be recorded on a tape, ensure that there is a blank tape in the drive to be used for recording the data.

- A list of the available drives is displayed in the **Media Drive Selection** window.

8 If the data are to be recorded on a tape, wait for the drive to come on line before responding to the **Media Drive Selection** window.

- Wait for light to stop flashing.

9 In the **Media Drive Selection** window click on (highlight) the drive (i.e., tape drive or Rimage unit) to be used for the job.

- For CD and DVD jobs it is possible to activate more jobs than can be accommodated by the number of currently available drives.
- Activating more jobs than can be accommodated by the number of currently available drives is not possible for 8MM or DLT jobs.

10 Click on the **OK** button.

- The **Media Drive Selection** window is dismissed.
- The process of writing data to the selected drive starts.

11 Return to the procedure for **Monitoring/Controlling Product Processing Using PDS**.

Comparing the Number of Units in an Order and a Job

The procedure for **Comparing the Number of Units in an Order and a Job** may be performed as part of the procedure for **Activating a Job** (previous section of this lesson). The purpose of comparing the number of units in an order and a job is to determine whether all units for a large order are included in a pending job that is displayed on the PDS **Main OI Screen**. The result is useful in deciding whether to activate the job or wait until the data for more or all units in the order become available.

The procedure for comparing the number of units in an order and a job involves a comparison between the number of units in the order on the **PDSIS OI Detail Screen** and the number of units specified on the **Main OI Screen**. It is possible for the number of units in the order on the **PDSIS OI Detail Screen** to be greater than the number of units specified on the **Main OI Screen**. If the number of units in the PDSIS order were greater than the number of units in the corresponding PDSSA job and the job was activated, only the units that were accessible to PDSSA would be copied to the specified medium. Depending on the circumstances (including

DAAC policy) activating part of an order may be acceptable. However, for high-capacity media types such as DLT, activation of a partial job could be a very inefficient use of the media.

Discrepancies in the number of units in an order (as displayed on the **PDSIS OI Detail Screen**) and the number of units in the corresponding job (as displayed on the PDS **Main OI Screen**) are generally due to PDSIS data "grouping" (also known as "chunking"). There are two possible grouping factors but only one of them is in effect at a time.

The two grouping factors are as follows:

- Granule size.
- Group limits.

When the current grouping factor is "granule size," PDSIS makes a chunk of a large order available to PDSSA after a specified number of megabytes of data have been received from ECS. The granule size limit is specified in the group_data_size column of the pdsis_serverconfig_tbl database table. If the total size of an order is smaller than the granule size limit, granule-size grouping is irrelevant for that order.

If the current grouping factor is "group limits," PDSIS makes a chunk of an order available to PDSSA when a specified number of units has been received from ECS. The number of units is specified in the group_unit_size column of the pdsis_serverconfig_tbl database table. If the value is NULL, all units are made available to PDSSA only after all unit data have been staged by ECS. If the total number of units in an order is less than the group limit, group-limit grouping is irrelevant for that order.

The grouping factor in use is specified by the value in the grouping_config column of the pdsis_serverconfig_tbl database table. Valid grouping values for the pdsis_serverconfig_tbl are as follows:

- **S** - "granule size" grouping.
- **G** - "group limits" grouping.

To determine the current grouping factor use the procedure for **Determining the Current Grouping Factor** (subsequent section of this lesson).

The grouping factor is relevant for orders that are larger than the value assigned to the current grouping factor only. For example, if **Grouping Config** equals "S" and **Group Data Size** is set to "35,000," an order for 600 megabytes of data would not be broken up into chunks.

The **Main OI Screen** provides the Distribution Technician with a means of determining the number of units in a job. The **PDSIS OI Detail Screen** provides the Distribution Technician with a means of determining the total number of units in the order.

The procedure for comparing the number of units in an order and a job starts with the following assumptions:

- All applicable servers are currently running.

- The **Main OI Screen** (Figure 77) is being displayed.
- The **PDSIS OI Main Screen** (Figure 78) is being displayed.

Comparing the Number of Units in an Order and a Job

---

1 Activate the **PDSIS OI Detail Screen** for the order to be filled as described in the procedure for **Using the PDSIS OI Detail Screen** (subsequent section of this lesson).

- The **PDSIS OI Detail Screen** (Figure 92) is displayed.

2 Scroll to the bottom of the **PDSIS OI Detail Screen** to find the last unit in the order.

3 Observe the number of units in the **To_Do Units** column for the corresponding job on the **Main OI Screen**.

4 Compare the number of units in the order on the **PDSIS OI Detail Screen** with the number of units specified in the **To_Do Units** column for the corresponding job on the **Main OI Screen**.

- If the number of units is equal, the job can be activated.
  - For detailed instructions refer to the procedure for **Activating a Job** (previous section of this lesson).
- If the number of units is not equal, consider the effects on job processing before activating the job:
  - If the job is activated, only the units that are accessible to PDSSA (in the PDT_PDSINFO table) will be activated.
  - Activating a partial order may be acceptable, depending on the circumstances and DAAC policy.
    - For a high-capacity type of medium (e.g., DLT) activating a partial order would be an inefficient use of the media if all units in the order could be recorded on a single tape or disk.
    - Distribution of a partial order may be authorized by User Services when some granules are currently unavailable but the customer has an immediate need for the granules that are available.
    - Activating a partial order may be acceptable when multiple media are required to fill the order and there is a sufficient quantity of data available to fill one disk or tape.
    - Activating a partial order may lead to manual intervention to correct the information on the labels affixed to the media, especially if more tapes or disks are used than originally expected. [Alternatively, DAAC policy may allow distribution of media volumes even when the numbering is not

consistent with the original numbering scheme (e.g., 1 of 2, 2 of 2, 3 of 2.]

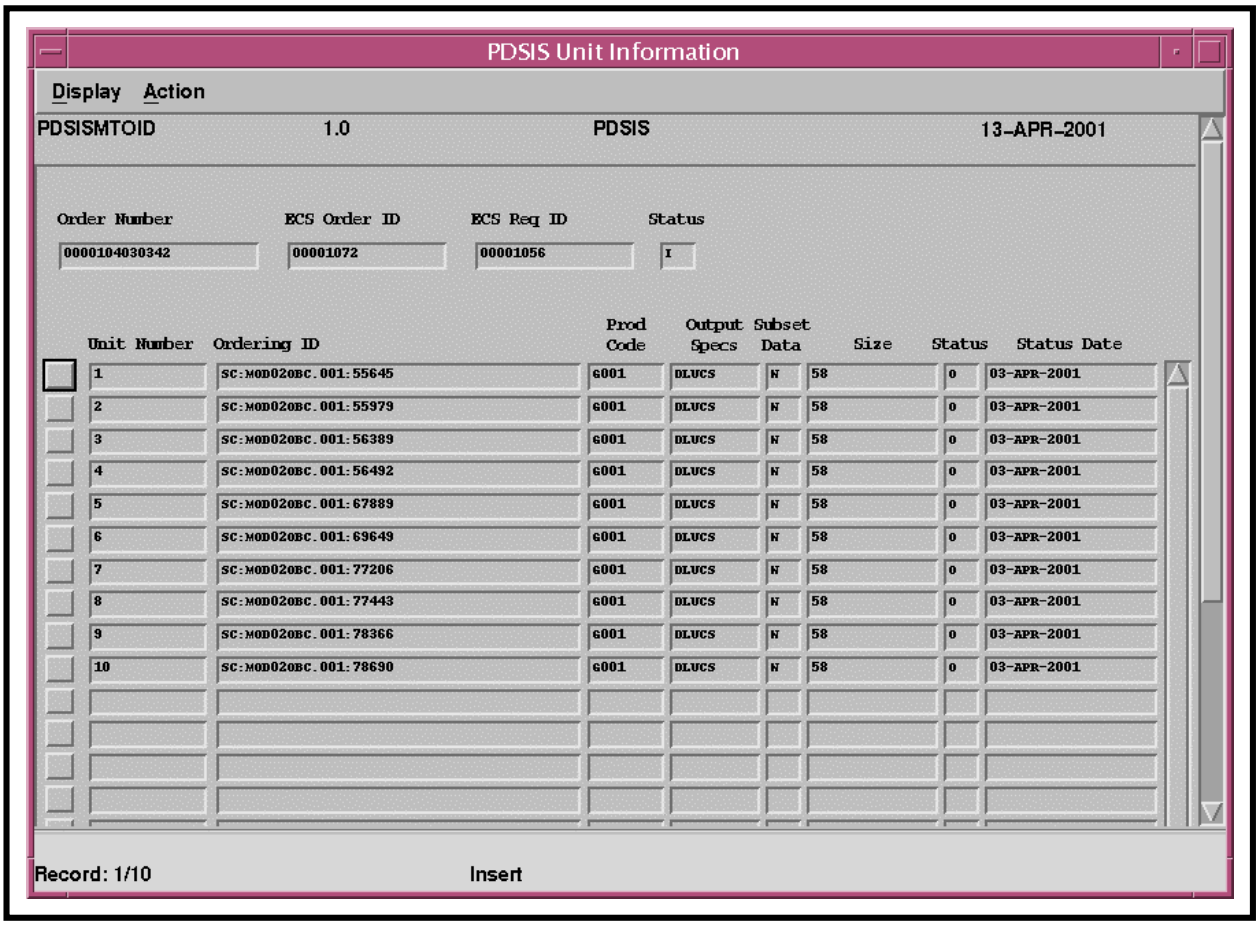


Figure 92. PDSIS OI Detail Screen

5 If all units currently available to PDSSA should be activated immediately, activate the job.

- For detailed instructions refer to the procedure for **Activating a Job** (previous section of this lesson).

6 If some of the units currently available to PDSSA should be activated immediately, activate the applicable units.

- For detailed instructions refer to the procedure for **Using the OI Detail Screen** (previous section of this lesson).

7 If none of the units currently available to PDSSA should be activated immediately, wait until the appropriate number of units is available to PDSSA before continuing.

8 If it was necessary to wait until the appropriate number of units became available to PDSSA before continuing, return to Step 3.

Determining the Current Grouping Factor

It may be necessary to determine the current grouping factor when comparing the number of units in an order and a job.

The procedure for determining the current grouping factor starts with the assumption that all applicable servers are currently running and the **PDSIS OI Main Screen** (Figure 78) is being displayed.

Determining the Current Grouping Factor

---

1 Perform the procedure for **Starting the PDSIS Maintenance Module** (previous section of this lesson).

2 Click on the **Server Config** button on the **PDSIS Maintenance Module Main Menu** (Figure 83).

- The **Server Config Maintenance (PDSISMTPST)** window (Figure 93) is displayed.

3 Click on the **Execute Query** button on the **Server Config Maintenance** window.

- Server configuration is displayed in the **Server Config Maintenance** window.

4 Observe the value in the **Grouping Config** field of the **Server Config Maintenance** window.

- Valid grouping values are as follows:
  - **S** - “granule size” grouping.
  - **G** - “group limits” grouping.

5 Observe the value in the **Group Data Size** field of the **Server Config Maintenance** window.

- Value indicates the maximum size (in megabytes) of each chunk of data made available to PDSSA if **Grouping Config** is set to “S.”
- For example, a value of “35000” would indicate a grouping factor of 35,000 megabytes (35 gigabytes).

6 Observe the value in the **Group Unit Size** field of the **Server Config Maintenance** window.

- Value indicates the maximum number of units in each chunk of data made available to PDSSA if **Grouping Config** is set to “G.”

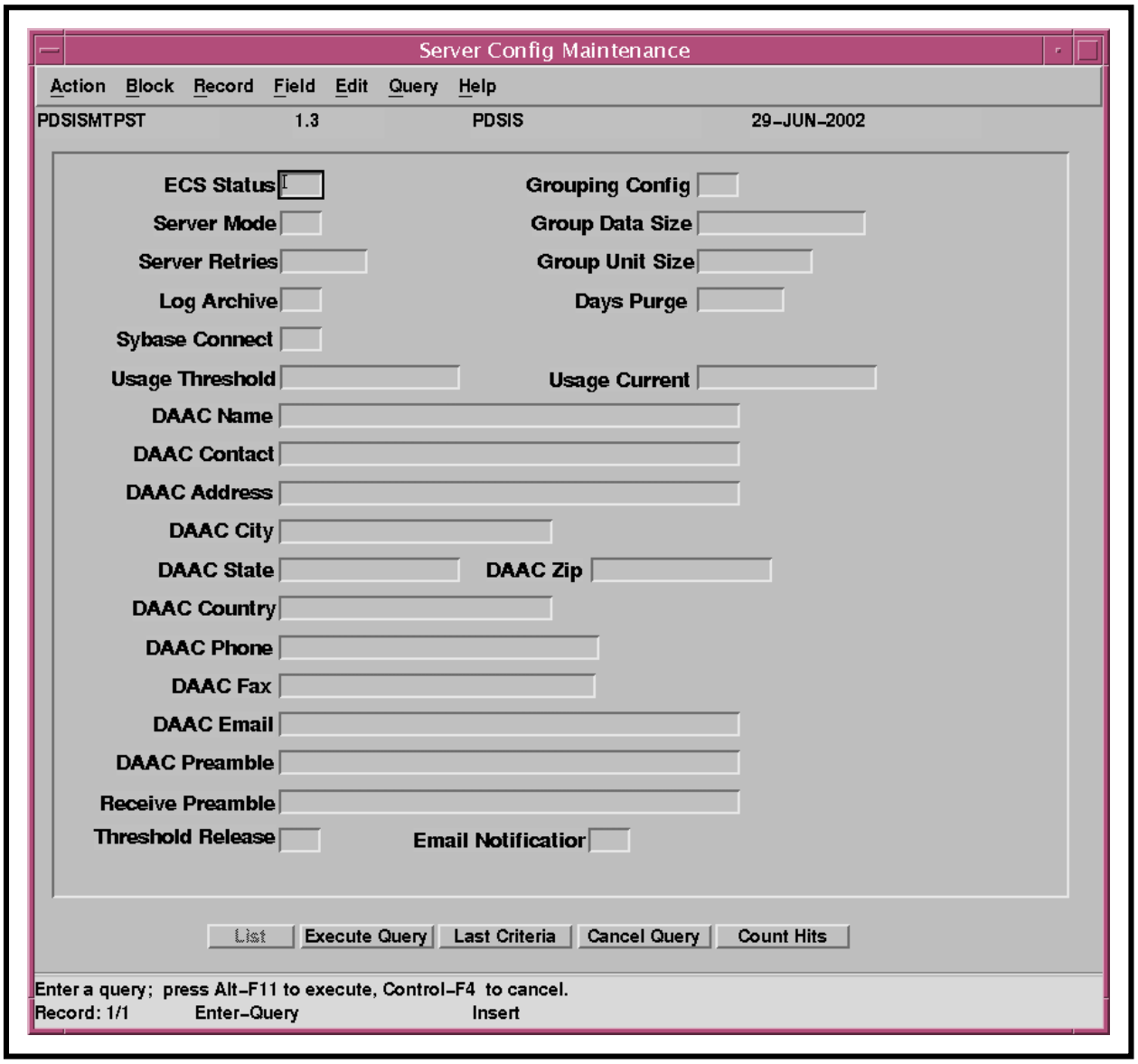


Figure 93. Server Config Maintenance (PDSISMTPST) Window

- For example, a value of “10” would indicate a grouping factor of 10 units.

7 To close the **Server Config Maintenance** window click on the **Exit** button at the bottom of the window.

- If the **Exit** button is not visible on the maintenance module form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- The **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.

8 To shut down the **PDSIS Maintenance Module** click on the **Exit** button at the bottom of the **PDSIS Maintenance Module Main Menu** window.

- The **PDSIS Maintenance Module Main Menu** is dismissed.

9 Return to the procedure (e.g., **Comparing the Number of Units in an Order and a Job**) that recommended determining the current grouping factor.

Stopping a Job Using the Main OI Screen Display

The procedure for **Stopping a Job Using the Main OI Screen Display** is performed as part of the procedure for **Monitoring/Controlling Product Processing Using PDS** (preceding section of this lesson). The **Main OI Screen** provides the Distribution Technician with means of stopping (suspending) jobs. Note that if a job has proceeded to the stage where the data are being written to the specified medium that process (writing to the medium) continues even after an attempt to stop the job.

The procedure for stopping a job using the **Main OI Screen Display** starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) and **Job Monitor Main Window** (Figure 79) are being displayed.

Stopping a Job Using the Main OI Screen Display

---

1 Click on the action button at the beginning of the job line for the relevant job on the **Main OI Screen**.

- The **Action List** box (Figure 88) is displayed.
- Not all actions are available for every job.
  - The available actions depend on the job's current status and processing.

2 Select (highlight) **Stop Job** in the **Action List** box.

- **Stop Job** is highlighted.

3 Click on the appropriate button from the following selections:

- **OK -** to start the process of stopping the job.

- A confirmation dialogue box is displayed to inquire "Are you sure you want to stop this job?"

- **Cancel -** to dismiss the **Action List** box and return to the **Main OI Screen**.
  - The **Main OI Screen** (Figure 77) is displayed. [End of procedure.]

4 If a confirmation dialogue box is being displayed, click on the appropriate button from the following selections:

- **Yes -** to stop the job and dismiss the confirmation dialogue box.
  - The system performs no further actions on the job except to process status files from the product generation code.
  - When the screen is refreshed the next time, the field adjacent to the action button on the job line for the specified job displays the word **STOP**.

NOTE: It may be useful to manually refresh the screen.

- **Cancel -** to dismiss the confirmation dialogue box without stopping the job.
  - When the activation process has been completed, the database is queried, the **Main OI Screen** is refreshed.

5 Return to the procedure for **Monitoring/Controlling Product Processing Using PDS**.

Terminating a Job Using the Job Monitor Main Window

The procedure for **Terminating a Job Using the Job Monitor Main Window** is performed as part of the procedure for **Monitoring/Controlling Product Processing Using PDS** (preceding section of this lesson). The **Job Monitor Main Window** provides the Distribution Technician with means of terminating jobs. Note that if a job has proceeded to the stage where the data are being written to the specified medium that process (writing to the medium) continues even after an attempt to terminate the job.

The procedure for terminating a job using the **Job Monitor Main Window** starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) and **Job Monitor Main Window** (Figure 79) are being displayed.

Terminating a Job Using the Job Monitor Main Window

---

1 Place the mouse cursor on the relevant job (the one to be terminated) in the running job list of the **Job Monitor Main Window** and click and hold the **right** mouse button.

- Pop-up menu appears. It has the following entries:
  - **View Job Log.**

- **View Job PPF.**
- **Force AutoRimage Completion** (appears only when the selected job is waiting for a completion message from a Rimage writer).
- **Terminate Job.**

2 Select (highlight) **Terminate Job** from the pop-up menu (release the right mouse button).

- A confirmation window is displayed.

3 Click on the appropriate button from the following selections:

- **Proceed -** to terminate the job and dismiss the confirmation window.
  - The confirmation window is dismissed.
- **Cancel -** to dismiss the confirmation window without terminating the job.
  - The confirmation window is dismissed.

4 Change the status of the job and its units to “Q” (Pending) in the **PDSINFO Jobs Table** and the **PDSINFO Work Table**.

- For detailed instructions refer to the procedure for **Changing the Values of Job Parameters Using the PDS Maintenance Module** (subsequent section of this lesson).

5 Return to the procedure for **Monitoring/Controlling Product Processing Using PDS**.

Responding to a Status of QC-Hold (Performing a QC Check or Verification)

The procedure for **Responding to a Status of QC-Hold (Performing a QC Check or Verification)** is performed as part of the procedure for **Monitoring/Controlling Product Processing Using PDS** (preceding section of this lesson). A status of **QC-Hold** on the **PDS Operator Interface (PDSOI)** indicates that a job requires a QC check or media verification. The **PDS Quality Check** GUI provides the Distribution Technician with a means of selecting a verification drive for checking a disk or tape. The **PDSIS OI Main Screen** provides a means of marking the job "shipped."

The procedure for responding to a status of QC-Hold (performing a QC check or verification) starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77), the **PDSIS OI Main Screen** (Figure 78), and the **PDS Quality Check** GUI (Figure 80) are being displayed.

Responding to a Status of QC-Hold (Performing a QC Check or Verification)

---

1 Retrieve the product summary from the report printer.

2 Review the product summary to determine whether there were any problems in writing to the medium.

- The status of each file on the medium is indicated on the report by a "Y" or "N."
- If there were problems in writing to the medium, go to the procedure for **Reprocessing a Job** (subsequent section of this lesson).
- If a disk was created but no product summary was printed, go to the procedure for **Reprocessing a Job** (subsequent section of this lesson).

3 Remove the medium (tape or disk) from the unit in which the data were written.

- 8mm tapes are ejected from the drive when completed.
- When a DLT tape is finished, the **Operate Handle** light on the DLT drive turns green.
  - To extract the completed DLT tape from the drive, lift the handle on the front of the drive and pull the tape out of the drive.
- The access door to the Rimage unit may be opened whenever the media arm is not moving media.
- If the label on a disk was not printed, go to the procedure for **Reprinting a Label Stamped on a Disk** (subsequent section of this lesson).

4 If the medium is a tape, set the write-protect switch on the tape cartridge at the **Read-Only** (write-protected) position.

5 If the medium is a tape, retrieve the tape label from the label printer.

- If the tape label is not correct or is damaged, go to the procedure for **Reprinting PDS Documents and Labels**.

6 If the medium is a tape, affix the tape label in the appropriate place.

- Labels are typically affixed directly to the tape cartridge unless DAAC policy states otherwise (e.g., affix the label to the case for the tape).

7 If the medium is a disk, retrieve the corresponding jewel-case insert from the jewel-case insert printer.

- If the jewel-case insert is not correct or damaged, go to the procedure for **Responding to a Jewel-Case Insert Printing Failure**.

8 If the medium is a disk, insert the jewel-case insert in a jewel case.

- If the DAAC is supplied with CD jewel cases and DVD jewel cases, ensure that each type of disk is placed in the appropriate type of jewel case (i.e., CDs in CD cases, DVDs in DVD cases).

9 Observe the **PDS Quality Check** GUI to identify an available drive for verifying writing to the medium (tape or disk).

- The color of the buttons on the **PDS Quality Check** GUI provides an indication as to the status of each drive.
  - Gray typically indicates "available."
  - Yellow typically indicates "in use."
  - Red typically indicates a problem.
- If there is no CD drive available for verification (e.g., if all CD drives are out of service), CDs can be verified by reading their contents using a verification DVD drive, a CD drive in a PC or a DVD drive in a PC.
  - Verify that there are data and metadata files for all units in the job and that the file sizes indicate the presence of data [e.g., file size of 0 (zero) indicates that there is no data in the file].
- If there is no DVD drive available for verification (e.g., if all verification DVD drives are out of service), DVDs can be verified by reading their contents using a DVD drive in a PC.

10 On the **PDS Quality Check** GUI in the data entry window associated with the selected verification drive enter the Media ID for the medium to be loaded in the drive.

- The Media ID is printed on the tape or disk label.
- Rather than typing it is generally preferable to copy and paste as much text as possible; for example, by copying the job key portion of the Media ID from the PDSOI and pasting it in the data entry window on the **PDS Quality Check** GUI.

11 Load the medium (tape or disk) in the selected verification drive.

12 Wait for the drive to come on line before continuing.

- Generally the lights on the drive stop blinking when the drive comes on line.

13 On the **PDS Quality Check** GUI click on the button corresponding to the drive in which the medium was loaded.

- The following events occur when the reader in which the medium was loaded has completed the verification:
  - The drive opens (except DLT drives, which do not open automatically).

  - The button corresponding to the drive on the **PDS Quality Check** GUI changes color.

- Messages (i.e., error messages) may be displayed in the text window at the bottom of the **PDS Quality Check** GUI.

14 When the reader (drive) in which the medium was loaded has completed the verification, retrieve the corresponding verification report from the printer.

15 Remove the medium from the drive.

- Keep the medium and its verification report together.
- If verification reports for media are lost, it may be necessary to reverify the tape or disk.
- 8mm tapes are ejected from the drive when completed.
- When a DLT tape is finished, the **Operate Handle** light on the DLT drive turns green.
  - To extract the completed DLT tape from the drive, lift the handle on the front of the drive then pull the tape out of the drive.

16 Insert the medium in its case.

- If the DAAC is supplied with CD jewel cases and DVD jewel cases, ensure that each type of disk is placed in the appropriate type of jewel case (i.e., CDs in CD cases, DVDs in DVD cases).

17 Review the verification report for read errors.

- If the medium is a tape with read errors and the tape has just been verified for the first time, repeat the verification on a different drive (return to Step 3).
- If the medium is a tape with read errors and the errors have been verified for a second time, reprocess the job by performing the procedure for **Reprocessing a Job** (subsequent section of this lesson).
- If the verification report for a disk (CD or DVD) does not list any contents, turn the power switch for the affected CD or DVD drive **off** then **on** and retry the verification check in the same drive (return to Step 10).
- If the medium is a disk with read errors and the disk has just been verified for the first time, visually inspect the disk for obvious damage.
  - If the disk has obvious unrecoverable damage (such as a scratch), discard the disk and reprocess the job by performing the procedure for **Reprocessing a Job** (subsequent section of this lesson).

- If the disk does not have obvious damage or has a recoverable problem (such as a fingerprint that can be wiped off), fix the problem and repeat the verification on a different drive (return to Step 3).

- If the medium is a disk with read errors and the errors have been verified for a second time, reprocess the job by performing the procedure for **Reprocessing a Job** (subsequent section of this lesson).

18 To review results of the verification using the **PDS Quality Check** GUI **Log Viewer**, select **File → View Log** from the pull-down menu on the **PDS Quality Check** GUI (Figure 80).

- The **Log Viewer** window (Figure 94) is displayed.
- The following types of information are displayed in the **Log Viewer** window:
  - **Time Stamp** – date and time of the verification.
  - **Result** - Pass or Fail.
  - **Media ID** – job key and number in the series of tapes or disks.
- To dismiss the **Log Viewer** either click on the **Exit** button at the bottom of the window or select **Close** from the pull-down menu at the upper left-hand corner of the window.

19 Place the medium (in its case), product summary, and verification report (indicating that the medium is good) together in an appropriate place.

20 Perform the procedure for **Completing a Job** (subsequent section of this lesson).

- About five to fifteen minutes after the job has been marked complete on the **PDSOI**, its status on the **PDSIS OI** changes from "I" (In Progress) to "C" (Completed).
- About five to fifteen minutes after the job has been marked "C" on the **PDSIS OI** the shipping labels and packing lists are printed.

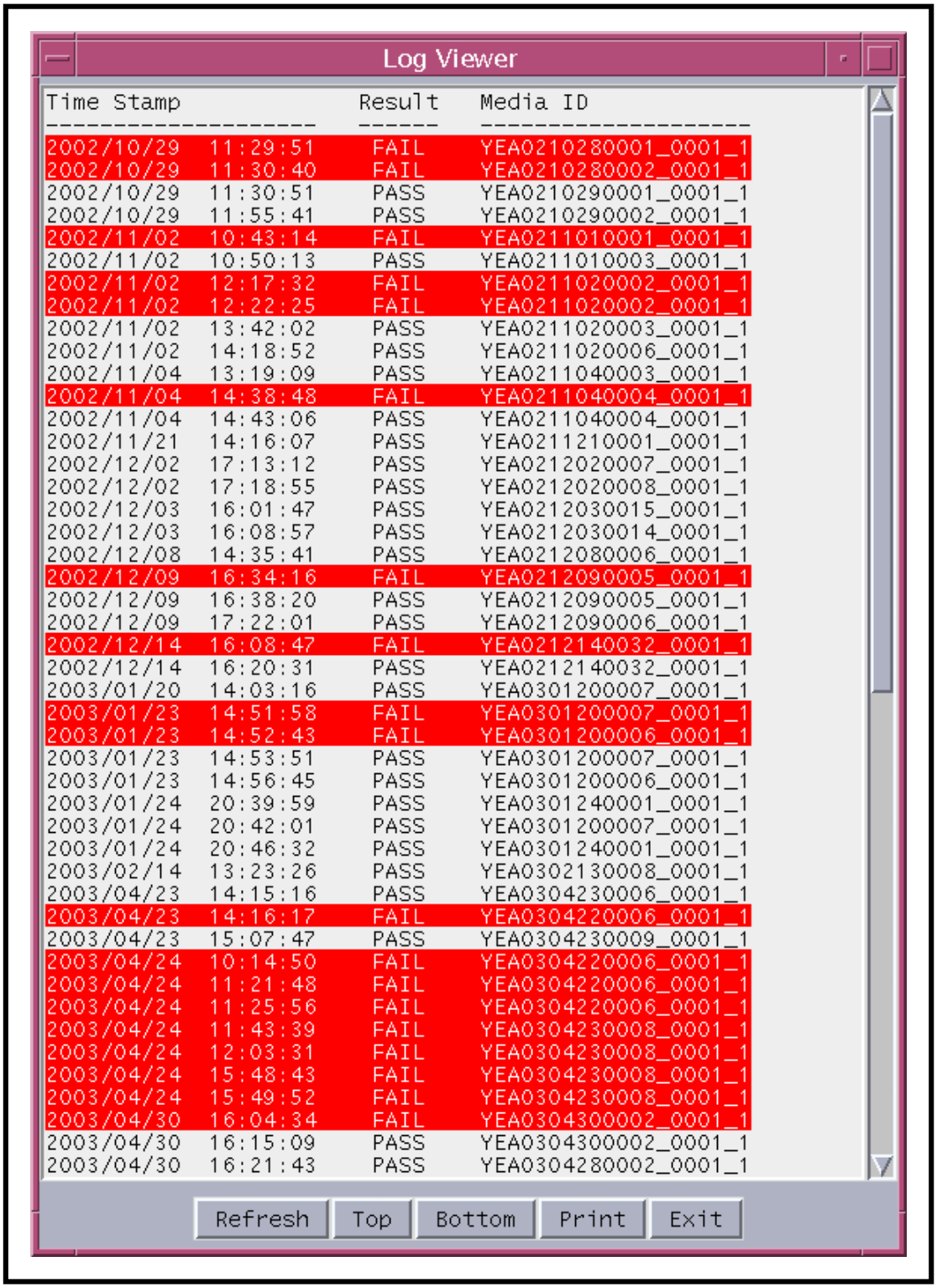
21 When the shipping labels and packing lists have been printed, retrieve the items and put them with the medium (in its case) in the appropriate area for pick-up by or delivery to the shipping (dissemination) area.

- Disposition of the paperwork depends on site policy.
  - For example, both shipping labels and one packing list may go to the shipping (dissemination) area while all remaining paperwork is recycled.

22 Verify that all items (i.e., disk/tape, shipping labels, packing list) to be sent to the shipping (dissemination) area are for the same order.

23 When the shipping labels and packing lists have been printed and the job status on the **PDSIS OI** has changed from "I" (In Progress) to "C" (Completed), click on the action button (on the **PDSIS OI Main Screen**) at the beginning of the job line for the job.

- The **Action List** box is displayed.



Log Viewer

Time Stamp	Result	Media ID
2002/10/29 11:29:51	FAIL	YEA0210280001_0001_1
2002/10/29 11:30:40	FAIL	YEA0210280002_0001_1
2002/10/29 11:30:51	PASS	YEA0210290001_0001_1
2002/10/29 11:55:41	PASS	YEA0210290002_0001_1
2002/11/02 10:43:14	FAIL	YEA0211010001_0001_1
2002/11/02 10:50:13	PASS	YEA0211010003_0001_1
2002/11/02 12:17:32	FAIL	YEA0211020002_0001_1
2002/11/02 12:22:25	FAIL	YEA0211020002_0001_1
2002/11/02 13:42:02	PASS	YEA0211020003_0001_1
2002/11/02 14:18:52	PASS	YEA0211020006_0001_1
2002/11/04 13:19:09	PASS	YEA0211040003_0001_1
2002/11/04 14:38:48	FAIL	YEA0211040004_0001_1
2002/11/04 14:43:06	PASS	YEA0211040004_0001_1
2002/11/21 14:16:07	PASS	YEA0211210001_0001_1
2002/12/02 17:13:12	PASS	YEA0212020007_0001_1
2002/12/02 17:18:55	PASS	YEA0212020008_0001_1
2002/12/03 16:01:47	PASS	YEA0212030015_0001_1
2002/12/03 16:08:57	PASS	YEA0212030014_0001_1
2002/12/08 14:35:41	PASS	YEA0212080006_0001_1
2002/12/09 16:34:16	FAIL	YEA0212090005_0001_1
2002/12/09 16:38:20	PASS	YEA0212090005_0001_1
2002/12/09 17:22:01	PASS	YEA0212090006_0001_1
2002/12/14 16:08:47	FAIL	YEA0212140032_0001_1
2002/12/14 16:20:31	PASS	YEA0212140032_0001_1
2003/01/20 14:03:16	PASS	YEA0301200007_0001_1
2003/01/23 14:51:58	FAIL	YEA0301200007_0001_1
2003/01/23 14:52:43	FAIL	YEA0301200006_0001_1
2003/01/23 14:53:51	PASS	YEA0301200007_0001_1
2003/01/23 14:56:45	PASS	YEA0301200006_0001_1
2003/01/24 20:39:59	PASS	YEA0301240001_0001_1
2003/01/24 20:42:01	PASS	YEA0301200007_0001_1
2003/01/24 20:46:32	PASS	YEA0301240001_0001_1
2003/02/14 13:23:26	PASS	YEA0302130008_0001_1
2003/04/23 14:15:16	PASS	YEA0304230006_0001_1
2003/04/23 14:16:17	FAIL	YEA0304220006_0001_1
2003/04/23 15:07:47	PASS	YEA0304230009_0001_1
2003/04/24 10:14:50	FAIL	YEA0304220006_0001_1
2003/04/24 11:21:48	FAIL	YEA0304220006_0001_1
2003/04/24 11:25:56	FAIL	YEA0304220006_0001_1
2003/04/24 11:43:39	FAIL	YEA0304230008_0001_1
2003/04/24 12:03:31	FAIL	YEA0304230008_0001_1
2003/04/24 15:48:43	FAIL	YEA0304230008_0001_1
2003/04/24 15:49:52	FAIL	YEA0304230008_0001_1
2003/04/30 16:04:34	FAIL	YEA0304300002_0001_1
2003/04/30 16:15:09	PASS	YEA0304300002_0001_1
2003/04/30 16:21:43	PASS	YEA0304280002_0001_1

Refresh Top Bottom Print Exit

Figure 94. PDS Quality Check GUI Log Viewer

24 Select (highlight) **Ship** in the **Action List** box.

- **Ship** is highlighted.

25 Click on the appropriate button from the following selections:

- **OK** - to mark the job "shipped."
- **Cancel** - to dismiss the **Action List** box and return to the **PDSIS OI Main Screen** without marking the job "shipped."
  - The **PDSIS OI Main Screen** is displayed.

26 Return to the procedure for **Monitoring/Controlling Product Processing Using PDS**.

Completing a Job

The procedure for **Completing a Job** is performed as part of the procedure for **Monitoring/Controlling Product Processing Using PDS** (preceding section of this lesson). The **Main OI Screen** provides the Distribution Technician with a means of completing jobs that are in a **QC-Hold** status once they have passed the QC check. This "Complete" action first checks the status of the units of the job. If any unit(s) of the job is (are) not in QC-Hold status, some unit(s) may not be ready for completion; consequently, the completion must be performed using the **OI Detail Screen** (Figure 85) as described in the procedure for **Using the OI Detail Screen** (preceding section of this lesson).

The procedure for completing a job starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Completing a Job

---

1 Click on the action button at the beginning of the job line for the relevant job.

- The **Action List** box (Figure 88) is displayed.
- Not all actions are available for every job.
  - The available actions depend on the job's current status and processing.

2 Select (highlight) **Complete** in the **Action List** box.

- **Complete** is highlighted.
- The **Complete** option is available if the job status is **QC-Hold** only.

3 Click on the appropriate button from the following selections:

- **OK -** to start the process of completing the units in the job and the job itself.
  - A blue pop-up window is displayed with the following type of message indicating that the job's units are being completed:
    - Completing Job *job_key*.
  - When the completion process has finished, the database is queried, the **Main OI Screen** is refreshed, showing any new information or status changes.
    - The job that was completed should no longer be displayed after the screen is refreshed because there are no units to be processed.
- **Cancel -** to dismiss the **Action List** box and return to the **Main OI Screen**.
  - The **Main OI Screen** (Figure 77) is displayed.

4 Return to the procedure for **Monitoring/Controlling Product Processing Using PDS**.

Entering Notes about a Job

The procedure for **Entering Notes about a Job** is performed as part of the procedure for **Monitoring/Controlling Product Processing Using PDS** (preceding section of this lesson). The **Main OI Screen** provides the Distribution Technician with a means of entering comments or notes about jobs. If a note has been entered for a job, an "*" is displayed in the **Note** field of the **Main OI Screen**.

The procedure for entering notes about a job starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Entering Notes about a Job

---

1 Click on the action button at the beginning of the job line for the relevant job.

- The **Action List** box (Figure 88) is displayed.
- Not all actions are available for every job.
  - The available actions depend on the job's current status and processing.

2 Select (highlight) **Notes** in the **Action List** box.

- **Notes** is highlighted.

3 Click on the appropriate button from the following selections:

- **OK -** to gain access to the **Job Notes** dialogue box.
  - The **Job Notes** dialogue box (Figure 95) is displayed.
- **Cancel -** to dismiss the **Action List** box and return to the **Main OI Screen**.
  - The **Main OI Screen** (Figure 77) is displayed.

4 Type appropriate text in the **Job Notes** dialogue box.

- If notes had already been entered for the selected job, the notes are displayed in the **Job Notes** dialogue box and it is possible to add to or modify them.

5 Click on the **Return** button to dismiss the **Job Notes** dialogue box and return to the **Main OI Screen**.

- The **Main OI Screen** (Figure 77) is displayed.
- When the **Main OI Screen** is refreshed next an "*" is displayed in the **Note** field on the job line for the specified job (on the **Main OI Screen**) indicating that there is a note concerning the job**.**

6 Return to the procedure for **Monitoring/Controlling Product Processing Using PDS**.

Promoting a Job

A job would most likely be promoted at the request of User Services. The only practical means the Distribution Technician has of promoting jobs is to activate the pending job ahead of any other pending jobs.

Canceling a Job

Jobs are not normally canceled using the PDSSA operator tools. Jobs (orders) can be "rejected" using PDSIS tools. (Refer to the procedure for **Rejecting a Unit/Order** (subsequent section of this lesson).

Generating PDS Production Reports

The procedure for **Generating PDS Production Reports** is performed as part of the procedure for **Monitoring/Controlling Product Processing Using PDS** (preceding section of this lesson). The **Main OI Screen** provides the Distribution Technician with a means of generating PDS production reports.

The procedure for generating PDS production reports starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed.

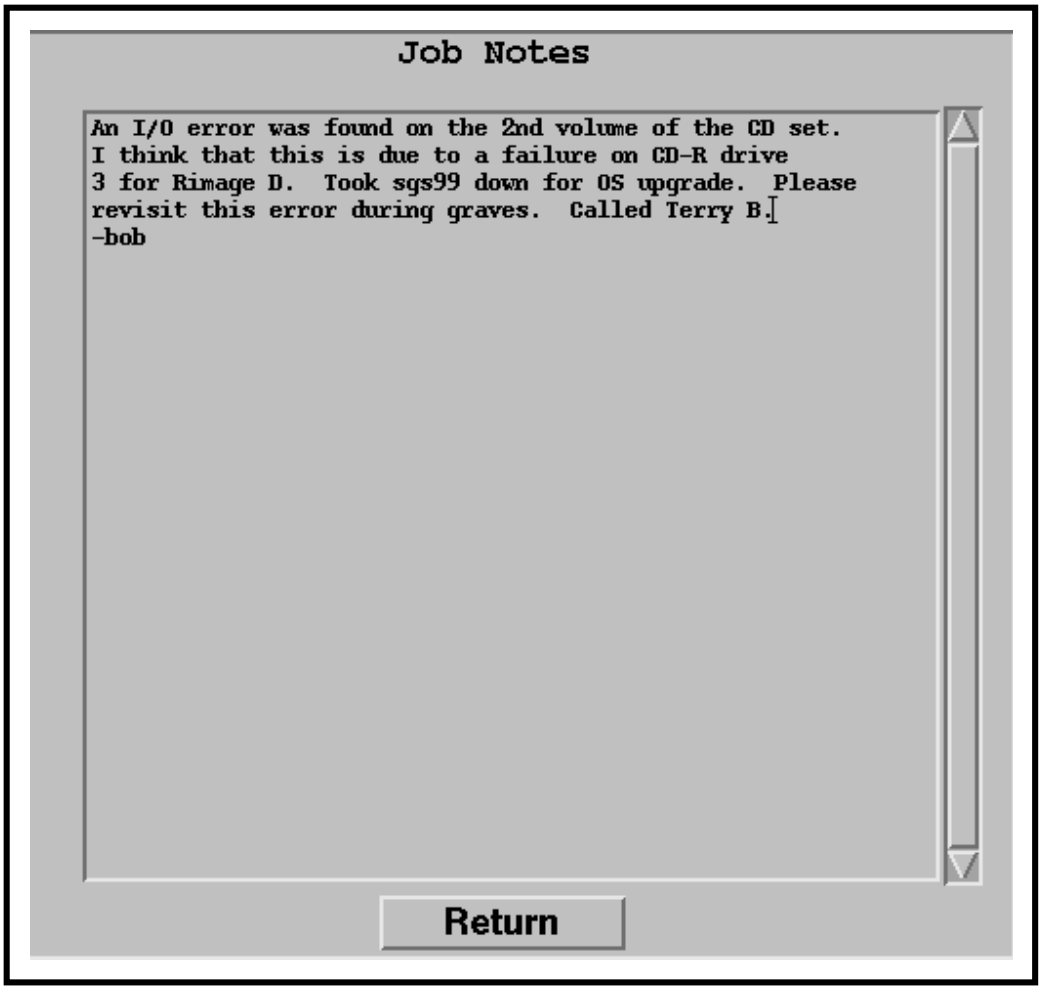


Figure 95. Job Notes Dialogue Box

Generating PDS Production Reports

1 If the report is to be printed on the currently assigned report printer, continue with Step 2; otherwise, perform the procedure for **Selecting an Alternate Printer** (subsequent section of this lesson).

2 To generate a report that contains the data currently being displayed on the **Main OI Screen** select **Reports → Queue** from the pull-down menu.

- The report is printed on the designated report printer.
- The report is fired off in the background and uses the printer definition for reports.

- The file generated for the report is stored in the $PDSROOT/summary directory. The file name is in the format PDSREQUE_ *MachineID_ConsoleID.timestamp* (e.g., PDSREQUE_DIG06_ops.04OCT2003084244).
- As shown in the example in Figure 96 the queue report contains the following types of data for each current job:
  - **Job Key.**
  - **Total Units.**
  - **Pri** [priority].
  - **Product Media.**
  - **Project ID.**
  - **Due Date.**
  - **Copy Flag.**
  - **Product Code.**
  - **Status.**

Job Key	Total Units	Pri	Product Media	Project Id	Due Date	Copy Flag	Product Code	Status
0000308080004_0001	1	9	DVD	Pds Project	11-AUG-03		L0OUT	Pending
1110308080003_0001	1	9	CD	Pds Project	11-AUG-03		ASTEROUT	Pending
1110308080005_0001	1	9	8H	Pds Project	11-AUG-03		ASTEROUT	Pending
1110308110003_0001	1	9	CD	Pds Project	14-AUG-03		ASTEROUT	Pending
YEA0308080006_0001	1	9	D7	Pds Project	11-AUG-03		GENERIC2	Pending

Figure 96. PDS Queue Report

3 To generate a report of all orders that still need to be produced (broken down by various time frame ranges) select **Reports → Lag** from the pull-down menu.

- The report is printed on the designated report printer.
- The report is fired off in the background and uses the printer definition for reports.
- The file generated for the report is stored in the $PDSROOT/summary directory. The file name is in the format PDSSARELAG_ *MachineID_ConsoleID.timestamp* (e.g., PDSSARELAG_DIG06_ops.04OCT2003084506).

- As shown in the example in Figure 97 the lagging order report contains the following types of groupings for lagging jobs:
  - **30 days old.**
  - **20 days old.**
  - **10 days old.**
  - **9 days old or newer.**
- The report contains the following types of data for each lagging job:
  - **Order Nbr.**
  - **Date Entered.**
  - **Date Due.**
  - **Total Units.**
  - **Prod Code.**
  - **Product Format.**

Date: 09/27/2003 Report No. : PDSSAL
Time: 02:35:00 PM LAGGING ORDER REPORT Page: 1

Order Nbr	Date Entered	Date Due	Total Units	Prod Code	Product Format
30 days old					
20 days old					
10 days old					
1110309170104	09/17/2003	09/20/2003	1	E200	ASTEROUT
1110309170108	09/17/2003	09/20/2003	1	E200	ASTEROUT
1110309170111	09/17/2003	09/20/2003	1	E200	ASTEROUT
1110309170115	09/17/2003	09/20/2003	1	E200	ASTEROUT
1110309170117	09/17/2003	09/20/2003	1	E200	ASTEROUT

Figure 97. PDS Lagging Order Report

4 To generate an error report for a particular job first click in one of the fields on the job line for the relevant job.

5 To generate an error report for a particular job select **Reports → Error** from the pull-down menu.

- The report is printed on the designated report printer.
- The report is fired off in the background.
- The file generated for the report is stored in the $PDSROOT/summary directory. The file name is in the format *job_key*_error_rpt.txt (e.g., YEA0309170681_0001_error_rpt.txt).
- The report is generated from error statements extracted from the job log. [The file name for the job log (in the $PDSROOT/summary directory) is in the format *job_key*.log (e.g., YEA0309170681_0001.log).]
- An example of an error report is shown in Figure 98.

```
Error report for YEA0309170681_0001
-----------------------------
[genericout-nodir] Error: Unit # 1, DPATH = /pdsis/pdsis/staging/orders/YEA0309170681_0001/2
[genericout-notdir] Error: Unit # 1, DPATH = /pdsis/pdsis/staging/orders/YEA0309170681_0001/
[genericout-nofile] Error: There is an error with unit # 1. This unit will not be on t
[genericout-getgeneric] Error: unable to retrieve generic files from /pdsis/pdsis/stagi
[genericout-dpath] Error: Unit 1 will be placed into error
```

Figure 98. PDS Error Report

6 To generate additional reports repeat Steps 1 through 5 as necessary.

7 When all desired reports have been generated, return to the procedure for **Monitoring/Controlling Product Processing Using PDS**.

Selecting an Alternate Printer

The procedure for **Selecting an Alternate Printer** is performed as part of the procedure for **Monitoring/Controlling Product Processing Using PDS** (preceding section of this lesson). The **Main OI Screen** provides the Distribution Technician with a means of selecting an alternate printer for printing reports or jewel cases.

The procedure for selecting an alternate printer starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Selecting an Alternate Printer

1 Click on **Printers** on the menu bar of the **Main OI Screen**.

- The **Default Printers** dialogue box (Figure 99) is displayed.
- The current selections for printers for reports and jewel-case inserts are displayed.

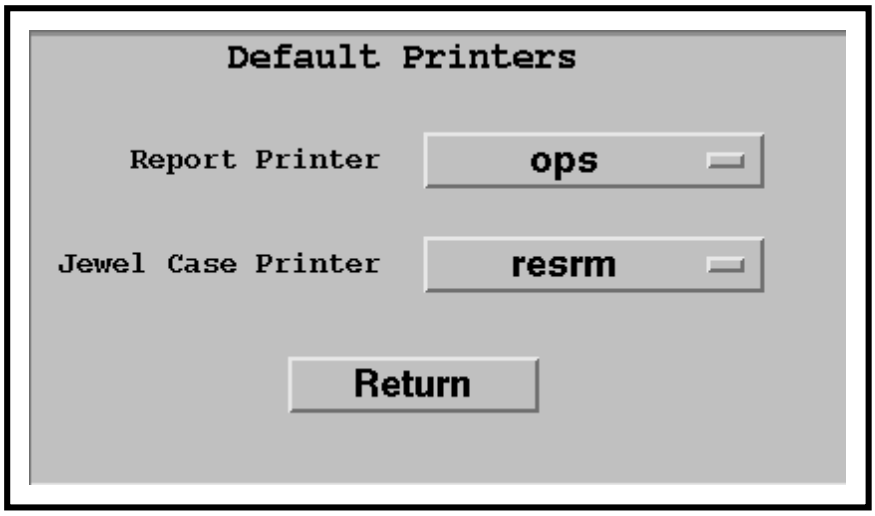


Figure 99. Default Printers Dialogue Box

2 Click and **hold** the applicable option button (either **Report Printer** or **Jewel Case Printer**) to display a menu of printers, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

- If the desired printer is not available on the list of printers, submit a request to the supervisor to have it added to the list.
- Selected printer is displayed on the option button when the mouse button is released.

3 If an alternate printer is to be designated for the other type of printer, repeat Step 2 for the other printer.

4 Click on the **Return** button.

- The **Main OI Screen** (Figure 77) is displayed.

5 Return to the procedure for **Generating PDS Production Reports** or the procedure for **Monitoring/Controlling Product Processing Using PDS** as applicable.

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Monitoring/Controlling Order Processing Using the PDSIS OI

PDSIS Monitoring Activities

Monitoring/controlling order processing using the PDSIS OI involves the following activities (among others):

- Determining the status of an order and/or taking action with respect to an order (using the PDSIS OI Main Screen).
- Determining the status of units associated with a particular order or taking action with respect to units associated with a particular order (using the PDSIS OI Detail Screen).
- Marking a job "Shipped."
- Rejecting a unit/order.
- Generating PDSIS reports.

PDSIS activities are monitored and controlled using the **PDSIS OI Main Screen** (Figure 78), the **PDSIS OI Detail Screen** (Figure 92) and the **PDSIS OI Error Screen** (Figure 100).

The **PDSIS OI Main Screen** (Figure 78) displays the following items for each individual PDS order:

- Action Button [not labeled].
  - Allows access to a list of actions that can be taken with respect to the order.
- Order Nbr.
  - Unique PDS order number given to the customer request.
  - The software creates an order number each time the ECS VOGW sends an order.
- Ecs Ordid.
  - ECS order number for the customer request in the MSS database.
- Ecs Reqid.
  - ECS Request ID number for the customer request in the MSS database.
- Sta.
  - PDSIS status of the order.

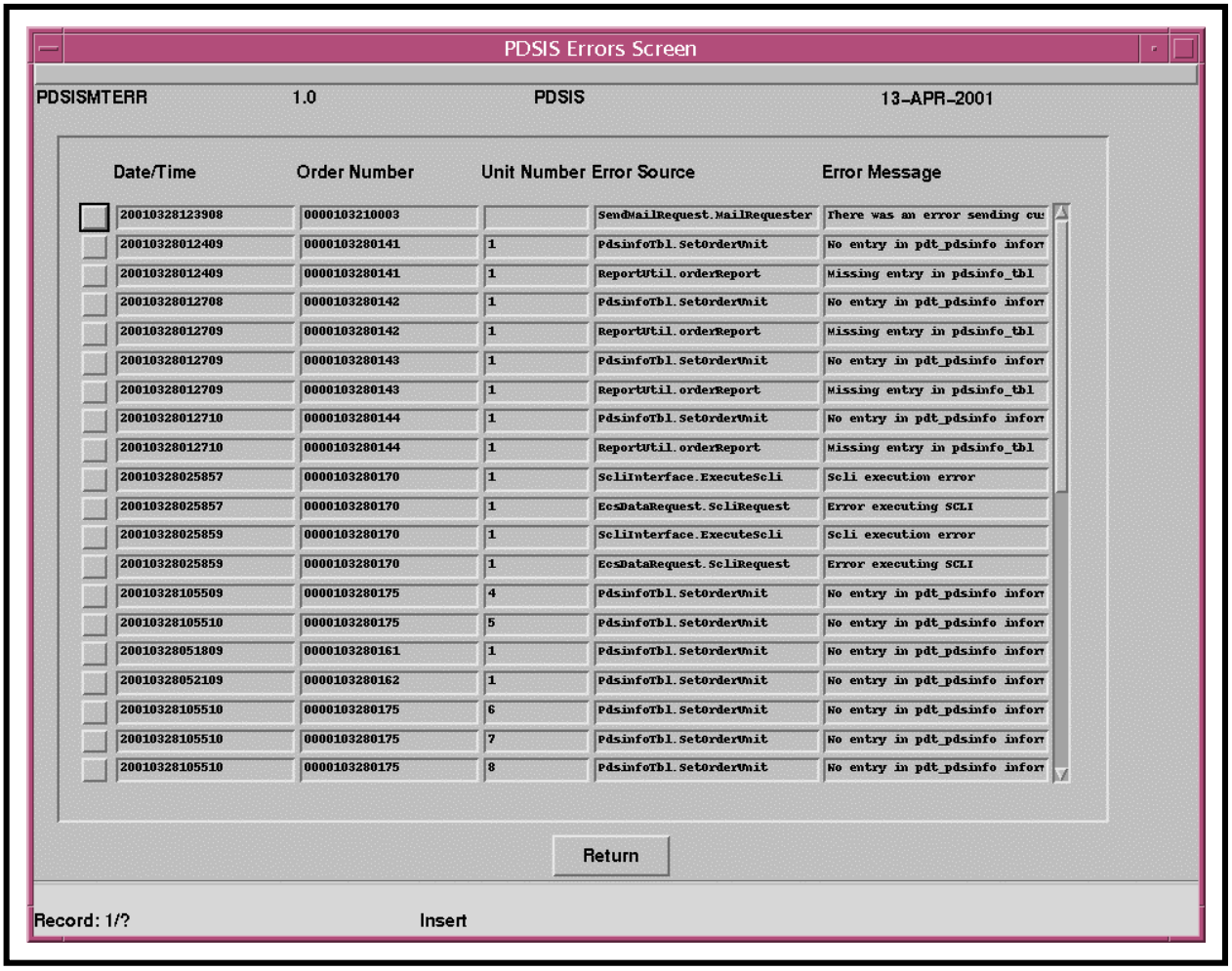


Figure 100. PDSIS OI Error Screen

- Status Date.
  - Last date any database status has changed on the order.
- Date Entered.
  - Date when the order was entered in the system.

The **PDSIS OI Detail Screen** (Figure 92) displays the following items for the selected individual PDS order:

- Order Number.
  - Unique PDS order number given to the customer request.

- ECS Order ID.
  - ECS order number of the customer request in the MSS database.
- ECS Req ID.
  - ECS Request ID number of the customer request in the MSS database.
- Status.
  - PDSIS status of the order.

The **PDSIS OI Detail Screen** (Figure 92) displays the following items for each unit within the selected PDS order:

- Action Button [not labeled].
  - Allows access to a list of actions that can be taken with respect to the job.
- Unit Number.
  - Unit number.
- Ordering ID.
  - Unique reference for the relevant granule in the ECS archive.
- Prod Code.
  - PDSIS's description of the product code.
  - It is loaded from customizable tables.
- Output Specs.
  - PDSSA's description of the output specifications selected by the customer.
- Subset Data.
  - Yes/No flag indicating whether the unit is a subsetted request (L7 floating scene).
- Size.
  - Size in MB of the granule.
  - May be an estimate in some cases.
- Status.
  - PDSIS status of the order.

- Status Date.
  - Last date any database status has changed on the unit.

The **PDSIS OI Error Screen** (Figure 100) displays the following types of information:

- Action Button [not labeled].
  - Allows access to a list of actions that can be taken with respect to the item.
- Date/Time.
  - Time when the error occurred.
- Order Number.
  - Order number of the order in which the error occurred.
- Unit Number.
  - PDS unit number in which the error occurred.
- Error Source.
  - Source of the error.
- Error Message.
  - PDSIS coded error message.

Monitoring/Controlling Order Processing Using the PDSIS OI

The procedure for monitoring/controlling order processing using the PDSIS OI starts with the assumption that all applicable servers are currently running and the **PDSIS OI Main Screen** (Figure 78) is being displayed.

Monitoring/Controlling Order Processing Using the PDSIS OI

---

1 Observe information displayed on the **PDSIS OI Main Screen** (Figure 78).

- The following items are displayed on an **order status line** for each individual PDS order:
  - Action Button [not labeled].
  - Order Nbr.
  - Ecs Ordid.
  - Ecs Reqid.
  - Sta.

- Status Date.
- Date Entered.

- Each **order status line** display is color-coded to draw attention to job status. The colors are interpreted as follows:
  - Red The error flag for the order is set at "Y" in the database.
  - Green **In Progress** status.
  - Yellow **Completed** status.
  - Grey **Order Received** status.
- If there are more records than can be displayed on the screen, use the scroll bar on the right hand side of the form to view the additional records.
- Selecting **Display → Refresh** from the pull-down menu provides a means of updating the data on the screen from the database without having to wait for the interval set on the timer.
- Selecting **Display → Repaint** from the pull-down menu causes the entire screen (borders, buttons, and data) to be redrawn without accessing the database for data.
  - The **Repaint** option is used in case the window becomes garbled.
- The **status line** at the bottom of the screen displays information about the form (for example, the status line in Figure 78 displays “Record: 1/?” and “INSERT").
- The **message line** near the bottom of the screen (just above the **status line**) displays informational messages and error messages pertinent to what is happening on the form.
  - Messages are displayed on the screen as long as they are pertinent.

2 If more specific information is required or action should be taken with respect to units associated with a particular order, perform the procedure for **Using the PDSIS OI Detail Screen** (subsequent section of this lesson).

3 If it becomes necessary to perform any of the following actions, go to the corresponding procedure (subsequent sections of this lesson):

- **Using the PDSIS OI Detail Screen** (to determine the status of units associated with a particular order or take action with respect to units associated with a particular order).
- **Marking a Job Shipped** (to mark a completed job shipped).
- **Rejecting a Unit/Order** (to change the status of a unit or order to "X" ("Reject"), effectively canceling the unit or order).

- **Generating PDSIS Reports** (to generate PDSIS error, lagging order, rejected order, or shipped order reports).
- **Troubleshooting PDS Problems** (to troubleshoot problems/failures affecting order processing).

4 Repeat Steps 1 through 3 as necessary to monitor/control orders.

5 If it becomes necessary to shut down the PDSIS OI, perform the procedure for **Shutting Down the PDSIS Operator Interface (PDSIS OI)** (previous section of this lesson).

Using the PDSIS OI Detail Screen

The **PDSIS OI Detail Screen** provides the Distribution Technician with a means of accomplishing the following objectives:

- Obtaining specific information with respect to units associated with a particular order.
- Taking action with respect to units associated with a particular order.

The procedure for using the **PDSIS OI Detail Screen** starts with the assumption that all applicable servers are currently running and the **PDSIS OI Main Screen** (Figure 78) is being displayed.

Using the PDSIS OI Detail Screen

---

1 Click on the action button at the beginning of the order status line for the relevant order.

- An **Action List** box similar to the one shown in Figure 88 is displayed.
- Not all actions are available for every order.
  - The available actions depend on the order's current status.

2 Select (highlight) **Details** in the **Action List** box.

- **Details** is highlighted.

3 Click on the appropriate button from the following selections:

- **OK** - to bring up the **PDSIS OI Detail Screen** and dismiss the **Action List** box.
  - The **PDSIS OI Detail Screen** (Figure 92) is displayed.
- **Cancel** - to dismiss the **Action List** box and return to the **Main OI Screen**.
  - The **PDSIS OI Main Screen** (Figure 78) is displayed.

4 Observe information displayed on the **PDSIS OI Detail Screen** (Figure 92).

- The following items are displayed on the **PDSIS OI Detail Screen** for the selected individual order:
  - Order Number.
  - ECS Order ID.
  - ECS Req ID.
  - Status.
- The following items are displayed on the **PDSIS OI Detail Screen** for each unit within the selected PDS order:
  - Action Button [not labeled].
  - Unit Number.
  - Ordering ID.
  - Prod Code.
  - Output Specs.
  - Subset Data.
  - Size.
  - Status.
  - Status Date.
- Each **unit line** display is color-coded to draw attention to unit status. The colors are interpreted as follows:
  - Red The error flag for the unit is set at "Y" in the database.
  - Green **In Progress** status.
  - Yellow **Completed** status.
  - Grey **Order Received** status.
- There is an action button [not labeled] at the beginning of each unit line.
  - Allows access to a list of actions that can be taken with respect to the job.
    - Errors (displays an Error Window).
    - Reject (changes the status of the selected unit to Reject).

- If there are more records than can be displayed on the screen, use the scroll bar on the right hand side of the form to view the additional records.
- Selecting **Display → Refresh** from the pull-down menu causes the **OI Detail Screen** data in the database to be requeried and redisplayed.
- Selecting **Display → Repaint** from the pull-down menu causes the entire screen (borders, buttons, and data) to be redrawn without accessing the database for data.
  - The **Repaint** option is used in case the window becomes garbled.
- The **status line** at the bottom of the screen displays information about the form.
- The **message line** near the bottom of the screen (just above the **status line**) displays informational messages and error messages pertinent to what is happening on the form.

5 If it is desirable to see the error(s) associated with a particular unit, perform the procedure for **Checking/Clearing Errors on PDSIS** (subsequent section of this lesson).

6 If it becomes necessary to reject unit(s), perform the procedure for **Rejecting a Unit/Order** (subsequent section of this lesson).

7 Repeat Steps 4 through 6 as necessary to obtain additional information with respect to units associated with the selected order and/or take action with respect to units associated with the order.

8 To return to the **PDSIS OI Main Screen** select **Action → Return** from the pull-down menu.

- The **PDSIS OI Detail Screen** is dismissed.
- The **PDSIS OI Main Screen** (Figure 78) is displayed.

Marking a Job Shipped

The procedure for **Marking a Job Shipped** is performed as part of the procedure for **Monitoring/Controlling Order Processing Using the PDSIS OI** (preceding section of this lesson). The **PDSIS OI Main Screen** provides the Distribution Technician with means of marking a completed job shipped.

The procedure for marking a job shipped starts with the assumption that all applicable servers are currently running, the **PDSIS OI Main Screen** (Figure 78) is being displayed.

1 Verify that the following conditions have been met:

- The **Sta** [status] of the job (as displayed on the **PDSIS OI Main Screen**) is **C** (completed).
- The packing lists for the job have been printed.
- The shipping labels for the job have been printed.

2 Click on the action button at the beginning of the relevant order status line.

- The **Action List** box (similar to the one shown in Figure 88) is displayed.

3 Select (highlight) **Ship** in the **Action List** box.

- **Ship** is highlighted.

4 Click on the appropriate button from the following selections:

- **OK** - to mark the order shipped and dismiss the **Action List** box.
  - The **PDSIS OI Main Screen** (Figure 78) is displayed.
  - The status of the order changes to shipped and the order is removed from (is no longer visible on) the **PDSIS OI Main Screen**.
- **Cancel** - to dismiss the **Action List** box without marking the order shipped.
  - The **PDSIS OI Error Screen** (Figure 100) is displayed.

5 Return to the procedure for **Monitoring/Controlling Order Processing Using the PDSIS OI** (previous section of this lesson).

Rejecting a Unit/Order

The procedure for **Rejecting a Unit/Order** is performed as part of either the procedure for **Monitoring/Controlling Order Processing Using the PDSIS OI** or the procedure for **Using the PDSIS OI Detail Screen** (preceding sections of this lesson). Both the **PDSIS OI Main Screen** and the **PDSIS OI Detail Screen** provide the Distribution Technician with means of rejecting a unit/order.

CAUTION

Before rejecting a unit or order it is advisable to have in hand written authorization to do so.

Selecting "Reject" changes the status of the unit or order to a Reject (X) or cancelled state. Care is recommended because the reject function does not have a confirmation button. All units in process will be marked for rejection and no further processing will occur. The customer's completion report will reflect the specified unit as having a Reject status.

The procedure for rejecting a unit/order starts with the assumption that all applicable servers are currently running and either the **PDSIS OI Main Screen** (Figure 78) or the **PDSIS OI Detail Screen** (Figure 92) is being displayed.

Rejecting a Unit/Order

---

1 Click on the action button at the beginning of the relevant order status line or unit line.

- The **Action List** box (similar to the one shown in Figure 88) is displayed.

2 Select (highlight) **Reject** in the **Action List** box.

- **Reject** is highlighted.

3 Click on the appropriate button from the following selections:

- **OK -** to reject the unit/order, dismiss the **Action List** box and return to the screen that was displayed before the action button was selected.
  - Either the **PDSIS OI Main Screen** (Figure 78) or the **PDSIS OI Detail Screen** (Figure 92) (as applicable) is displayed.
- **Cancel -** to dismiss the **Action List** box and return to the screen that was displayed before the action button was selected.
  - Either the **PDSIS OI Main Screen** (Figure 78) or the **PDSIS OI Detail Screen** (Figure 92) (as applicable) is displayed.

4 Return to the procedure being performed before the action button was selected, i.e., either **Monitoring/Controlling Order Processing Using the PDSIS OI** or **Using the PDSIS OI Detail Screen** (as applicable).

Generating PDSIS Reports

The procedure for **Generating PDSIS Reports** is performed as part of the procedure for **Monitoring/Controlling Order Processing Using the PDSIS OI** (preceding section of this lesson). The **PDSIS OI Main Screen** provides the Distribution Technician with a means of generating PDSIS reports.

The procedure for generating PDSIS reports starts with the assumption that all applicable servers are currently running and the **PDSIS OI Main Screen** (Figure 78) is being displayed.

Generating PDSIS Reports

---

1 Select the type of report from the **Reports** pull-down menu on the **PDSIS OI Main Screen**.

- The following types of reports are listed on the menu:
  - **Error Report.**
  - **Orders Lagged.**
  - **Orders Rejected.**
  - **Orders Shipped.**
- When a type of report has been selected, one of two types of **Report Parameters** form [a.k.a. **Runtime Parameter Form** (Figure 101 or Figure 102)] is displayed.

2 Click and hold on the **Destype** (destination type) option button, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

- The selected report destination type is displayed on the **Destype** option button.
- The following options are available:
  - **Screen.**
  - **File.**
  - **Printer.**
  - **Mail.**
  - **Preview** [same visual effect as **Screen** but intended to be viewed as a prelude to printing].
- The default printer (if any) is displayed in the **Desname** field if **Printer** is selected as the **Destype**.

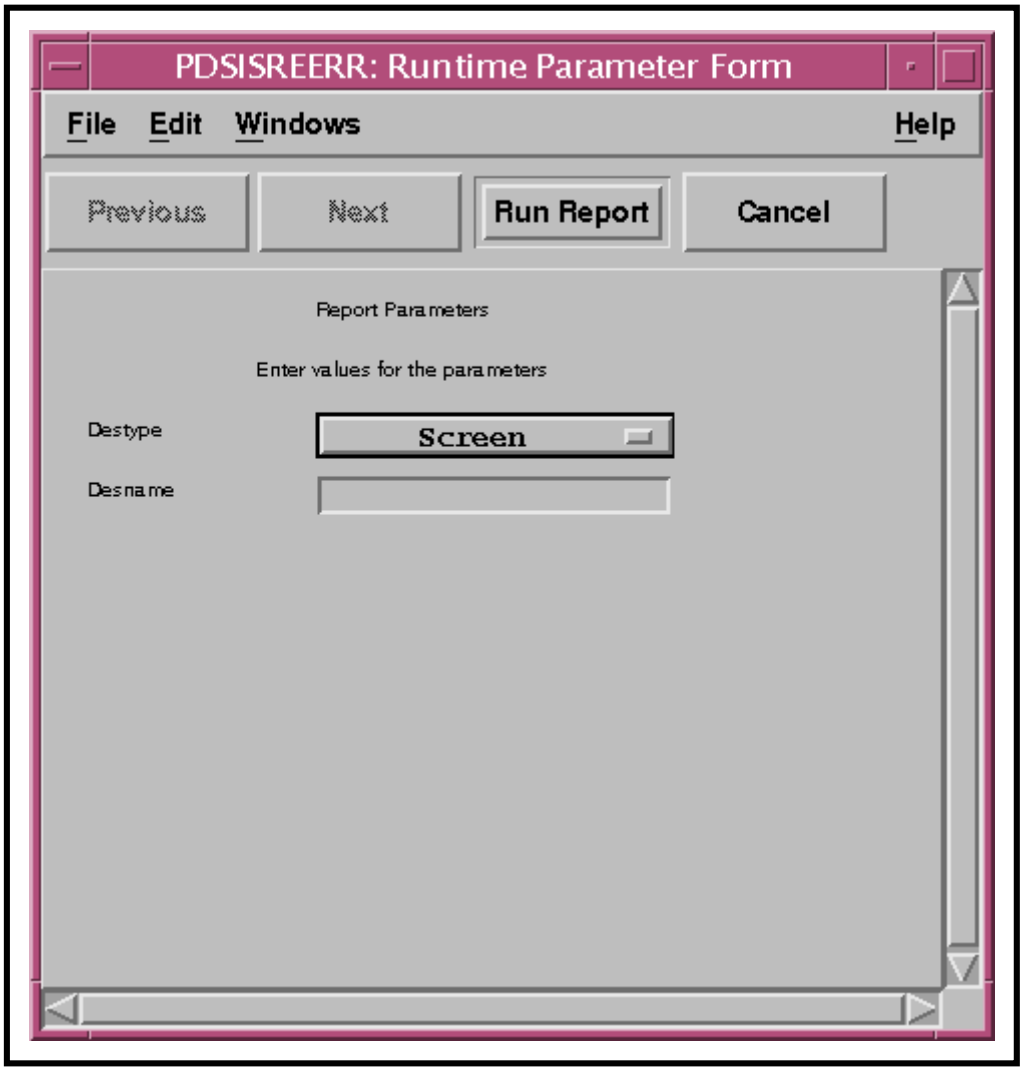


Figure 101. Report Parameters Form (Runtime Parameter Form)

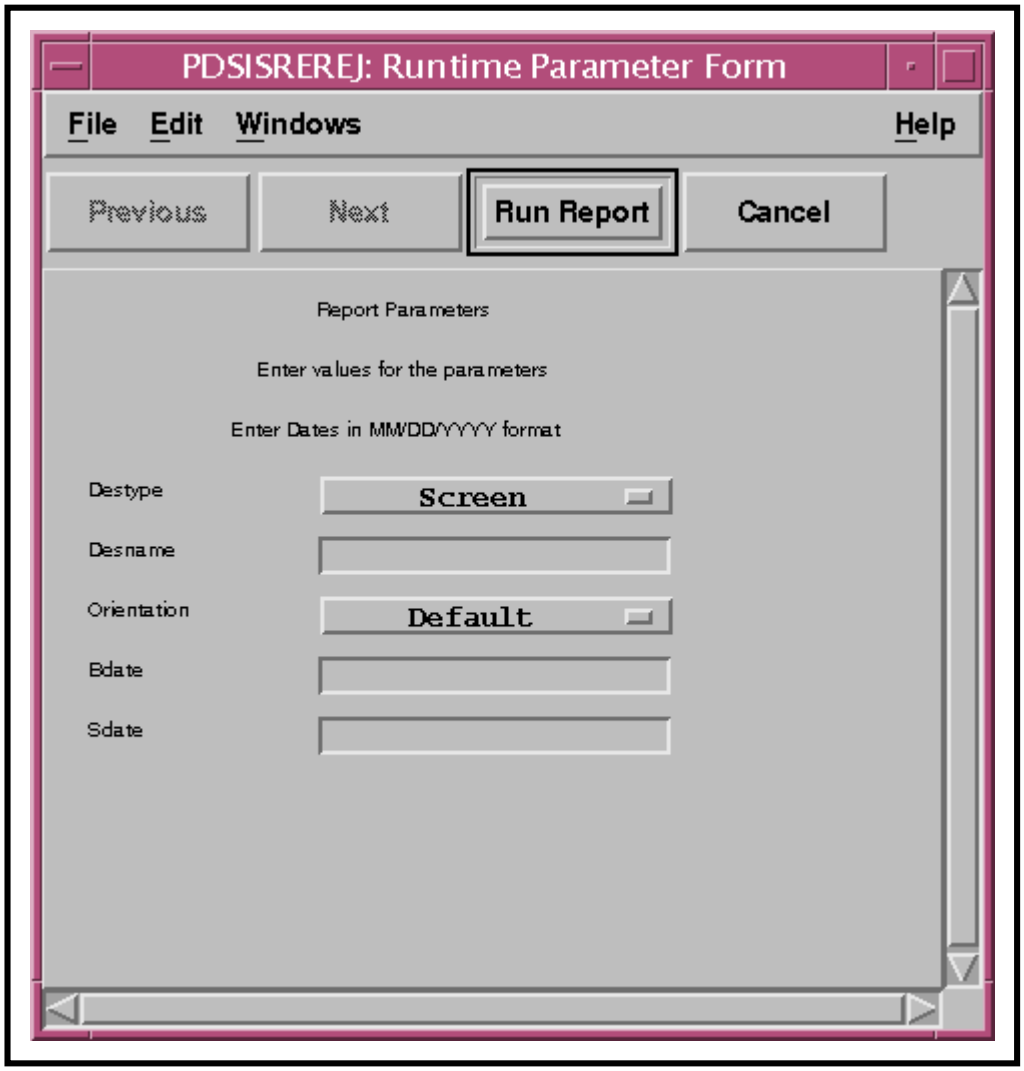


Figure 102. Report Parameters Form (Alternate Form)

3 If a destination is needed for the selected **Destype** and the preferred destination is not already being displayed in the **Desname** field, type the destination in the **Desname** field.

- The following kinds of destinations may be entered in the Desname field (as appropriate):
  - Printer name.
  - File path/name.
  - E-mail address.

4 If there is an **Orientation** option button on the **Report Parameters Form** (as shown in Figure 102), click and hold on the **Orientation** option button, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

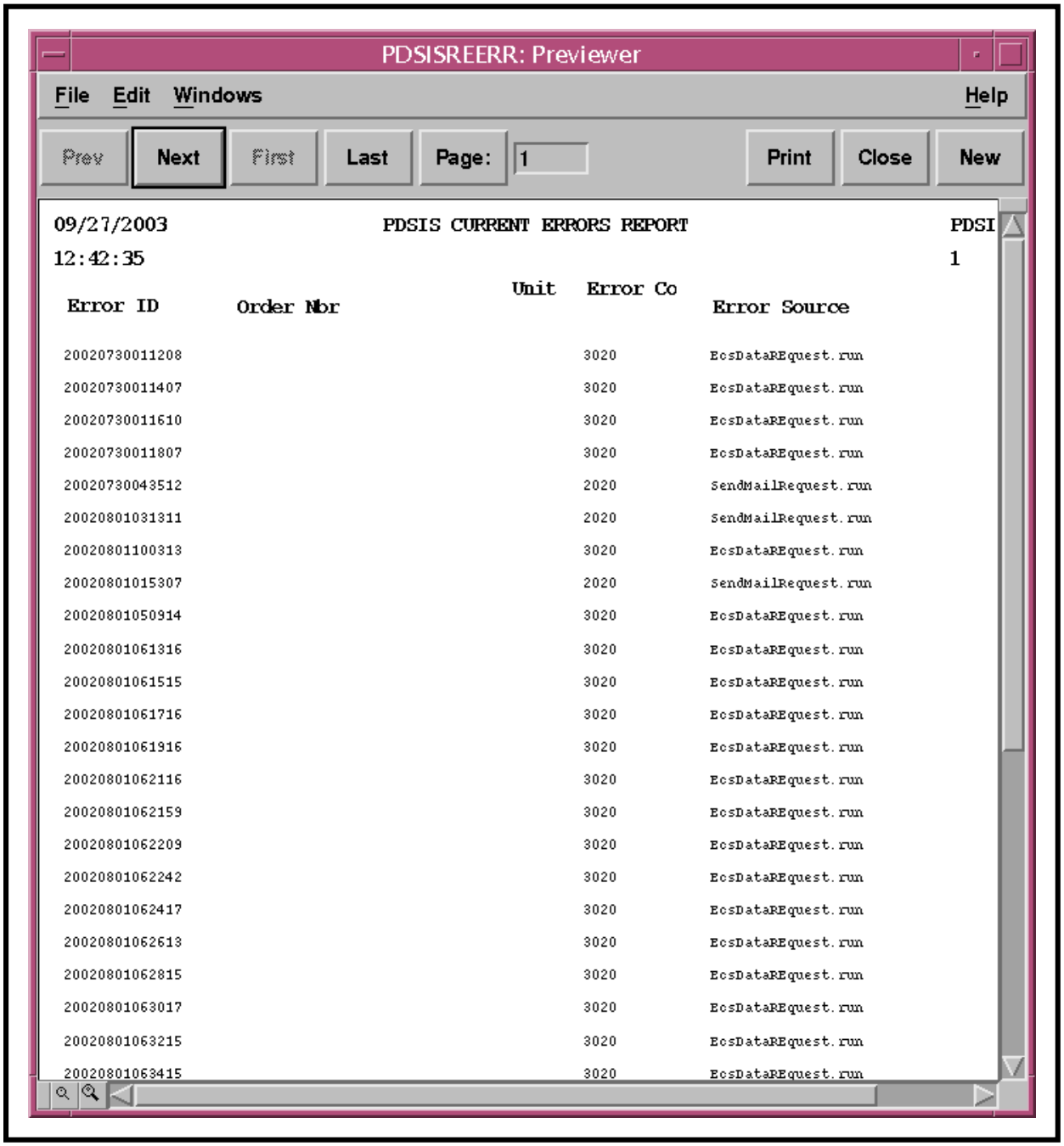
- The selected report orientation is displayed on the **Orientation** option button.
- The following options are available:
  - **Default.**
  - **Landscape.**
  - **Portrait.**

5 If there are date range fields on the **Report Parameters Form** (Figure 102), for the report, type the beginning date (based on "status date") and ending date (in ***MM/DD/YYYY*** format) in the appropriate fields:

- **Bdate** [beginning of the "status date" range].
- **Sdate** [end of the "status date" range].

6 Click on the appropriate button from the following selections:

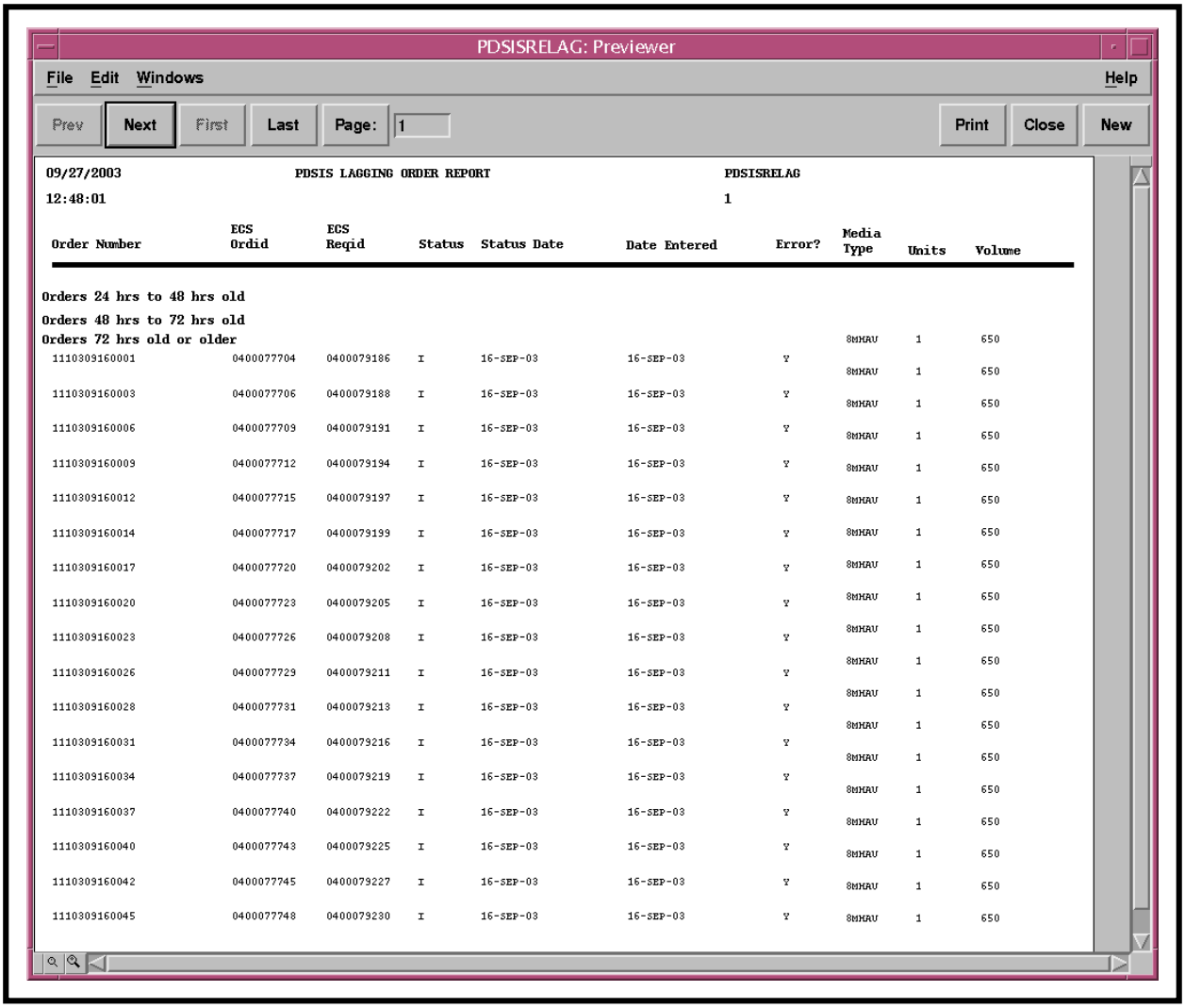
- **Run Report -** to generate the selected report and dismiss the **Report Parameters** form.
  - The selected report is generated and sent to the selected destination type (**Destype**).
    - If either **Screen** or **Preview** was selected, the report is displayed in a window as shown in Figures 78 through 81.
    - If **File** was selected, a "**Print job**" dialogue box (Figure 107) is displayed to verify the file path/name (as specified in the **Desname** field). Clicking on the **Save…** button results in the **Save File Dialog** box (Figure 108) being displayed for further verification of the file path/name. Clicking on the **OK** button causes the file to be saved in the specified location. Please note that the file is not easily read using editing programs (e.g., **vi**) but if printed (e.g., **lp -d *printername filename***), it should be readable.
    - If **Printer** was selected, the printer specified in the **Desname** field prints a hardcopy report.
    - If **Mail** was selected, the report is sent to the e-mail address specified in the **Desname** field.
- **Cancel -** to dismiss the **Report Parameters** form without generating a report.



09/27/2003 PDSIS CURRENT ERRORS REPORT PDSI
12:42:35 1

Error ID	Order Nbr	Unit	Error Co	Error Source
20020730011208			3020	EcsDataREquest.run
20020730011407			3020	EcsDataREquest.run
20020730011610			3020	EcsDataREquest.run
20020730011807			3020	EcsDataREquest.run
20020730043512			2020	SendMailRequest.run
20020801031311			2020	SendMailRequest.run
20020801100313			3020	EcsDataREquest.run
20020801015307			2020	SendMailRequest.run
20020801050914			3020	EcsDataREquest.run
20020801061316			3020	EcsDataREquest.run
20020801061515			3020	EcsDataREquest.run
20020801061716			3020	EcsDataREquest.run
20020801061916			3020	EcsDataREquest.run
20020801062116			3020	EcsDataREquest.run
20020801062159			3020	EcsDataREquest.run
20020801062209			3020	EcsDataREquest.run
20020801062242			3020	EcsDataREquest.run
20020801062417			3020	EcsDataREquest.run
20020801062613			3020	EcsDataREquest.run
20020801062815			3020	EcsDataREquest.run
20020801063017			3020	EcsDataREquest.run
20020801063215			3020	EcsDataREquest.run
20020801063415			3020	EcsDataREquest.run

Figure 103. PDSIS Current Errors Report



09/27/2003 PDSIS LAGGING ORDER REPORT PDSISRELAG
12:48:01 1

Order Number	ECS Ordid	ECS Reqid	Status	Status Date	Date Entered	Error?	Media Type	Units	Volume
Orders 24 hrs to 48 hrs old									
Orders 48 hrs to 72 hrs old									
Orders 72 hrs old or older									
							8MMAV	1	650
1110309160001	0400077704	0400079186	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160003	0400077706	0400079188	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160006	0400077709	0400079191	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160009	0400077712	0400079194	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160012	0400077715	0400079197	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160014	0400077717	0400079199	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160017	0400077720	0400079202	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160020	0400077723	0400079205	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160023	0400077726	0400079208	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160026	0400077729	0400079211	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160028	0400077731	0400079213	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160031	0400077734	0400079216	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160034	0400077737	0400079219	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160037	0400077740	0400079222	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160040	0400077743	0400079225	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160042	0400077745	0400079227	I	16-SEP-03	16-SEP-03	Y			
							8MMAV	1	650
1110309160045	0400077748	0400079230	I	16-SEP-03	16-SEP-03	Y			

Figure 104. PDSIS Lagging Order Report

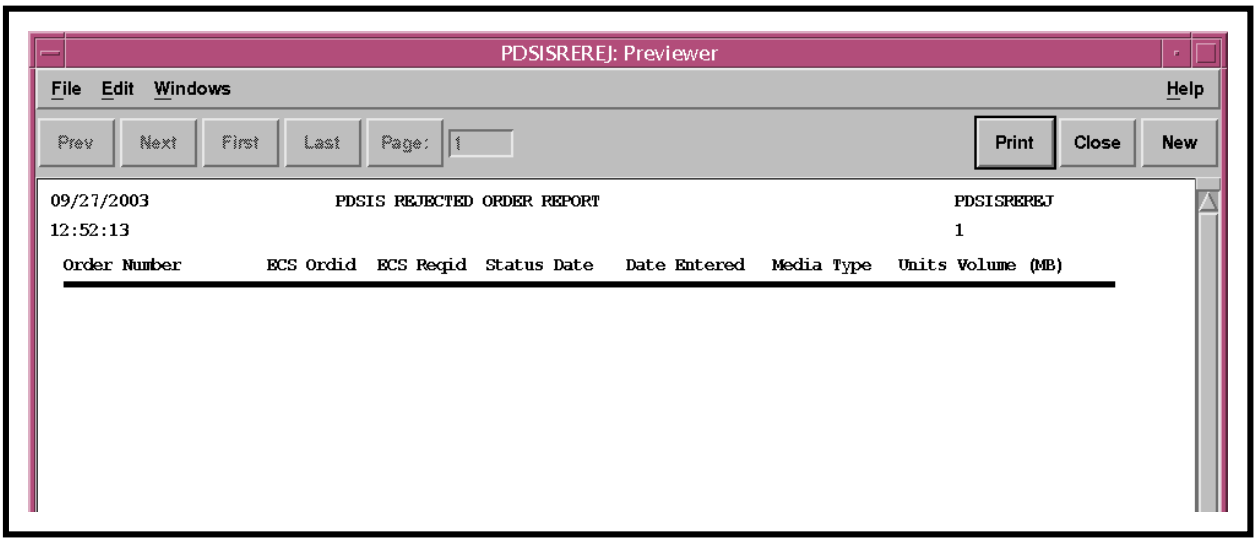


Figure 105. PDSIS Rejected Orders Report

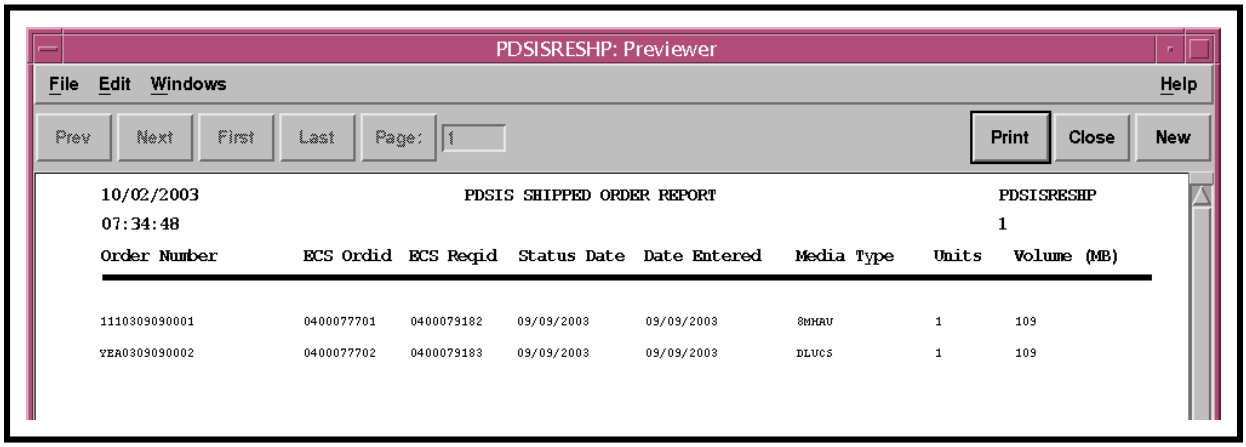


Figure 106. PDSIS Shipped Order Report

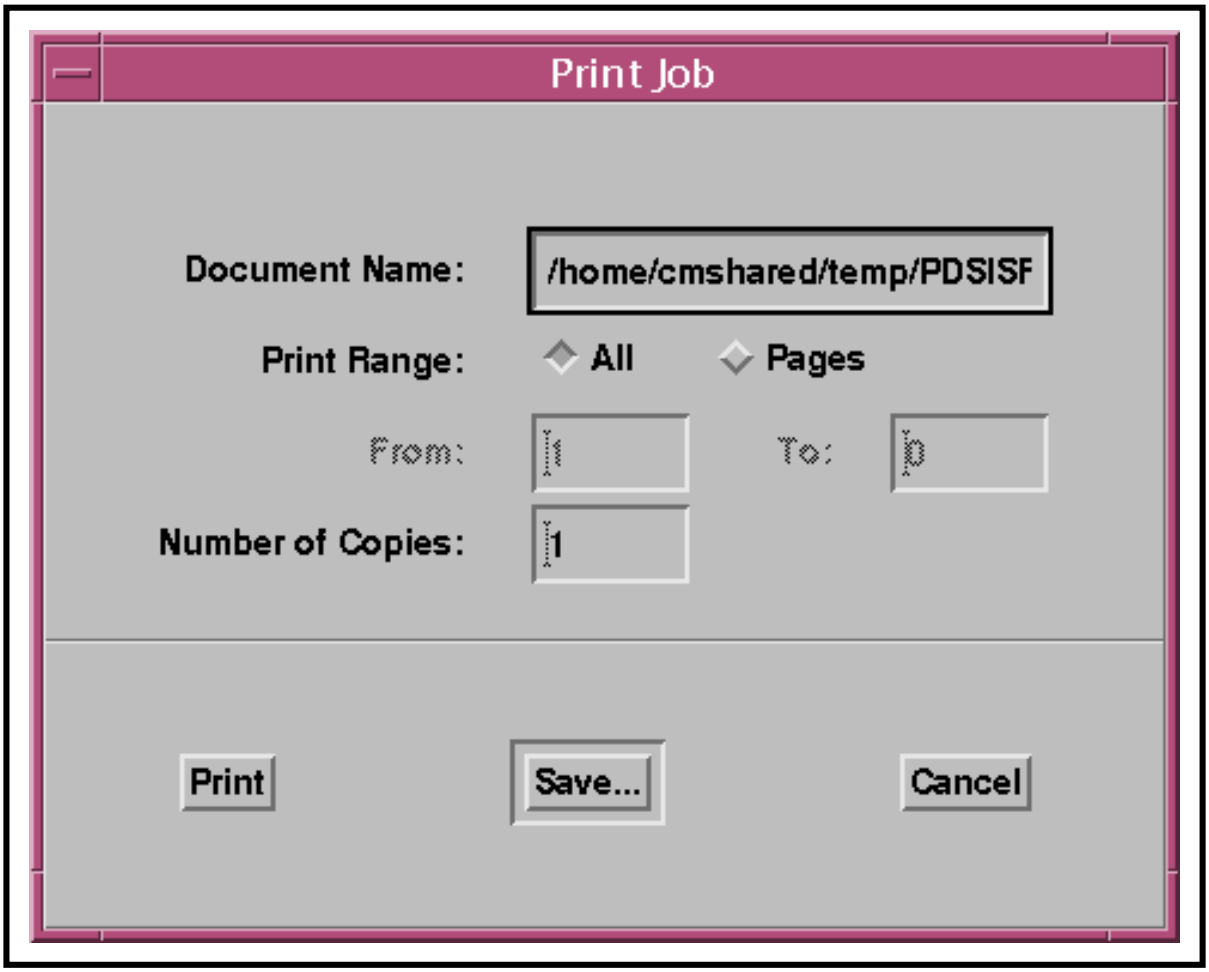


Figure 107. Print Job Dialogue Box

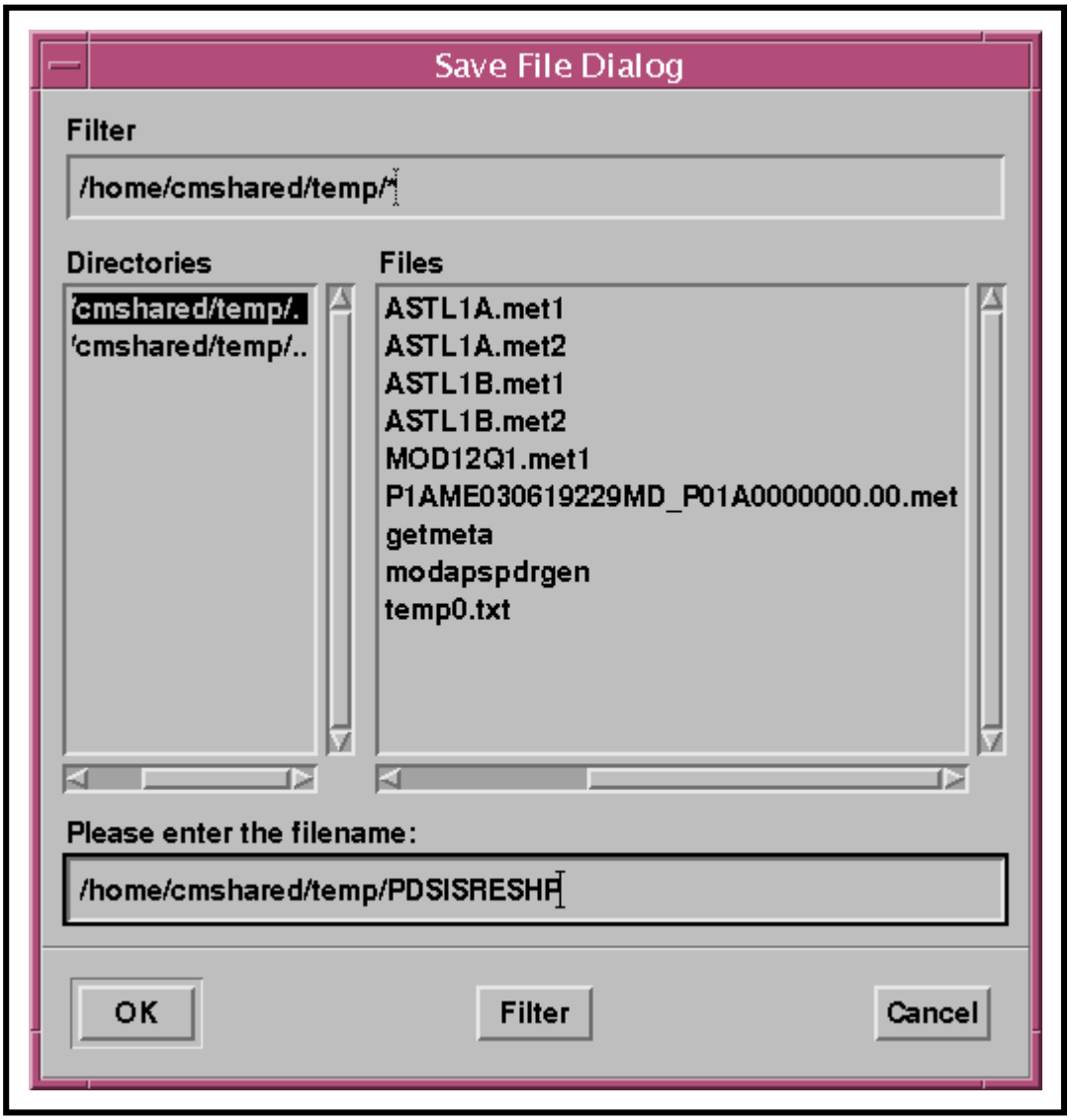


Figure 108. Save File Dialog Box

7 Review the report.

- An **PDSIS Current Errors Report** contains the following types of data for each error:
  - **Error ID.**
  - **Order Nbr.**
  - **Unit.**

  - **Error Co** [error code].
  - **Error Source.**
- A **PDSIS Lagging Order Report** contains the following types of groupings for lagging orders:
  - **Orders 24 hrs to 48 hrs old.**
  - **Orders 48 hrs to 72 hrs old.**
  - **Orders 72 hrs old or older.**
- A **PDSIS Lagging Order Report** contains the following types of data for each lagging order:
  - **Order Number.**
  - **ECS Ordid** [ECS Order ID].
  - **ECS Reqid** [ECS Request ID].
  - **Status.**
  - **Status Date.**
  - **Date Entered.**
  - **Error?**
  - **Media Type.**
  - **Units.**
  - **Volume.**
- A **PDSIS Rejected Order Report** or a **PDSIS Shipped Order Report** contains the following types of data for each affected order:
  - **Order Number.**
  - **ECS Ordid** [ECS Order ID].
  - **ECS Reqid** [ECS Request ID].
  - **Status Date.**
  - **Date Entered.**
  - **Media Type.**

- **Units.**
- **Volume (MB).**

- If either **Screen** or **Preview** was selected as the **Destype**, the following buttons are available on the report form:
  - **Prev** – when active (boldface letters), provides direct access to the previous page in the report.
  - **Next** – when active (boldface letters), provides direct access to the next page in the report.
  - **First** – when active (boldface letters), provides direct access to the first page in the report.
  - **Last** – when active (boldface letters), provides direct access to the last page in the report.
  - **Page:** – when active (boldface letters), provides direct access to the page specified in the adjacent text entry field.
  - **Print** – provides access to a **Print job** dialogue box (Figure 107). Click on the **Print** button in the dialogue box to send the document to the printer.
  - **Close** – dismisses the report window (to exit from the report).
  - **New** – opens an additional report window containing another copy of the report (so different pages of the report can be viewed at the same time).
- Selecting **File** → **Quit** from the pull-down menu is another way (in addition to the **Close** button) of dismissing the report window.

8 To generate additional reports repeat Steps 1 through 7 as necessary.

9 When all desired reports have been generated, return to the procedure for **Monitoring/Controlling Order Processing Using the PDSIS OI**.

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Using the PDS and PDSIS Cleanup Managers

Using the PDS Cleanup Manager

The PDS Cleanup Manager is a GUI that is used for specifying a file cleanup strategy for the following types of PDSSA files:

- Summary files.
- Master list files.
- Log files.
- Operator Interface log files.
- Status files.
- Jewel-case insert files.
- Label files.
- Text files.
- TIFF (Tag Image File Format) files.

PDSIS files are not included in the PDS Cleanup Manager's cleanup strategy. The PDSIS Cleanup Manager is used for specifying a file cleanup strategy for PDSIS files.

The PDS Cleanup Manager generates or modifies a Bourne shell script (i.e., cleanup.sh) that implements the file cleanup strategy. In addition, the PDS Cleanup Manager may modify the crontab file to adjust the time intervals for deletion or archiving of files.

The large number of files generated by PDS activities would overwhelm the system if some of the files were not removed from the working directories on a fairly frequent basis. However, some files may be required for a limited period of time in order to troubleshoot a job if there is a problem with it or if it is returned from the customer.

The PDS Cleanup Manager is not used very often, especially if a manageable retention period has been established for PDSSA files.

The procedure for using the PDS Cleanup Manager starts with the assumption that all applicable servers (e.g., the Oracle DBMS server) are currently running.

1 Access a terminal window logged in to the PDS Server (e.g., **e0dig06**, **g0dig06**, **l0dig06** or **n0dig06**).

- Click in or open a UNIX (terminal) window.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 At the UNIX command line prompt type **cd** then press the **Return/Enter** key on the keyboard.

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID type **echo $PDSROOT** then press the **Return/Enter** key.

3 Type **cd run** then press the **Return/Enter** key.

- Change to the "run" directory.

4 Type **pdscleanup** then press the **Return/Enter** key.

- The **PDS Cleanup Manager** GUI (Figure 109) is displayed.

5 If any of the types of files in the "summary" directory or "label" directory are to be archived or deleted, in the **Summary Directory** or **Label Directory** section (as applicable) of the **PDS Cleanup Manager** GUI click on either the **Archive** or **Delete** radio button (as applicable) to the right of one of those types of file.

- When one of the radio buttons is selected, the button color changes from gray to red and the button gives the appearance of being depressed.

6 If any of the types of files in the "summary" directory or "label" directory are to be archived or deleted, in the text box adjacent to the button selected in the previous step type the number of days after which files of that type are to be either archived or deleted.

- The following types of files are listed in the **Summary Directory** section of the **PDS Cleanup Manager** GUI:
  - **Summary files.**
  - **Masterlist files.**
  - **Log files.**
  - **OILog files.**

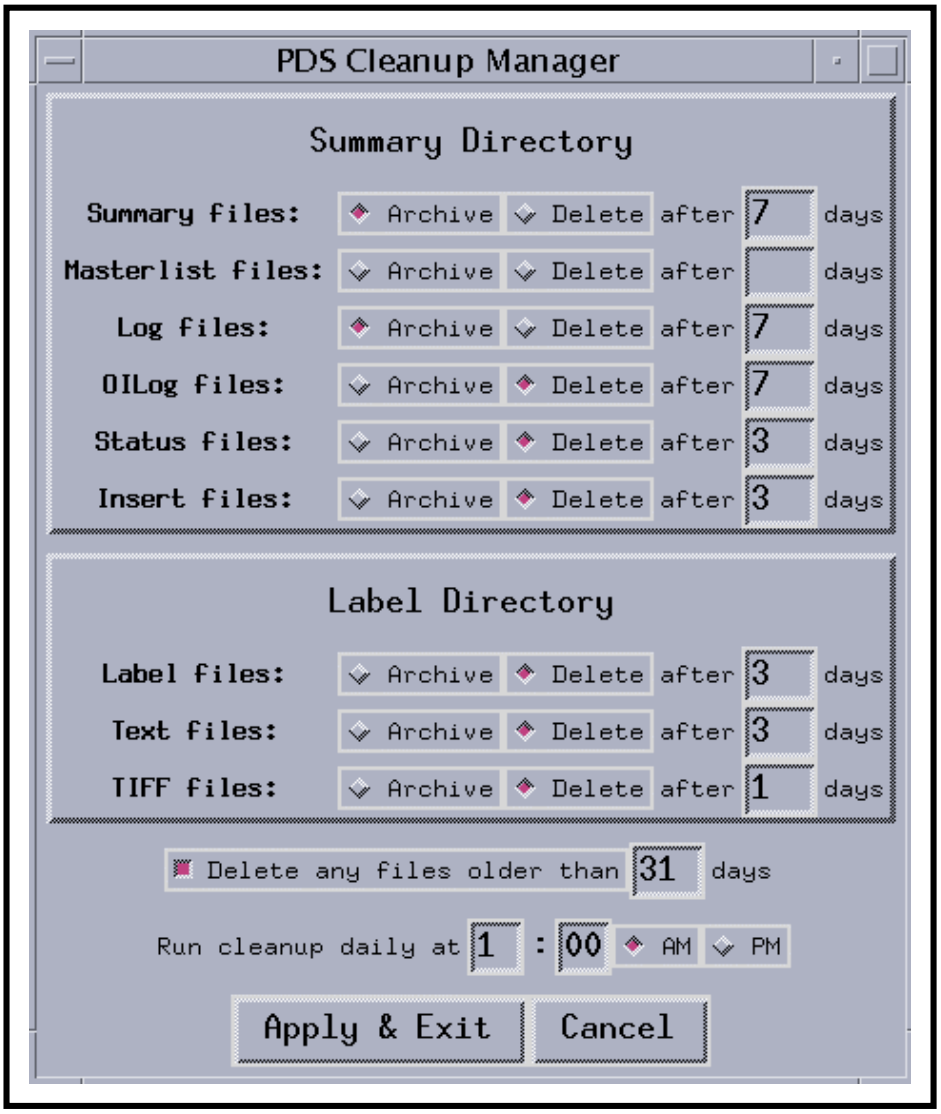

Figure 109. PDS Cleanup Manager

- **Status files.**
- **Insert files.**

- The following types of files are listed in the **Label Directory** section of the **PDS Cleanup Manager** GUI:
  - **Label files.Text files.**
  - **TIFF files.**

7 Repeat Steps 5 and 6 for each additional type of file in the “summary” directory or “label” directory that is to be archived or deleted.

8 If files older than a particular number of days should be deleted, click on the **Delete any files older than** radio button.

- When the **Delete any files older than** button is selected, the button color changes from gray to red.

9 If files older than a particular number of days should be deleted, in the text box adjacent to the **Delete any files older than** radio button type the appropriate number of days.

10 Type the time when the cleanup should run [in 12-hour (rather than 24-hour) format] in the **Run cleanup daily at** fields.

- For example, type **2:00** for either two o’clock in the morning or two o’clock in the afternoon.

11 Click on either the **AM** or **PM** radio button (as applicable).

- When one of the radio buttons is selected, the button color changes from gray to red and the button gives the appearance of being depressed.

12 Click on the appropriate button from the following selections:

- **Apply & Exit** - to set the cleanup parameters as specified on the **PDS Cleanup Manager** GUI.
  - A **This will modify the PDS cleanup script and/or crontab** dialogue box is displayed.
  - Go to Step 13.
- **Cancel** - to dismiss the **PDS Cleanup Manager** GUI without applying any new cleanup parameters.
  - The **PDS Cleanup Manager** GUI (Figure 109) is dismissed.
  - End of procedure.

13 Click on the appropriate button from the following selections:

- **Proceed** - to set the cleanup parameters as specified on the **PDS Cleanup Manager** GUI.
  - The cleanup script is generated, incorporating the parameters specified on the **PDS Cleanup Manager** GUI.
  - The **PDS Cleanup Manager** GUI (Figure 109) is dismissed.

- **Cancel** - to dismiss the **PDS Cleanup Manager** GUI without applying any new cleanup parameters.
  - The **PDS Cleanup Manager** GUI (Figure 109) is dismissed.

Using the PDSIS Cleanup Manager

The PDSIS Cleanup Manager is a GUI that is used for specifying a file cleanup strategy for the following types of PDSIS files:

- Product request ("ODL") files.
- Product result ("Prodres") files.
- Socket log files.

The PDSIS Cleanup Manager generates or modifies a Bourne shell script (i.e., pdsiscleanup.sh) that implements the file cleanup strategy. In addition, the PDSIS Cleanup Manager may modify the crontab file to adjust the time intervals for deletion or archiving of files.

The large number of files generated by PDSIS activities would overwhelm the system if some of the files were not removed from the working directories on a fairly frequent basis. However, some files may be required for a limited period of time in order to troubleshoot an order if there is a problem with it or if it is returned from the customer.

The PDSIS Cleanup Manager is not used very often, especially if a manageable retention period has been established for PDSIS files.

The procedure for using the PDSIS Cleanup Manager starts with the assumption that all applicable servers (e.g., the Oracle DBMS server) are currently running.

Using the PDSIS Cleanup Manager

NOTE: A **PDSIS** user ID (e.g., **pdsis**, **pdsis_ts1**, or **pdsis_ts2**) is used in this procedure.

1 Log in to the PDS Server host using the appropriate PDSIS user ID for the operating mode being used.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and n**0dig06**.
- PDSIS user IDs are **pdsis**, **pdsis_ts1**, and **pdsis_ts2**, which are used for PDSIS operations in the OPS, TS1, and TS2 modes respectively.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **cd utilities** then press the **Return/Enter** key.

- Change to the PDSIS "utilities" directory (e.g., /data1/pdsis/utilities).

3 Type **EcPdIsPdsisCleanup &** then press the **Return/Enter** key.

- The **PDSIS Cleanup Manager** GUI (Figure 110) is displayed.

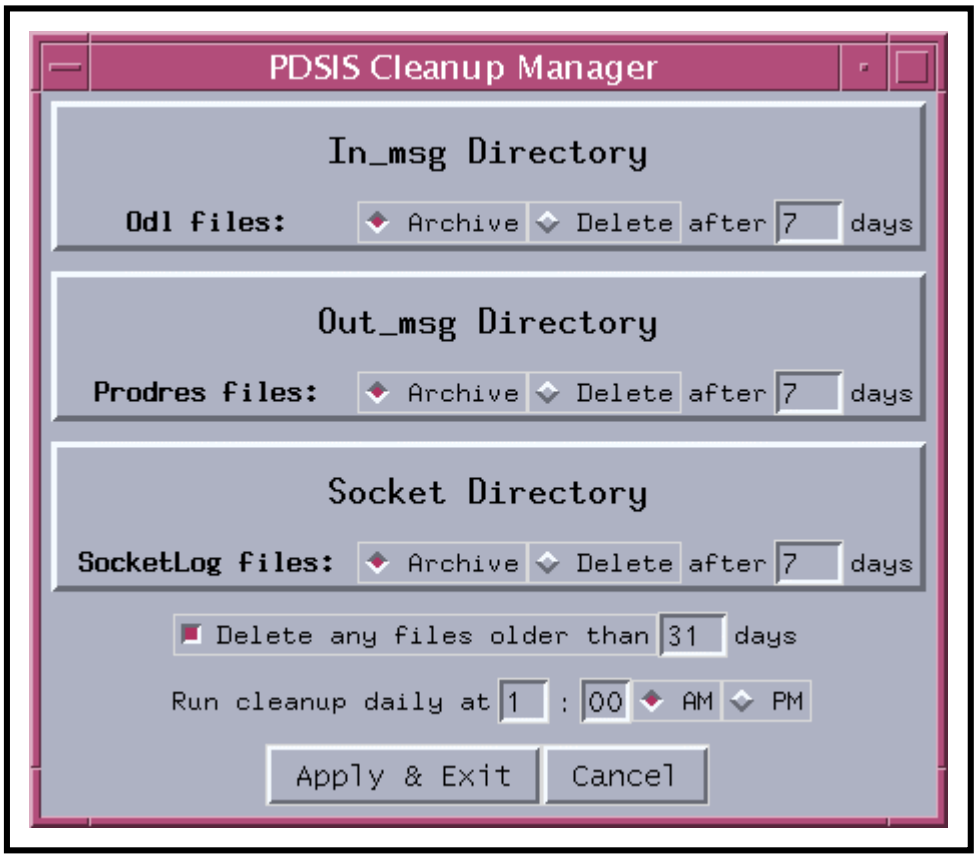

Figure 110. PDSIS Cleanup Manager

4 If any of the types of files in the "in_msg" directory, "out_msg" directory, or "socket" directory are to be archived or deleted, in the **In_msg Directory**, **Out_msg Directory**, or **Socket Directory** section (as applicable) of the **PDSIS Cleanup Manager** GUI click on either the **Archive** or **Delete** radio button (as applicable) to the right of one of those types of file.

- When one of the radio buttons is selected, the button color changes from gray to red and the button gives the appearance of being depressed.

5 If any of the types of files in the “in_msg” directory, “out_msg” directory, or “socket” directory are to be archived or deleted, in the text box adjacent to the button selected in the previous step type the number of days after which files of that type are to be either archived or deleted.

- The following type of file is listed in the **In_msg Directory** section of the **PDSIS Cleanup Manager** GUI:
  - **Odl files** (product request files).
- The following type of file is listed in the **Out_msg Directory** section of the **PDSIS Cleanup Manager** GUI:
  - **Prodres files** (product result files).
- The following type of file is listed in the **Socket Directory** section of the **PDSIS Cleanup Manager** GUI:
  - **Socket Log files**.

6 Repeat Steps 4 and 5 for each additional type of file in the “in_msg” directory, “out_msg” directory, or “socket” directory that is to be archived or deleted.

7 If files older than a particular number of days should be deleted, click on the **Delete any files older than** radio button.

- When the **Delete any files older than** button is selected, the button color changes from gray to red.

8 If files older than a particular number of days should be deleted, in the text box adjacent to the **Delete any files older than** radio button type the appropriate number of days.

9 Type the time when the cleanup should run [in 12-hour (rather than 24-hour) format] in the **Run cleanup daily at** fields.

- For example, type **2:00** for either two o’clock in the morning or two o’clock in the afternoon.

10 Click on either the **AM** or **PM** radio button (as applicable).

- When one of the radio buttons is selected, the button color changes from gray to red and the button gives the appearance of being depressed.

11 Click on the appropriate button from the following selections:

- **Apply & Exit -** to set the cleanup parameters as specified on the **PDSIS Cleanup Manager** GUI.
  - A **This will modify the PDSIS cleanup script and/or crontab** dialogue box is displayed.

- Go to Step 12.

- **Cancel -** to dismiss the **PDSIS Cleanup Manager** GUI without applying any new cleanup parameters.
  - The **PDSIS Cleanup Manager** GUI (Figure 110) is dismissed.
  - End of procedure.

12 Click on the appropriate button from the following selections:

- **Proceed -** to set the cleanup parameters as specified on the **PDSIS Cleanup Manager** GUI.
  - The cleanup script is generated, incorporating the parameters specified on the P**DSIS Cleanup Manager** GUI.
  - The **PDSIS Cleanup Manager** GUI (Figure 110) is dismissed.
- **Cancel -** to dismiss the **PDSIS Cleanup Manager** GUI without applying any new cleanup parameters.
  - The **PDSIS Cleanup Manager** GUI (Figure 110) is dismissed.

Troubleshooting PDS Problems

Trouble Symptoms

Troubleshooting is a process of identifying the source of problems on the basis of observed trouble symptoms. Many problems with PDS can be traced to some part of the PDS itself. However, a common source of problems involves the reliance on messages or data from other subsystems. Like many other operational areas, PDS has interfaces with several ECS subsystems. Consequently, it is possible to trace some problems to an ECS subsystem, including (but not necessarily limited to) those in the following list:

- Data Management Subsystem (DMS).
- Data Server Subsystem (DSS).
  - Science Data Server.
  - Data Distribution.
  - Storage Management.
- System Management Subsystem (MSS).
- Communications Subsystem (CSS).

The general process of troubleshooting involves the following activities:

- Review the trouble symptoms.
- Check the status of relevant hosts/servers (as necessary).
- Check log files (as necessary).
- Take action to correct the problem(s).

If a problem is suspected in one of the subsystems in the preceding list, refer to the section on **Troubleshooting DDIST and Order Manager GUI Problems** (previous section of this lesson).

Actions to be taken in response to some common PDS problems are described in the following tables:

- Table 11. General Problems.
- Table 12. PDS Operator Interface (PDSOI) Problems.
- Table 13. Job Monitor Problems.
- Table 14. PDS Maintenance Module Problems.

- Table 15. PDSIS Operator Interface (PDSIS OI) Problems.
- Table 16. PDSIS Maintenance Module Problems.

If the problem cannot be identified and fixed without help within a reasonable period of time, the appropriate response is to call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Table 11. General Problems

Symptom	Response
A selection has been made from an **Action List** window but the action is not invoked	Click on the **OK** button near the bottom of the **Action List** window to start the action or go to the appropriate screen.
Buttons are not visible at the bottom of the screen but they should be visible	1. Move the mouse to the outside edge of the form. (The cursor changes shape.) 2. Click and hold the mouse button and move the mouse to resize the screen until the buttons are visible.
Disk label needs to be reprinted	Perform the procedure for **Reprinting a Label Stamped on a Disk** (subsequent section of this lesson).
Jewel-case insert did not print	Perform the procedure for **Responding to a Jewel-Case Insert Printing Failure** (subsequent section of this lesson).
Jewel-case insert needs to be reprinted	Perform the procedure for **Responding to a Jewel-Case Insert Printing Failure** (subsequent section of this lesson).
Job needs to be reprocessed [e.g., product has stalled in the media production process or fails the media quality control (QC) check]	Perform the procedure for **Reprocessing a Job** (subsequent section of this lesson).
Lag report includes a job that is not displayed on the PDSOI	Perform the procedure for **Responding to a Job on a Lag Report** (subsequent section of this lesson).
Media Drive Selection window does not appear in the workspace within a couple of minutes after a job/unit has been activated	Perform the procedure for **Responding to a "Waiting for Drive Selection" Message on the Job Monitor** (subsequent section of this lesson).
No printouts	Perform the procedure for **Responding to No Printouts (Either Jewel-Case Inserts or Paper Reports)** (subsequent section of this lesson).
Not all text is showing in a text box or the box appears to be too small	1. Click in the text box. 2. Move the cursor using the arrow keys. [The text scrolls in the box and hidden text becomes visible.]
Packing list for a completed order (i.e., an order with a status of "C") needs to be reprinted	Set the action flag to "S" using the PDSIS Maintenance Module as described in the procedure for **Changing the Values of Order Parameters Using the PDSIS Maintenance Module** (subsequent section of this lesson).
Rimage (CD or DVD) drive goes off line.	Verify that the blank media were placed in the Rimage input bins with the shiny side down.

Table 11. General Problems

Symptom	Response
Shipping label for a completed order (i.e., an order with a status of "C") needs to be reprinted	Set the action flag to "S" using the PDSIS Maintenance Module as described in the procedure for **Changing the Values of Order Parameters Using the PDSIS Maintenance Module** (subsequent section of this lesson).
Summary report is not printed but disk or tape is produced	Perform the procedure for **Responding to No Printouts (Either Jewel-Case Inserts or Paper Reports)** (subsequent section of this lesson).
Tape label needs to be reprinted	Perform the procedure for **Reprinting PDS Documents and Labels** (subsequent section of this lesson).
Units that were previously completed need to be reactivated or reset	Perform the procedure for **Reactivating Units** or the procedure for **Resetting an Order or a Unit** (as applicable) (subsequent sections of this lesson).

Table 12. PDS Operator Interface (PDSOI) Problems

Symptom	Response
"Already activated" message is displayed in a purple box (error dialogue box).	1. Click on the **OK** button to dismiss the error window. 2. Perform the procedure for **Changing the Values of Job Parameters Using the PDS Maintenance Module** (subsequent section of this lesson) to determine the value of the **OI ID** field in the PDS Maintenance Module **PDSINFO Jobs Table**. [The message indicates that the job was already started by another PDSOI with a different OI ID (machine_id/console_id).] 3. Start another PDSOI using the OI ID specified in the **PDSINFO Jobs Table**. [Refer to the procedure for **Starting the PDS Operator Interface (PDSOI)** (previous section of this lesson).] 4. Process the job using the PDSOI started using the OI ID specified in the **PDSINFO Jobs Table**. [Refer to the procedure for **Monitoring/Controlling Product Processing Using PDS** (previous section of this lesson).]
"Cannot activate because the selected field in the PWT_PDS_WORK_TBL contains an incorrect value" message is displayed in a purple box (error dialogue box).	1. Click on the **OK** button to dismiss the error window. 2. Perform the procedure for **Changing the Values of Job Parameters Using the PDS Maintenance Module** (subsequent section of this lesson) to set the value of the **Selected** field to **N** in the PDS Maintenance Module **PDSINFO Work Table**. [The message indicates that an attempt was made to activate the unit before and the **Selected** field in the PDS Maintenance Module **PDSINFO Work Table** did not get set correctly.]

Table 12. PDS Operator Interface (PDSOI) Problems

Symptom	Response
"No job limit" message is displayed in a purple box (error dialogue box).	1. Click on the **OK** button to dismiss the error window. 2. Call the help desk and submit a trouble ticket in accordance with site Problem Management policy. [The PDS Maintenance Module **Machine Parameters Maintenance Form (PDSMTMPX)** is used to set the job limits for the particular **Product Code**.]
"No job" message is displayed in a purple box (error dialogue box).	1. Click on the **OK** button to dismiss the error window. 2. Record (make a note of) the job_key displayed in the purple box. 3. Perform the procedure for **Changing the Values of Job Parameters Using the PDS Maintenance Module** to query the **PDSINFO Jobs Table** and the **PDSINFO Work Table** to determine whether there is a job with the specified job_key in the system. [If a unit was rejected after it was already in process, it is possible that the job no longer exists when the status file is written.] 4. If there is no such job currently in the system, click in or open a UNIX (terminal) window. 5. If there is no such job currently in the system, type **mv *filename*.status tmp.*filename*.status** then press the **Return/Enter** key. [***filename*** represents the body of the file name for the status file for the job; it includes the PDSOI ID and the PPF_KEY. The status file must either be moved or removed (deleted) or no other status files can be processed. For example: **mv PDS1_drg_0110011130207_0001.status tmp.PDS1_drg_0110011130207_0001.status** An alternative: **rm PDS1_drg_0110011130207_0001.status**]
"No units were selected, no action taken" message is displayed in a purple box (error dialogue box).	1. Click on the **OK** button to dismiss the error window. 2. Perform Steps 7 and 8 or 9 (as applicable) of the procedure for **Using the OI Detail Screen** (previous section of this lesson). [The message indicates that no units were selected from the **OI Detail Screen** for activation or completion before clicking on the corresponding **Activate** or **Complete** button.]
"Stopped" job is not identified as stopped on the **Main OI Screen**	Select **Display** → **Refresh** from the pull-down menu on the **Main OI Screen** to force querying of the database. [The stop does not appear until the next time the database is queried.]
"You must select at least one selection criteria" [sic] message is displayed in a purple box (error dialogue box).	1. Click on the **OK** button to dismiss the error window. 2. Perform Steps 8 through 18 of the procedure for **Starting the PDS Operator Interface (PDSOI)** (previous section of this lesson). [The message indicates that no selection criteria were selected from the **PDSOI Start-Up Selection Screen** (Figure 74).}

Table 12. PDS Operator Interface (PDSOI) Problems

Symptom	Response
"You must select at least one sort criteria" message is displayed in a purple box (error dialogue box).	1. Click on the **OK** button to dismiss the error window. 2. Perform Steps 16 through 18 of the procedure for **Starting the PDS Operator Interface (PDSOI)** (previous section of this lesson). [The message indicates that no sorting criteria were selected from the **PDSOI Start-Up Selection Screen** (Figure 74).]
Duplicate jobs are displayed on the PDSOI	Perform the procedure for **Responding to Duplicate Jobs on the PDSOI** (subsequent section of this lesson).
No status updates on PDSOI	Perform the procedure for **Responding to PDSOI's Failure to Update Status** (subsequent section of this lesson).
Problem starting PDSOI	Perform the procedure for **Responding to a Problem Starting PDSOI** (subsequent section of this lesson).
Red job status line associated with a CD or DVD job on the PDSOI (indicating an error condition)	Perform the procedure for **Responding to a CD/DVD Job Error Indicated on PDSOI** (subsequent section of this lesson).
Screen (PDSOI) has locked up	Perform the procedure for **Responding to a Locked-Up Screen** (subsequent section of this lesson).

Table 13. Job Monitor Problems

Symptom	Response
CD or DVD job has produced optical media and is waiting needlessly	Perform the procedure for **Forcing AutoRimage Completion** (subsequent section of this lesson).
Disk space is low (as displayed on the **Job Monitor Main Window**)	Perform the procedure for **Responding to Low Disk Space** (subsequent section of this lesson).
Log file needs to be checked for error messages	Perform either the procedure for **Viewing a Job Log Using the PDS Job Monitor** or the procedure for **Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** (subsequent sections of this lesson).
PPF file needs to be checked for job-related data	Perform either the procedure for **Viewing a Job Production Parameter File (PPF)** or the procedure for **Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** (subsequent sections of this lesson).
"Waiting for Drive Selection" message is displayed	1. If the **Media Drive Selection** window is visible in the workspace, go to Step 4 of the procedure for **Activating a Job** (previous section of this lesson). 2. If the **Media Drive Selection** window does not appear in the workspace within a couple of minutes, perform the procedure for **Responding to a "Waiting for Drive Selection" Message on the Job Monitor** (subsequent section of this lesson).

Table 13. Job Monitor Problems

Symptom	Response
"Waiting For *Rimage* Status" message is displayed for an excessive period of time	1. Wait a reasonable period of time for the message to disappear. [The wait may be lengthy depending on product size and/or system load.] 2. If the Rimage status is not provided (if the message does not disappear) within a reasonable period of time, go to the procedure for **Reprocessing a Job** (subsequent section of this lesson).

Table 14. PDS Maintenance Module Problems

Symptom	Response
Dialogue box is displayed inquiring as to whether changes should be saved before exiting a maintenance module window	Perform the procedure for **Responding to a Save Changes Dialogue Box When Exiting a Maintenance Module Window** (subsequent section of this lesson).
No **Exit** button on a Maintenance Screen (**PDS Maintenance Module** or **PDSIS Maintenance Module**)	Click on the **Cancel Query** button. [The buttons change and the **Exit** button becomes visible.]
Output specification is unknown/needed	Perform the procedure for **Determining Output Specifications Using the PDS Maintenance Module** (subsequent section of this lesson).
Product code is unknown/needed	Perform the procedure for **Determining Product Codes Using the PDS Maintenance Module** (subsequent section of this lesson).
Value of a job parameter is missing, incorrect, or needs to be modified	Perform the procedure for **Changing the Values of Job Parameters Using the PDS Maintenance Module** (subsequent section of this lesson).

Table 15. PDSIS Operator Interface (PDSIS OI) Problems

Symptom	Response
Red order status line on the **PDSIS OI Main Screen** (an error flag for the order is set at "Y" in the database)	Perform the procedure for **Checking/Clearing Errors on PDSIS** (subsequent section of this lesson).

Table 16. PDSIS Maintenance Module Problems

Symptom	Response
Output specification is unknown/needed	Perform the procedure for **Determining Output Specifications Using the PDSIS Maintenance Module** (subsequent section of this lesson).
Product code is unknown/needed	Perform the procedure for **Determining Product Codes Using the PDSIS Maintenance Module** (subsequent section of this lesson).
Value of an order parameter is missing, incorrect, or needs to be modified	Perform the procedure for **Changing the Values of Order Parameters Using the PDSIS Maintenance Module** (subsequent section of this lesson).

PDS Troubleshooting Procedures

The following procedures for correcting PDS problems are provided in this section:

- Changing the Values of Job Parameters Using the PDS Maintenance Module.
- Changing the Values of Order Parameters Using the PDSIS Maintenance Module.
- Checking/Clearing Errors on PDSIS.
- Checking PDSSA or PDSIS Log Files.
- Checking/Restoring Synchronization of the Rimage PC Time with PDS System Time.
- Checking/Restoring the Rimage PC NFS Connection.
- Cleaning up the CD-R_Images Folder on the Rimage PC.
- Clearing an Error Displayed on the PDSIS OI Error Screen.
- Determining Output Specifications Using the PDS Maintenance Module.
- Determining Output Specifications Using the PDSIS Maintenance Module.
- Determining Product Codes Using the PDS Maintenance Module.
- Determining Product Codes Using the PDSIS Maintenance Module.
- Determining the Status of PDS Tape/Disk Drives.
- Determining Which Instance of PDSOI Was Used to Activate a Job.
- Forcing AutoRimage Completion.
- Reactivating Units.
- Reprinting a Label Stamped on a Disk.

- Reprinting PDS Documents and Labels.
- Reprocessing a Job.
- Resetting an Order or Unit.
- Responding to a CD/DVD Job Error Indicated on PDSOI.
- Responding to a Jewel-Case Insert Printing Failure.
- Responding to a Job’s Status Not Changing to QC-Hold Although Production is Successful.
- Responding to a Job on a Lag Report.
- Responding to a Locked-Up Screen.
- Responding to a Problem Starting PDSOI.
- Responding to a Save Changes Dialogue Box When Exiting a Maintenance Module Window.
- Responding to a "Waiting for Drive Selection" Message on the Job Monitor.
- Responding to Duplicate Jobs on the PDSOI.
- Responding to Low Disk Space.
- Responding to No Printouts (Either Jewel-Case Inserts or Paper Reports).
- Responding to PDSOI's Failure to Update Status.
- Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands.
- Viewing a Job Log Using the PDS Job Monitor.
- Viewing a Job Production Parameter File (PPF) Using the PDS Job Monitor.
- Viewing an Extended Error Message.

Changing the Values of Job Parameters Using the PDS Maintenance Module

The PDS Maintenance Module provides the Distribution Technician with a means of changing the values assigned to job parameters, especially the following types of parameters:

- Status of an order (job).
  - May be changed (for example) to "Pending" so the job will rerun (e.g., if there was a problem with the previous run of the job).

- Media type assigned to an order (job) or unit within an order.
  - Typically changed in response to a request from the user that has been forwarded by User Services.
- Output specification assigned to change the output specifications for a unit.
  - Typically have to be changed if the media type is changed.
- Number of copies in an order (job).
  - May be changed in response to a request from the user that has been forwarded by User Services.
  - Usually involves in-house orders.
- Directory path for pulling data for an order (job).
  - May be necessary if (for example) a problem occurs with the disk on which the normal directory resides.
- E-Mail address for ftp notification of order (job) completion.
  - Typically changed in response to a request from the user that has been forwarded by User Services.

In order to maintain consistency between PDSIS packing lists and PDSSA media generation, changes to the values assigned to order/job parameters may need to be made using both the PDSIS and PDSSA maintenance modules.

- Changes that affect both PDSIS and PDSSA should be made in PDSIS first, then PDSSA.
- Some changes affect PDSIS only.
  - For example, PDSSA does not contain customer shipping address information, so no shipping-address changes are necessary in PDSSA.
  - No changes are needed in PDSSA if order processing in PDSIS has not made any data for an order available to PDSSA yet.

The PDS **Maintenance Module Main Menu** (Figure 82) has the following buttons available for selection:

- Lookups.
- Product Code Descriptions.
- Product Media Descriptions.
- Status Code Descriptions.
- Printers.

- PPF Definitions.
- Jewel Cases.
- Machine Parameter/Job Limits.
- PDSINFO Jobs Table.
- PDSINFO Work Table.
- Query Only PDSINFO.
- Mass Update PDSINFO.
- Restage a Job.
- Exit.

Along the top of the PDS **Maintenance Module Main Menu** (Figure 82) are the following features:

- Name of the Oracle Form (e.g., PDSMNMSM).
- Current version of the PDS in use (e.g., 2.3).
- Database instance that is being running against (e.g., PRODUCTION).
- Current date (e.g., 2000/01/19).

At the bottom of the PDS **Maintenance Module Main Menu** (Figure 82) are the following features:

- The **status line** displays information about the form (e.g., “Record: 1/1” and “INSERT").
- The **message line** (just above the **status line**) displays informational messages and error messages pertinent to what is happening on the form (e.g., "Working…").
  - Messages are displayed on the screen as long as they are pertinent.

CAUTION

Before changing product media type, number of copies, or customer's e-mail address it is advisable to have in hand written authorization to do so.

The procedure for changing the values of job parameters using the PDS Maintenance Module starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed.

NOTE: In order to maintain consistency between PDSIS packing lists and PDSSA media generation, changes to the values assigned to order/job parameters may need to be made using both the PDSIS and PDSSA maintenance modules. Changes that affect both PDSIS and PDSSA should be made in PDSIS first, then PDSSA. However, there are changes that affect PDSIS only. For example, PDSSA does not contain customer shipping address information, so no shipping-address changes are necessary in PDSSA. Furthermore, no changes are needed in PDSSA if order processing in PDSIS has not made any data for an order available to PDSSA yet.

1 Perform the procedure for **Starting the PDS Maintenance Module** (previous section of this lesson).

NOTE: If parameter values (except Input Directory or Email Address) are to be changed for a job or all units within a job, continue with Step 2. If parameters are to be changed for specific units only associated with a job, go to Step 12. Output Specs, Input Directory, or Email Address parameter values can be changed on the **PDSINFO Work Table** only (go to Step 12).

2 Click on the **PDSINFO Jobs Table** button on the PDS **Maintenance Module Main Menu** (Figure 82).

- The **PDSINFO Jobs Table Maintenance Form (PDSMTPJT)** or **PDSINFO Jobs Table** (Figure 111) is displayed.

3 Copy the job key by clicking and dragging (to highlight the text) in the **Job Key** field for the appropriate job on the **Main OI Screen**.

- **Job Key** text is highlighted on the **Main OI Screen**.

4 Paste the job key copied from the **Main OI Screen** by clicking in the **Job Key** field on the **PDSINFO Jobs Table** with the **center** mouse button.

- **Job Key** is pasted in the **Job Key** field on the **PDSINFO Jobs Table**.

5 Click on the **Execute Query** button near the bottom of the **PDSINFO Jobs Table**.

- The database is queried for data concerning the job represented by the **Job Key** and the relevant data are displayed on the **PDSINFO Jobs Table**.

6 Click in the appropriate field of the **PDSINFO Jobs Table**.

- **Status -** to change the status of an order (job).
- **Product Media -** to change the media type assigned to an order (job).
- **Copies -** to change the number of copies in an order (job).

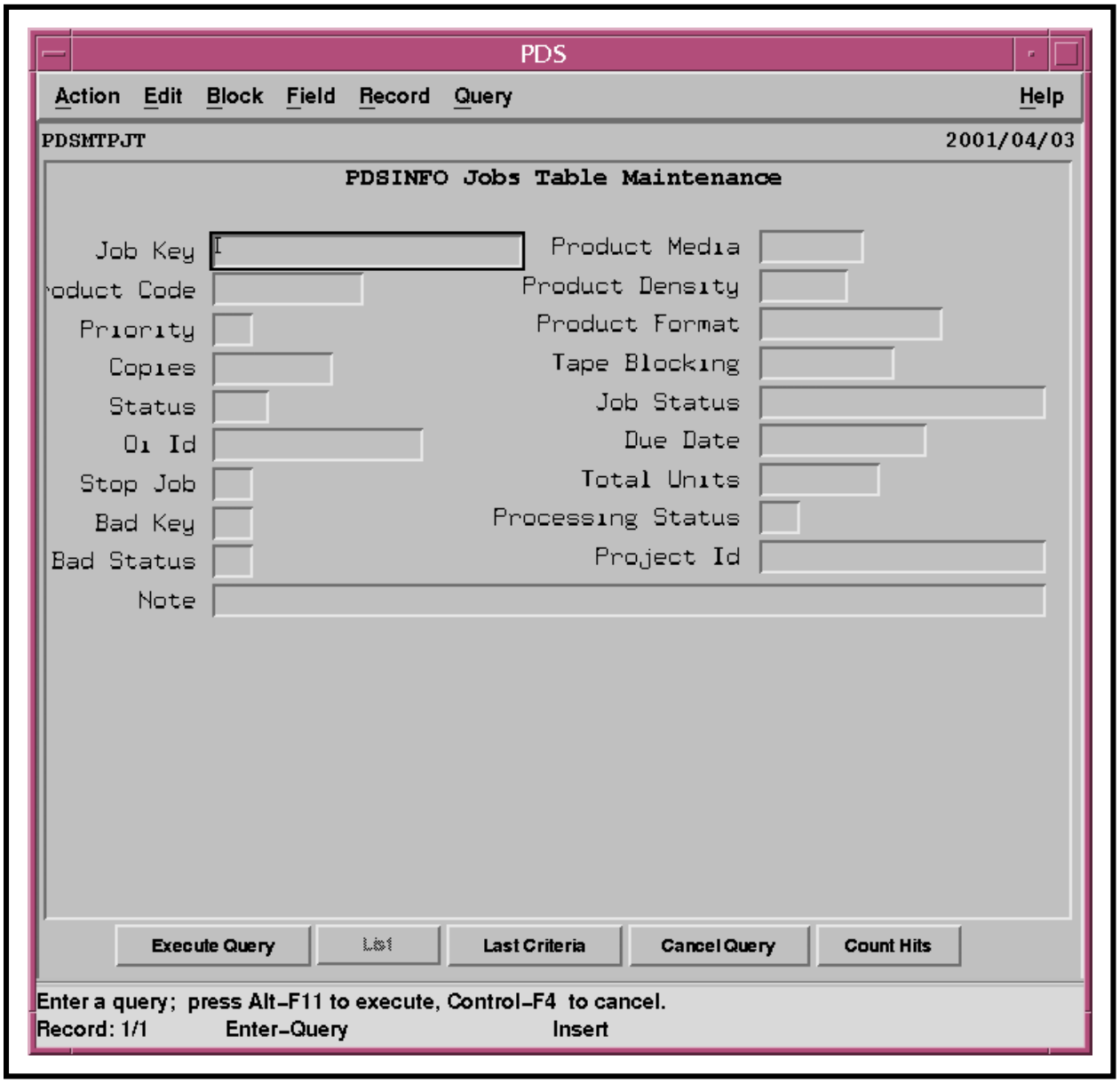

Figure 111. PDSINFO Jobs Table

7 Type the new value in the field.

- Clicking on the **List** button on the **PDSINFO Jobs Table** causes a list of valid values for the field to be displayed in a dialogue box if the value of certain parameters is being changed.

- Lists are available for at least the following parameters:
  - Status.
  - Product Media.
- Valid **Status** values for the **PDSINFO Jobs Table** are as follows:
  - **Q** - Pending.
  - **I** - Active.
  - **IP** - Active Partial.
  - **F** - QC-Hold.
  - **FP** - QC-Hold Partial.
  - **G** - Error.
  - **GP** - Error Partial.
  - **C** - Completed.

8 Repeat Steps 6 and 7 to modify values in other fields of the **PDSINFO Jobs Table**.

9 Click on the **Save** button on the **PDSINFO Jobs Table**.

- The record is saved in the database with the new value entered in the appropriate field.
- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

10 Click on the **Exit** button at the bottom of the **PDSINFO Jobs Table**.

- If the **Exit** button is not visible on the form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

11 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, click on the appropriate button from the following selections:

- **Yes -** to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.

- The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

- **No -** to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

12 Click on the **PDSINFO Work Table** button on the PDS **Maintenance Module Main Menu**.

- The **PDSINFO Table Maintenance Form (PDSMTPDT)** or **PDSINFO Work Table** (Figure 112) is displayed.

13 Copy the job key by clicking and dragging (to highlight the text) in the **Job Key** field for the appropriate job on the **Main OI Screen**.

- **Job Key** text is highlighted on the **Main OI Screen**.

14 Paste the job key copied from the **Main OI Screen** by clicking in the **Job Key** field on the **PDSINFO Work Table** with the **center** mouse button.

- **Job Key** is pasted in the **Job Key** field on the **PDSINFO Work Table**.

15 Click on the **Execute Query** button near the bottom of the **PDSINFO Work Table**.

- The database is queried for data concerning the job represented by the **Job Key** and the relevant data are displayed on the **PDSINFO Work Table**.

16 If the values of any of the following parameters were changed in the **PDSINFO Jobs Table** (Steps 2 through 11), determine whether the values have changed in the **PDSINFO Work Table**:

- **Status.**
- **Product Media.**
- **Copies.**

17 If the values of any of the preceding parameters were changed in the **PDSINFO Jobs Table** and the changed values are not displayed in the **PDSINFO Work Table**, continue with Step 18; otherwise, go to Step 24.

18 If the data displayed on the **PDSINFO Work Table** do not refer to the appropriate record (e.g., as indicated in the **Unit Nbr** field) click on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display the appropriate record.

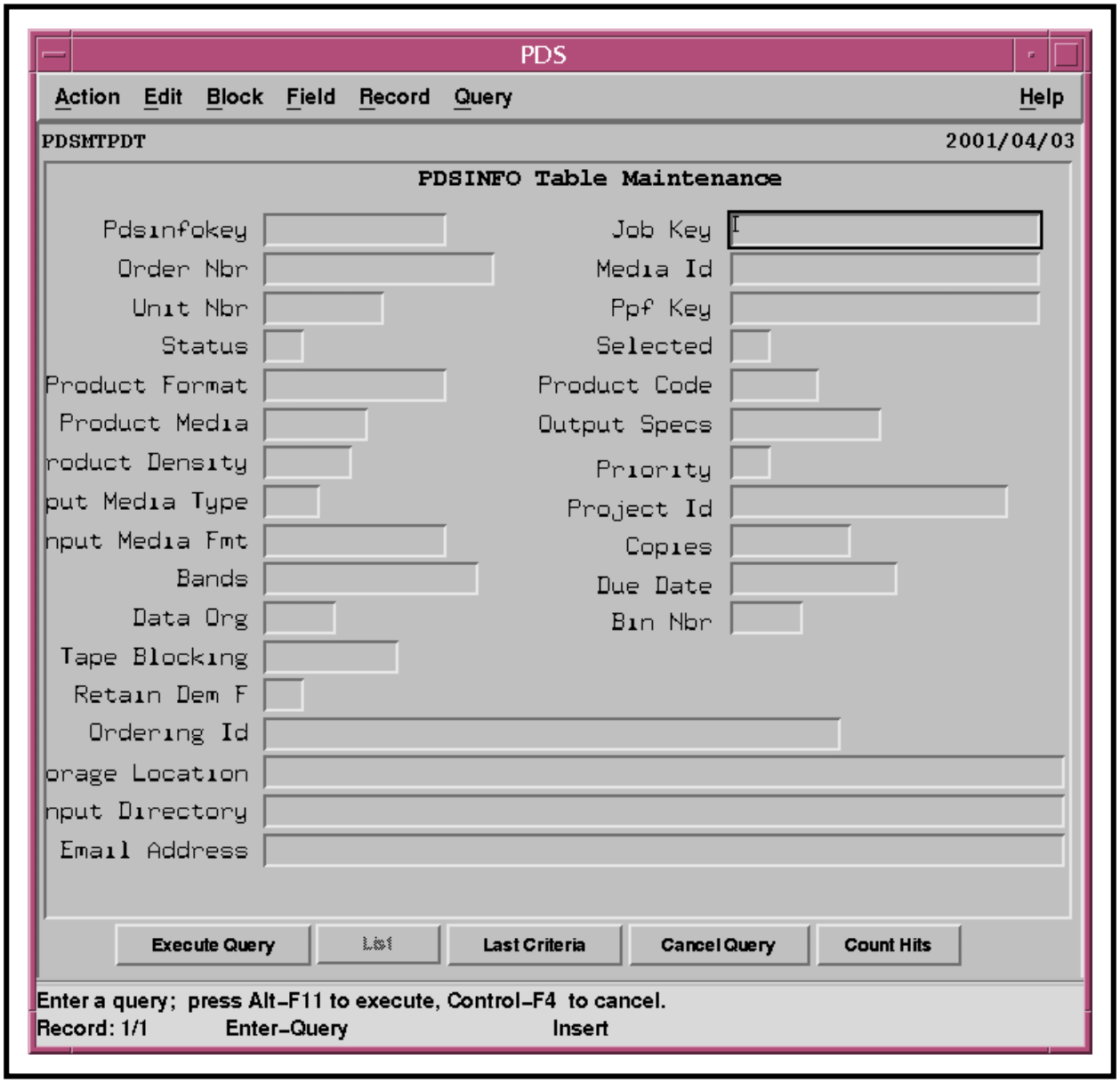

Figure 112. PDSINFO Work Table

19 Click in the appropriate field of the **PDSINFO Work Table**.

- **Status -** to change the status of an order (job).
- **Product Media -** to change the media type assigned to an order (job).
- **Output Specs -** to change the output specifications for a unit.
  - Output specifications typically have to be changed if the media type is changed.

- **Copies** - to change the number of copies in an order (job).
- **Input Directory** - to change the directory path for pulling data for an order (job).
- **Email Address** - to change the e-mail address for ftp notification of order (job) completion.

20 Type the new value in the field.

- Clicking on the **List** button on the **PDSINFO Work Table** causes a list of valid values for the field to be displayed in a dialogue box if the value of certain parameters is being changed.
- Lists are available for at least the following parameters:
  - Status.
  - Product Media.
- Valid **Status** values for the **PDSINFO Work Table** are as follows:
  - **Q** - Pending.
  - **I** - Active.
  - **F** - QC-Hold.
  - **G** - Error.
  - **C** - Completed.
- Valid **Output Specifications** for a particular media type can be determined by performing the procedure for **Determining Output Specifications** (subsequent section of this lesson); however, representative **Output Specs** values are as follows:
  - **CDRMS** - compact disk.
  - **8MHAU** - 8-mm tape.
  - **DLUCS** - DLT.
  - **DVD** - DVD.
  - **FTP** - ftp.

21 Repeat Steps 19 and 20 to modify values in other fields of the **PDSINFO Work Table**.

22 Click on the **Save** button on the **PDSINFO Work Table**.

- The record is saved in the database with the new value entered in the appropriate field.

- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

23 Repeat Steps 18 through 22 for all additional records that need to be modified for the job.

24 Click on the **Exit** button at the bottom of the **PDSINFO Work Table**.

- If the **Exit** button is not visible on the form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

25 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, click on the appropriate button from the following selections:

- **Yes -** to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.
- **No -** to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

26 Click on the **Exit** button at the bottom of the PDS **Maintenance Module Main Menu** window.

- The PDS **Maintenance Module Main Menu** is dismissed.
- The PDS maintenance module has been shut down.

27 Return to the procedure for **Monitoring/Controlling Product Processing Using PDS** or the procedure for **Reprocessing a Job** as applicable.

Changing the Values of Order Parameters Using the PDSIS Maintenance Module

The PDSIS Maintenance Module provides the Distribution Technician with a means of changing the values assigned to order parameters, especially the following types of parameters:

- Status of an order or unit.
  - May be changed (for example) to "ODL Order Received" so the order processing will restart (e.g., if the order is hung up in PDSIS).
- Action to be sent to an order or unit.
  - Used for stimulating the order or unit to perform functions consistent with the current status.
- Error flag for an order or unit.
  - Reset the error flag for the order/unit.
- Output specification for a unit.
  - Must be changed if a different media type is requested.
- Number of copies of a unit.
  - May be changed in response to a request from the user that has been forwarded by User Services.
  - Usually involves in-house orders.
- Directory (location) for PDSSA to pull data for a unit.
  - May be necessary if (for example) a problem occurs with the disk on which the normal directory resides.
- E-Mail address for ftp notification of order completion.
  - Typically changed in response to a request from the user that has been forwarded by User Services.

In addition the PDSIS Maintenance Module provides the Distribution Technician with a means of determining the values assigned to various output specifications.

In order to maintain consistency between PDSIS packing lists and PDSSA media generation, changes to the values assigned to order/job parameters may need to be made using both the PDSIS and PDSSA maintenance modules.

- Changes that affect both PDSIS and PDSSA should be made in PDSIS first, then PDSSA.

- Some changes affect PDSIS only.
  - For example, PDSSA does not contain customer shipping address information, so no shipping-address changes are necessary in PDSSA.
  - No changes are needed in PDSSA if order processing in PDSIS has not made any data for an order available to PDSSA yet.

The **PDSIS Maintenance Module Main Menu** (Figure 83) has the following buttons available for selection:

- PDSIS Orders.
- PDSIS Units.
- PDSIS Address.
- Server Config.
- ODL Lookup.
- Outspec Info.
- Prod Code Info.
- Lookups.
- Exit.

Along the top of the **PDSIS Maintenance Module Main Menu** (Figure 83) are the following features:

- Name of the Oracle Form (e.g., PDSISMTMNU).
- Current version of the PDS in use (e.g., 1.0).
- "PDSIS".
- Current date (e.g., 03-APR-2001).

At the bottom of the **PDSIS Maintenance Module Main Menu** (Figure 83) are the following features:

- The **status line** displays information about the form (e.g., “Record: 1/1” and “INSERT").
- The **message line** (just above the **status line**) displays informational messages and error messages pertinent to what is happening on the form (e.g., "Working…").
  - Messages are displayed on the screen as long as they are pertinent.

CAUTION

Before changing output specs or number of copies it is advisable to have in hand written authorization to do so.

The procedure for changing the values of order parameters using the PDSIS Maintenance Module starts with the assumption that all applicable servers are currently running and the **PDSIS OI Main Screen** (Figure 78) is being displayed.

Changing the Values of Order Parameters Using the PDSIS Maintenance Module

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NOTE: In order to maintain consistency between PDSIS packing lists and PDSSA media generation, changes to the values assigned to order/job parameters may need to be made using both the PDSIS and PDSSA maintenance modules. Changes that affect both PDSIS and PDSSA should be made in PDSIS first, then PDSSA. However, there are changes that affect PDSIS only. For example, PDSSA does not contain customer shipping address information, so no shipping-address changes are necessary in PDSSA. Furthermore, no changes are needed in PDSSA if order processing in PDSIS has not made any data for an order available to PDSSA yet.

1 Perform the procedure for **Starting the PDSIS Maintenance Module** (previous section of this lesson).

NOTE: If parameter values (except Output Specs) are to be changed for an order or all units within an order, continue with Step 2. If parameters are to be changed for specific units only associated with an order, go to Step 11. Output Specs or Directory parameter values can be changed on the **PDSIS Units Maintenance Form** only (go to Step 11). E-mail address parameter values can be changed on the **PDSIS Address Maintenance Form** only (go to Step 24).

2 Click on the **PDSIS Orders** button on the **PDSIS Maintenance Module Main Menu** (Figure 83).

- The **PDSIS Orders Maintenance Form (PDSISMTPOT)** (Figure 113) is displayed.

3 Copy the order number by clicking and dragging (to highlight the text) in the **Order Nbr** field for the appropriate order on the **PDSIS OI Main Screen**.

- **Order Nbr** text is highlighted on the **PDSIS OI Main Screen**.

4 Paste the order number copied from the **PDSIS OI Main Screen** by clicking in the **Order Nbr** field on the **PDSIS Orders Maintenance Form** with the **center** mouse button.

- **Order Nbr** is pasted in the **Order Nbr** field on the **PDSIS Orders Maintenance Form**.

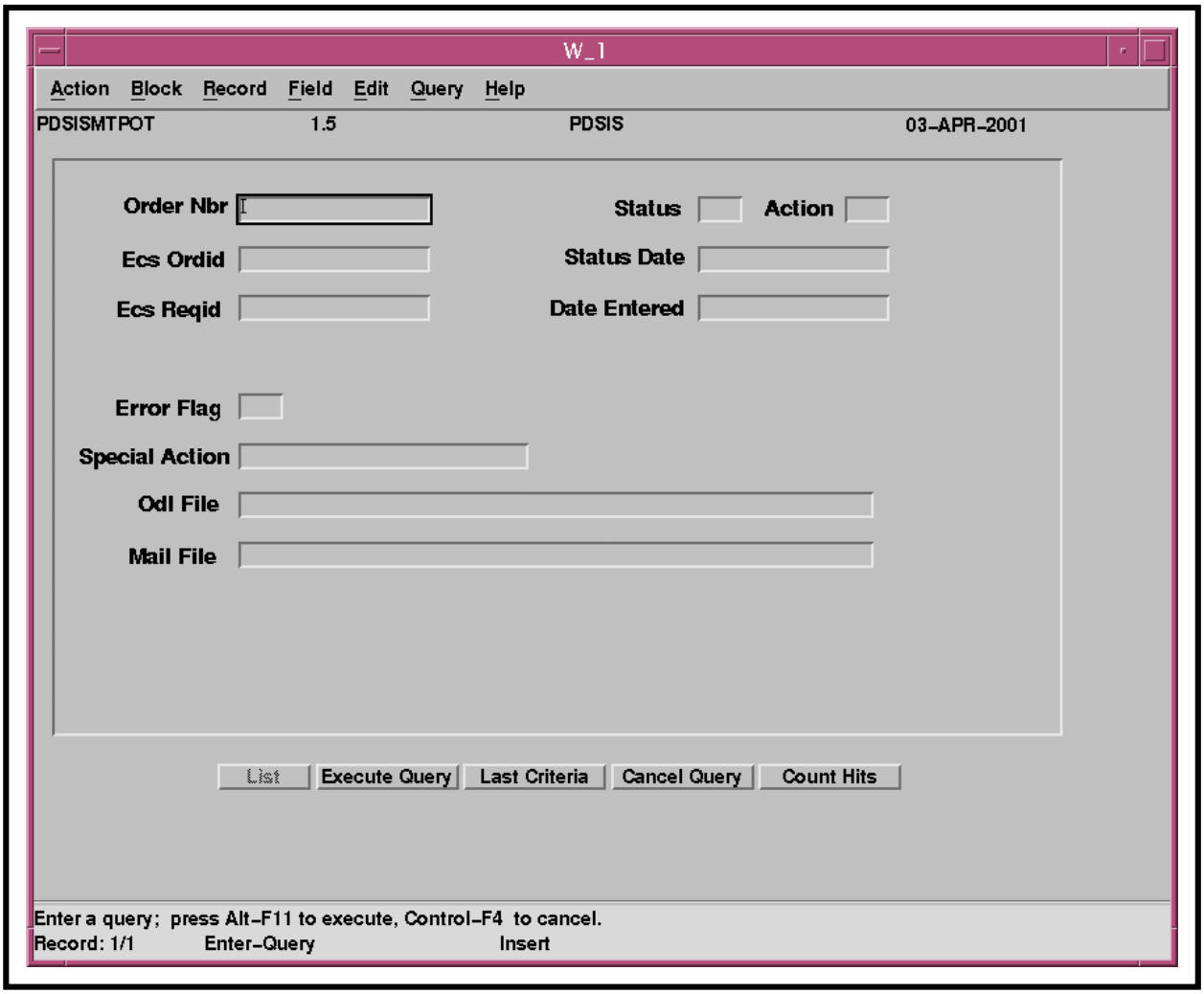

Figure 113. PDSIS Orders Maintenance Form

5 Click on the **Execute Query** button near the bottom of the **PDSIS Orders Maintenance Form**.

- The database is queried for data concerning the order represented by the **Order Nbr** and the relevant data are displayed on the **PDSIS Orders Maintenance Form**.

6 Click in the appropriate field of the **PDSIS Orders Maintenance Form**.

- **Status -** to change the status of the order.
- **Action -** to send an action request to the order.
- **Error Flag -** to reset the error flag for the order.

7 Type the new value in the field.

- Valid **Status** values for the **PDSIS Orders Maintenance Form** are as follows:
  - **O** - ODL Order Received (initial status in PDSIS).
  - **I** - In Progress.
  - **C** - Completed.
  - **S** - Shipped.
  - **X** - Rejected.
- Valid **Action** values for the **PDSIS Orders Maintenance Form** are as follows:
  - **A** - activate (activate entire order).
  - **S** - print shipping labels and packing lists.
  - **M** - mail the distribution notice to the customer (unless **dorran** is listed in the Special Action field of the **PDSIS Orders Maintenance Form**, in which case the DORRAN billing and accounting system (EDC only) is notified of the order status).
  - **D** - delete all order data in all tables associated with the specified order.
  - **X** - reject (reject the entire order).
- Valid **Error Flag** values for the **PDSIS Orders Maintenance Form** are as follows:
  - **Y** - Yes, an error condition exists.
  - **N** - No error condition exists.

8 Click on the **Save** button on the **PDSIS Orders Maintenance Form**.

- The record is saved in the database with the new value entered in the appropriate field.
- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

9 Click on the **Exit** button at the bottom of the **PDSIS Orders Maintenance Form**.

- If the **Exit** button is not visible on the form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.

- If the maintenance module window was dismissed, the **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.

10 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, click on the appropriate button from the following selections:

- **Yes -** to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.
- **No -** to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.

11 Click on the **PDSIS Units** button on the **PDSIS Maintenance Module Main Menu** (Figure 83).

- The **PDSIS Units Maintenance Form (PDSISMTPUT)** (Figure 114) is displayed.

12 Copy the order number by clicking and dragging (to highlight the text) in the **Order Nbr** field for the appropriate order on the **PDSIS OI Main Screen**.

- **Order Nbr** text is highlighted on the **PDSIS OI Main Screen**.

13 Paste the order number copied from the **PDSIS OI Main Screen** by clicking in the **Order Nbr** field on the **PDSIS Units Maintenance Form** with the **center** mouse button.

- **Order Nbr** is pasted in the **Order Nbr** field on the **PDSIS Units Maintenance Form**.

14 Click on the **Execute Query** button near the bottom of the **PDSIS Units Maintenance Form**.

- The database is queried for data concerning the order represented by the **Order Nbr** and the relevant data are displayed on the **PDSIS Units Maintenance Form**.

15 If the values of any of the following parameters were changed in the **PDSIS Orders Maintenance Form** (Steps 2 through 10), determine whether the values have changed in the **PDSIS Units Maintenance Form**:

- **Status**.
- **Action**.
- **Error Flag.**

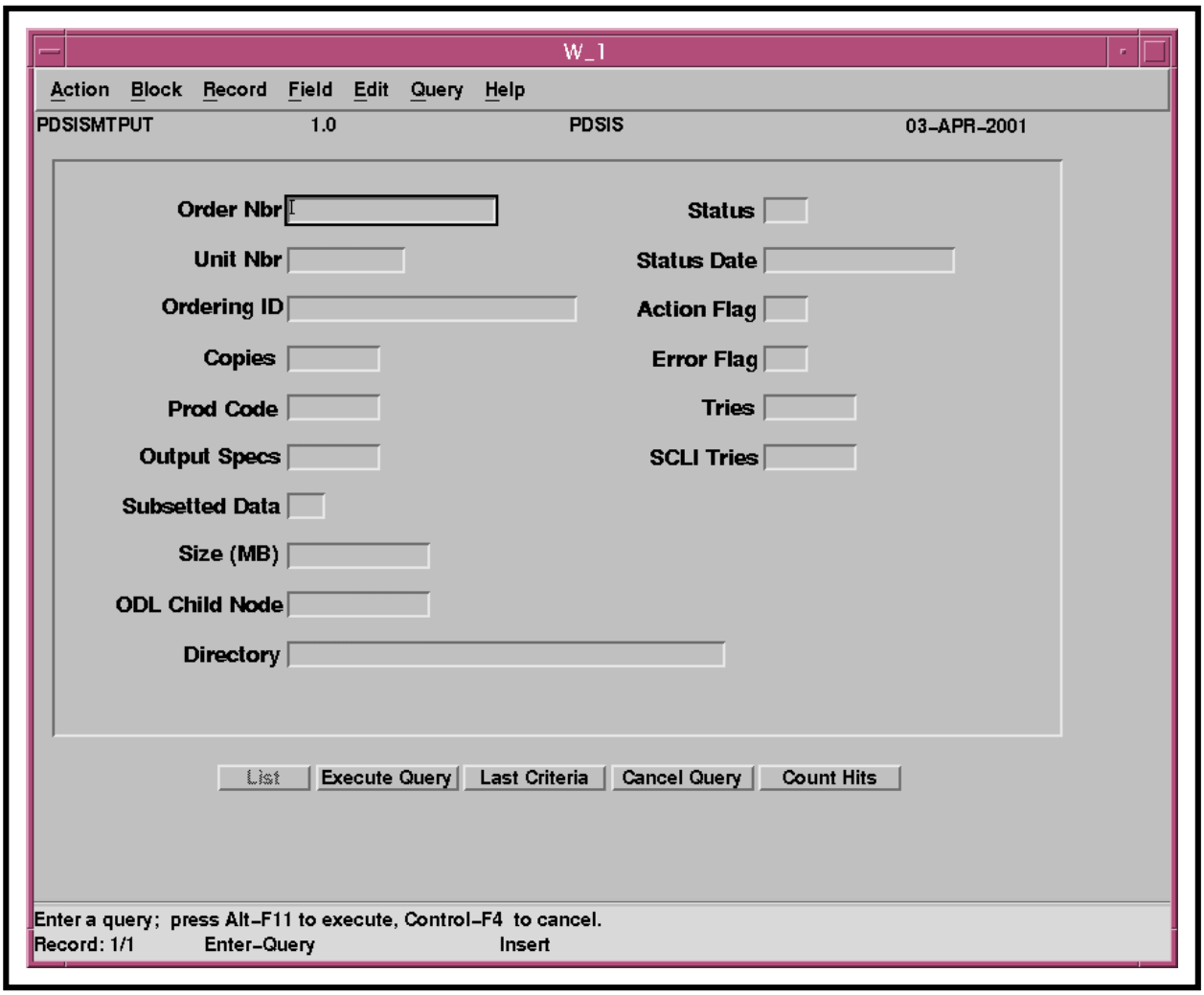

Figure 114. PDSIS Units Maintenance Form

16 If the values of any of the preceding parameters were changed in the **PDSIS Orders Maintenance Form** and the changed values are not displayed in the **PDSIS Units Maintenance Form**, continue with Step 17; otherwise, go to Step 22.

17 If the data displayed on the **PDSIS Units Maintenance Form** do not refer to the appropriate record (e.g., as indicated in the **Unit Nbr** field) click on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display the appropriate record.

18 Click in the appropriate field of the **PDSIS Units Maintenance Form**.

- **Status -** to change the status of the order.

- **Action** - to send an action request to the order.
- **Error Flag** - to reset the error flag for the order.
- **Output Specs** - to specify a different type of medium for recording the data.
- **Copies** - to specify a different number of copies of the unit.
- **Directory** - to change the directory path for PDSSA to pull data for the unit.

19 Type the new value in the field.

- Valid **Status** values for the **PDSIS Units Maintenance Form** are as follows:
  - **O** - ODL Order Received (initial status in PDSIS).
  - **D** - ECS Data Requested.
  - **R** - ECS Data Received.
  - **P** - PDS Products Requested.
  - **C** - PDS Completed.
  - **S** - Shipped.
  - **X** - Rejected.
- Valid **Action** values for the **PDSIS Units Maintenance Form** are as follows:
  - **A** - activate (activate unit).
  - **E** - request ECS data.
  - **P** - request PDS data.
  - **C** - clean/delete the directory associated with the unit.
  - **X** - reject (reject the unit).
- Valid **Error Flag** values for the **PDSIS Units Maintenance Form** are as follows:
  - **Y** - Yes, an error condition exists.
  - **N** - No error condition exists.
- Valid **Output Specs** for a particular media type can be determined by performing the procedure for **Determining Output Specifications** (subsequent section of this lesson); however, representative **Output Specs** values are as follows:
  - **CDRMS** - compact disk.
  - **8MHAU** - 8-mm tape.
  - **DLUCS** - DLT.

- **DVD** - DVD.
- **FTP** - ftp.

20 Click on the **Save** button on the **PDSIS Units Maintenance Form**.

- The record is saved in the database with the new value entered in the appropriate field.
- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

21 Repeat Steps 17 through 20 for all additional records that need to be modified for the order.

22 Click on the **Exit** button at the bottom of the **PDSIS Units Maintenance Form**.

- If the **Exit** button is not visible on the form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.

23 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, click on the appropriate button from the following selections:

- **Yes** - to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.
- **No** - to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.

24 Click on the **PDSIS Address** button on the **PDSIS Maintenance Module Main Menu** (Figure 83).

- The **PDSIS Address Maintenance Form (PDSISMTADD)** (Figure 115) is displayed.

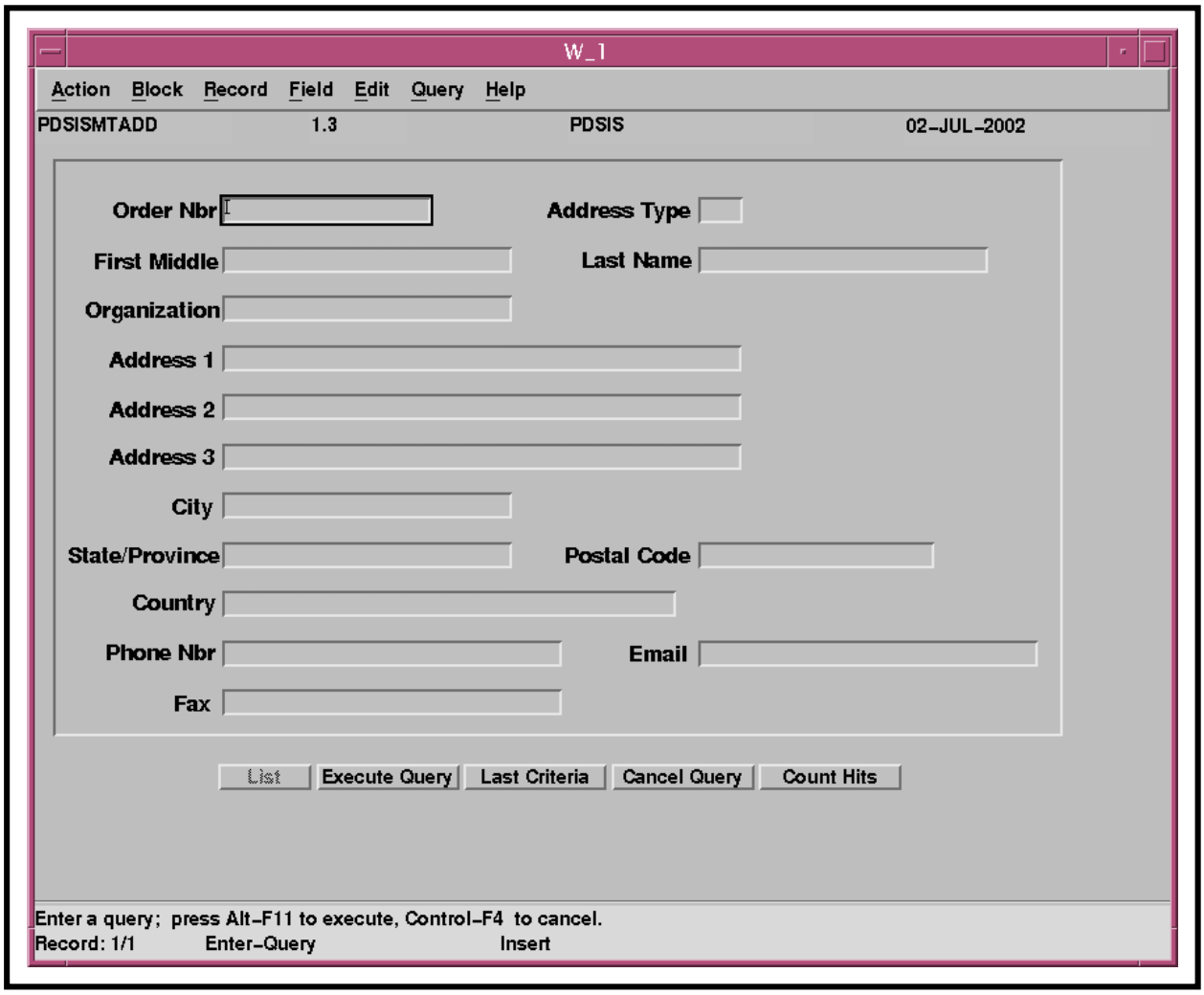

Figure 115. PDSIS Address Maintenance Form

25 Copy the order number by clicking and dragging (to highlight the text) in the **Order Nbr** field for the appropriate order on the **PDSIS OI Main Screen**.

- **Order Nbr** text is highlighted on the **PDSIS OI Main Screen**.

26 Paste the order number copied from the **PDSIS OI Main Screen** by clicking in the **Order Nbr** field on the **PDSIS Address Maintenance Form** with the **center** mouse button.

- **Order Nbr** is pasted in the **Order Nbr** field on the **PDSIS Address Maintenance Form**.

27 Click on the **Execute Query** button near the bottom of the **PDSIS Address Maintenance Form**.

- The database is queried for data concerning the order represented by the **Order Nbr** and the relevant data are displayed on the **PDSIS Address Maintenance Form**.

28 If the data displayed on the **PDSIS Address Maintenance Form** do not refer to the appropriate record (e.g., as indicated in the **Address Type** field) click on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display the appropriate record.

- The following codes specify the **Address Type**:
  - **C** -contact.
  - **B** - billing.
  - **S** - shipping.

29 Click in the **Email** field of the **PDSIS Address Maintenance Form**.

30 Type the new value in the field.

31 Click on the **Save** button on the **PDSIS Address Maintenance Form**.

- The record is saved in the database with the new value entered in the appropriate field.
- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

32 Repeat Steps 28 through 31 for all additional records that need to be modified for the order.

33 Click on the **Exit** button at the bottom of the **PDSIS Address Maintenance Form**.

- If the **Exit** button is not visible on the form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.

34 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, click on the appropriate button from the following selections:

- **Yes** - to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.
- **No** - to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.

35 To shut down the **PDSIS Maintenance Module** click on the **Exit** button at the bottom of the **PDSIS Maintenance Module Main Menu** window.

- The **PDSIS Maintenance Module Main Menu** is dismissed.

36 Return to the procedure for **Monitoring/Controlling Order Processing Using the PDSIS OI** (previous section of this lesson).

Checking/Clearing Errors on PDSIS

Both the **PDSIS OI Main Screen** and the **PDSIS OI Detail Screen** provide the Distribution Technician with means of checking and/or clearing errors associated with PDS orders.

The procedure for checking or clearing errors on PDSIS starts with the assumption that all applicable servers are currently running and either the **PDSIS OI Main Screen** (Figure 78) or the **PDSIS OI Detail Screen** (Figure 92) is being displayed.

Checking/Clearing Errors on PDSIS

---

1 Click on the action button at the beginning of the relevant order status line or unit line.

- The **Action List** box (similar to the one shown in Figure 88) is displayed.

2 Select (highlight) **Errors** in the **Action List** box.

- **Errors** is highlighted.

3 Click on the appropriate button from the following selections:

- **OK** - to display the **PDSIS OI Error Screen** (Figure 100).
  - The **PDSIS OI Error Screen** (Figure 100) is displayed.

- **Cancel -** to dismiss the **Action List** box and return to the screen that was displayed before the action button was selected.
  - Either the **PDSIS OI Main Screen** (Figure 78) or the **PDSIS OI Detail Screen** (Figure 92) (as applicable) is displayed.

4 Observe information displayed on the **PDSIS OI Error Screen** (Figure 100).

- The following items are displayed on the **PDSIS OI Error Screen** (Figure 100):
  - Action Button [not labeled].
  - **Date/Time.**
  - **Order Number.**
  - **Unit Number.**
  - **Error Source.**
  - **Error Message.**
- If the entire entry is not visible in a field, click in the field and use the arrow keys on the keyboard to scroll to the end of the entry.

5 If it is desirable to see an extended error message associated with a particular unit, perform the procedure for **Viewing an Extended Error Message** (subsequent section of this lesson).

6 If it is desirable to clear an error displayed on the **PDSIS OI Error Screen**, perform the procedure for **Clearing an Error Displayed on the PDSIS OI Error Screen** (subsequent section of this lesson).

7 Repeat Steps 4 through 6 as necessary.

8 Click on the **Return** button to return to the procedure being performed before the action button was selected (i.e., either **Monitoring/Controlling Order Processing Using the PDSIS OI** or **Using the PDSIS OI Detail Screen**).

- The **PDSIS OI Error Screen** is dismissed.
- Either the **PDSIS OI Main Screen** (Figure 78) or the **PDSIS OI Detail Screen** (Figure 92) is displayed (as applicable).

Checking PDSSA or PDSIS Log Files

PDSIS maintains the following kinds of daily logs for PDSIS troubleshooting purposes:

- Error log.
  - May give slightly more information on the nature of a problem than the PDSIS Error screen.
  - Provides a history of daily problems.
- Debug log.
  - Provides a record of all pertinent server information as the cron runs every five minutes.
  - Nominal/successful processing is logged in the debug log file.
    - Consequently, debug logs can grow large.
  - Problems may be logged below the level of a declared error in the debug log file
    - May provide the operator with indications as to the health of the PDSIS server:
- Socket log.
  - Provides a record of socket activity, including connection information, product request data, and product result data.

PDSSA maintains the following kinds of logs:

- Operator Interface log (oilog).
  - Describes the events that occur with respect to the jobs that are being processed through the operator interface (PDSOI).
  - Among the entries in the Operator Interface log are the following types of items:
    - Activation of jobs.
    - Eventual status of jobs processed by the production modules (as reported in job status files).
    - Errors detected by the operator interface.
- Job log.
  - Describes the events that occur during the processing of an individual job.

- The following two procedures (subsequent sections of this lesson) are available for checking a job log:
  - **Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands**.
  - **Viewing a Job Log Using the PDS Job Monitor**.

The PDS Cleanup Manager cleans up the PDSSA logs in accordance with the current PDSSA file cleanup strategy. For detailed information refer to the procedure for **Using the PDS Cleanup Manager** (previous section of this lesson).

The PDSIS Cleanup Manager cleans up the PDSIS socket logs in accordance with the current PDSIS file cleanup strategy. For detailed information refer to the procedure for **Using the PDSIS Cleanup Manager** (previous section of this lesson).

The procedure for checking PDSSA or PDSIS log files starts with the assumption that the operator has logged in to the PDS Server host.

Checking PDSSA or PDSIS Log Files

---

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).
- PDS Server host has the following PDSSA log files:
  - Operator Interface log (e.g., DIG06_ops_05022002102727.oilog).
  - Job log (e.g., YEA0203190048_0001.log).
- PDS Server host has the following PDSIS log files:
  - Debug log (e.g., debug.log).
  - Error log (e.g., error.log).
  - Socket log (e.g., 1045668430144.log).

2 Type **cd** ***path*** then press **Return/Enter**.

- Change directory to the directory containing the PDSSA or PDSIS log files.
- ***path*** represents the full directory path to the directory containing the log files.
- **/usr/local/pds_*mode*/summary** is the typical directory path for PDSSA logs (i.e., Operator Interface logs and job logs).

- **/usr/local/pdsis_*mode*/logs/debug** is the typical directory path for PDSIS debug logs.
  - The **pdsis_*mode*** refers to one of the following subdirectories:
    - pdsis (for OPS-mode operations).
    - pdsis_ts1 (for TS1-mode operations).
    - pdsis_ts2 (for TS2-mode operations).
- **/usr/local/pdsis_*mode*/logs/errors** is the typical directory path for PDSIS error logs.
- **/usr/local/pdsis_*mode*/logs/socket** is the typical directory path for PDSIS socket logs.

3 Type **pg** ***filename*** then press **Return/Enter**.

- ***filename*** refers to the PDSSA or PDSIS log file to be reviewed (e.g., DIG06_ops_05022002102727.oilog, YEA0203190048_0001.log, error log, debug.log, 1045668430144.log).
- The first page of the log file is displayed.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view, more**) can be used to review the log file.

4 Review the log file to identify problems that have occurred.

5 Respond to problems as follows:

- PDSIS- or PDSSA-related problems.
  - Perform the appropriate procedure(s) from the list near the beginning of the **PDS Troubleshooting Procedures** section.
- Communication problems.
  - Notify the Operations Controller/System Administrator of suspected communication problems.
- Database problems.
  - Verify that relevant database servers are running.
  - Check for lack of (or corruption of) data in the database using either a database browser or isql commands.
  - Notify the Database Administrator of suspected database problems.
- Lack of disk space.
  - Remove unnecessary files.

– Notify the Operations Controller/System Administrator of recurring disk space problems.

Checking/Restoring Synchronization of the Rimage PC Time with PDS System Time

The time on the Rimage PC must be set to within five (5) minutes of the time on the PDS Server host (e.g., x0dig06). If the time is not properly synchronized, CD and DVD jobs cannot proceed to a QC-Hold status.

The procedure for checking/restoring synchronization of the Rimage PC time with PDS system time starts with the assumption that the PDS Server host (e.g., x0dig06) and the Rimage PC (e.g., x0dip07) are currently running.

Checking/Restoring Synchronization of the Rimage PC Time with PDS System Time

---

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06,** and **n0dig06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 At the UNIX command line prompt on the PDS Server host type **date** then press the **Return/Enter** key on the keyboard.

- The date and time (as known to the PDS Server host) are displayed as follows:

  Thu Jun 20 15:42:15 EDT 2002

- If the date or time values shown on the PDS Server host appear to be incorrect, notify the System Administrator.

3 On the Rimage PC double-click on the time displayed on the Windows task bar.

- A **Date/Time Properties** window is displayed.
- The current date and time (as known to the Rimage PC) are displayed.
- An alternative method of displaying the **Date/Time Properties** window is to select **Start** → **Settings** → **Control Panel** from the Windows task bar, then double-click on the **Date/Time** icon.

4 If the date and time displayed on the Rimage PC are the same as those displayed on the PDS Server host, click on the **Cancel** button in the **Date/Time Properties** window on the Rimage PC.

- End of procedure.

NOTE: If the date or time zone displayed on the Rimage PC is not the same as that displayed on the PDS Server host, change the date/time zone on the Rimage PC before changing the time. No specific steps for doing so are provided in this procedure because they are not likely to be needed.

5 If the time displayed on the Rimage PC is not the same as that displayed on the PDS Server host, on the Rimage PC (in the **Date/Time Properties** window) click on the incorrect hour, minute or second in the digital time display.

6 If the time displayed on the Rimage PC is not the same as that displayed on the PDS Server host, on the Rimage PC (in the **Date/Time Properties** window) type the correct value(s) (as displayed on the PDS Server host) for the hour, minute and/or second in the digital time display.

- The clock stops when a new time value is entered.
- The new time values are displayed but not applied yet.

7 If the time displayed on the Rimage PC was not the same as that displayed on the PDS Server host, on the Rimage PC (in the **Date/Time Properties** window) click on the appropriate button from the following selections:

- **OK** - to restart the Rimage PC clock with the new time values and dismiss the **Date/Time Properties** window.
  - Rimage PC time is reset.
  - The **Date/Time Properties** window is dismissed.
- **Cancel** - to restart the Rimage PC clock with the old time values and dismiss the **Date/Time Properties** window.
  - Rimage PC time is not reset.
  - The **Date/Time Properties** window is dismissed.
- **Apply** - to restart the Rimage PC clock with the new time values without dismissing the **Date/Time Properties** window.
  - Rimage PC time is reset.
  - The **Date/Time Properties** window is still displayed.

8 Return to the procedure [e.g., **Responding to No Printouts (Either Jewel-Case Inserts or Paper Reports)**] that recommended checking/restoring synchronization of the Rimage PC time with PDS system time.

Checking/Restoring the Rimage PC NFS Connection

A Network File System (NFS) mount is needed in order for the Rimage software to see the job control directory (e.g., /pdssa/rimage_jobcontrol) on the PDS system. When the Windows NT system for the Rimage PC is set up, the PDS job control directory on the PDS Server host (e.g., x0dig06) is typically mapped to the PC's Z: drive.

The procedure for checking/restoring the Rimage PC NFS connection starts with the assumption that the PDS Server host (e.g., x0dig06) and the Rimage PC (e.g., x0dip07) are currently running.

Checking/Restoring the Rimage PC NFS Connection

---

1 Select **Start** → **Programs** → **Windows NT Explorer** from the Windows task bar.

- An **Exploring – [C:]** window is displayed.

2 In the left (**All Folders**) frame, scroll down to determine whether there is a network drive Z: to which rimage_jobcontrol is assigned.

- If no drive associated with the rimage_jobcontrol directory, there is a problem with the NFS connection.
  - Go to Step 5.

3 If there is a network drive Z: to which rimage_jobcontrol is assigned, click on the icon for the drive.

- Folders (subdirectories) and files in the rimage_jobcontrol directory should be displayed in the right (**Contents of…**) frame of the **Exploring – [C:]** window.
- If no folders (subdirectories) or files are displayed in the **Exploring – [C:]** window, there is a problem with the NFS connection.

4 If there is no problem with the NFS connection, go to Step 15.

5 If there is a problem with the NFS connection, shut down the Rimage CD production software.

- For detailed instructions refer to the procedure for **Shutting Down the Rimage CD Production Software** (previous section of this lesson).

- Shutting down the Rimage CD production software is a preparatory step for rebooting the computer.
  - When logging back on to the computer as a user with NFS privileges, the NFS connection should be restored.

6 To start the process of rebooting the computer select **Start** → **Shut Down** from the Windows task bar.

- A **Shut Down Windows** window is displayed.

7 Click on the appropriate radio button from the following selections (which are alternate endings to the question, **Are you sure you want to:**):

- **Shut down the computer? -** to indicate an intention to shut down the computer for the purpose of turning it off.
- **Restart the computer? -** to indicate an intention to shut down the computer and immediately restart it.
  - This is the optimum choice for rebooting the computer (the goal in this procedure) although **Shut down the computer?** is an acceptable choice as well.
- **Close all programs and log on as a different user? -** to indicate an intention to close all programs and log on as a different user.

8 Click on the appropriate button from the following selections:

- **Yes -** to implement the choice indicated in the preceding step.
  - The **Shut Down Windows** window is dismissed.
  - If **Shut down the computer?** was selected in the preceding step, eventually a **Shutdown Computer** window (containing the text “It is now safe to turn off your computer” and a **Restart** button) is displayed.
    - Clicking on the **Restart** button causes the screen to go black, then a variety of text is displayed on the screen as the computer checks its configuration and loads and starts the operating system, and eventually a **Begin Logon** window (containing the text “Press Ctrl + Alt + Delete to log on”) is displayed.
  - If **Restart the computer?** was selected in the preceding step, the screen goes black, then a variety of text is displayed on the screen as the computer checks its configuration and loads and starts the operating system, and eventually a **Begin Logon** window (containing the text “Press Ctrl + Alt + Delete to log on”) is displayed.

- If **Close all programs and log on as a different user?** was selected in the preceding step, eventually a **Begin Logon** window (containing the text "Press Ctrl + Alt + Delete to log on") is displayed.

- **No -** to dismiss the **Shut Down Windows** window without shutting down the computer.
  - The **Shut Down Windows** window is dismissed.
  - The Windows desktop is displayed.

9 Simultaneously press the **Ctrl**, **Alt**, and **Delete** keys on the keyboard.

- The **Begin Logon** window is dismissed.
- An **Acceptance of … Computer Policy** window (containing policy text and an **OK** button) is displayed.

10 Click on the **OK** button.

- The **Acceptance of … Computer Policy** window is dismissed.
- A **Logon Information** window is displayed.
  - The **Logon Information** window contains the text "Enter a user name and password that is valid for this system" and the following fields:
    - **Username.**
    - **Password.**
    - **Domain.**

11 Ensure that the entries in the **Username** and **Domain** fields of the **Logon Information** window are correct.

- Type the appropriate information in the fields if necessary.
- The user name entered in the **Username** field must have NFS access privileges.

12 Type the appropriate password in the **Password** field.

- If the **Return/Enter** key on the keyboard is pressed after the password has been typed, go to Step 14.

13 Click on the appropriate button from the following selections:

- **OK -** to start log-on to Windows.
  - The **Logon Information** window is dismissed.
  - Scripts run in log-on windows and eventually the Windows desktop is displayed.

- **Cancel** - to dismiss the **Logon Information** window without starting the log-on to Windows.

  The **Logon Information** window is dismissed.

  – The **Begin Logon** window is displayed.

  – Return to Step 9.

- **Shut Down** - to dismiss the **Logon Information** window and select choices for computer shutdown.

  – The **Logon Information** window is dismissed.

  – A **Shutdown Computer** window is displayed.

  – Return to Step 7.

14 Return to Step 1 to recheck the Rimage PC NFS connection.

15 If the Rimage CD production software was shut down, restart the Rimage CD production software.

- For detailed instructions refer to the procedure for **Starting the Rimage CD Production Software** (previous section of this lesson).

16 Return to the procedure [e.g., **Responding to No Printouts (Either Jewel-Case Inserts or Paper Reports)**] that recommended checking/restoring the Rimage PC NFS connection.

Cleaning up the CD-R_Images Folder on the Rimage PC

From time to time the CD-R_Images folder on one of the Rimage PC hard drives (e.g., the E: drive) needs cleaning to remove files that result from ftp errors, disk space issues, or problems producing an output. For example, it may be required as part of the procedure for **Responding to a CD/DVD Job Error Indicated on PDSOI** (subsequent section of this lesson).

The procedure for cleaning up the CD-R_Images folder on the Rimage PC starts with the assumption that the Distribution Technician has logged on to the Rimage PC using an account that is valid on the PDS system.

Cleaning up the CD-R_Images Folder on the Rimage PC

---

1 Double-click on the **My Computer** icon.

- A window is displayed containing icons for the accessible drives.

- Unneeded image files should be deleted from the CD-R_Images folder before attempting to delete the production order files through the Rimage Production Server Production Order Editor.

2 Double-click on the icon for the appropriate drive (e.g., the **E:** drive).

- A window is displayed containing icons for the folders (directories) and files on the specified drive.

3 Double-click on the icon for the **CD-R_Images** folder.

- A window is displayed containing icons for the image files in the **CD-R_Images** folder.

4 Hold the **Ctrl** key while clicking on the icons (highlighting them) for all unneeded files to be deleted from the **CD-R_Images** folder.

- All unneeded files in the **CD-R_Images** folder are highlighted.

5 Click on one of the highlighted icons with the **right** mouse button.

- Pop-up menu appears.

6 Select **Delete** from the pop-up menu.

- A **Confirm File Delete** dialogue box is displayed containing the message "Are you sure you want to send *'filename'* to the Recycle Bin?".

7 Click on the appropriate button from the following selections:

- **Yes -** to send the selected files to the recycle bin and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The selected files are transferred to the recycle bin (folder).
- **No -** to dismiss the dialogue box without sending the selected files to the recycle bin.
  - The dialogue box is dismissed.

8 Click on the **X** in the box at the upper right-hand corner of the **CD-R_Images** folder window.

- The **CD-R_Images** folder window is dismissed.

9 Select **File** → **Production Order Editor** from the pull-down menu in the **Production Server** window on the PC.

- The **pofile** window is displayed.
- As an alternative, if the Windows desktop has an icon for the **Rimage CD-R Production Order File Editor**, double-clicking on the icon causes the **pofile** window to be displayed.

10 Hold the **Ctrl** key while clicking on the icons (highlighting them) for all unneeded production order files to be deleted.

- All unneeded production order files are highlighted.

11 Click on one of the highlighted icons with the **right** mouse button.

- Pop-up menu appears.

12 Select **Delete** from the pop-up menu.

- A **Confirm File Delete** dialogue box is displayed containing the message "Are you sure you want to send *'filename'* to the Recycle Bin?".

13 Click on the appropriate button from the following selections:

- **Yes** - to send the selected files to the recycle bin and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The selected files are transferred to the recycle bin (folder).
- **No** - to dismiss the dialogue box without sending the selected files to the recycle bin.
  - The dialogue box is dismissed.

14 Click on the **Recycle Bin** icon on the PC desktop with the **right** mouse button.

- Pop-up menu appears.

15 Select **Empty Recycle Bin** from the pop-up menu.

- A **Confirm Multiple File Delete** dialogue box is displayed containing the message "Are you sure you want to delete these *n* items?".

16 Click on the appropriate button from the following selections:

- **Yes** - to delete the selected files and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The selected files are deleted.
- **No** - to dismiss the dialogue box without deleting the selected files.
  - The dialogue box is dismissed.

17 Click on the **X** in the box at the upper right-hand corner of the **pofile** window.

- The **pofile** window is dismissed.

18 Click on the **X** in the box at the upper right-hand corner of the hard drive (e.g., **E:** drive) window.

- The drive window is dismissed.

19 Click on the **X** in the box at the upper right-hand corner of the **My Computer** window.

- The **My Computer** window is dismissed.

Clearing an Error Displayed on the PDSIS OI Error Screen

The procedure for **Clearing an Error Displayed on the PDSIS OI Error Screen** is performed as part of the procedure for **Checking/Clearing Errors on PDSIS** (previous section of this lesson).

The procedure for clearing an error displayed on the **PDSIS OI Error Screen** starts with the assumption that all applicable servers are currently running and the **PDSIS OI Error Screen** (Figure 100) is being displayed.

Clearing an Error Displayed on the PDSIS OI Error Screen

NOTE: It is generally good practice to ensure that the condition that caused an error has been corrected before clearing the error on the GUI (operator interface); otherwise, the error may recur.

1 Click on the action button at the beginning of the relevant error status line.

- The **Action List** box (similar to the one shown in Figure 88) is displayed.

2 Select (highlight) **Clear Error** in the **Action List** box.

- **Clear Error** is highlighted.

3 Click on the appropriate button from the following selections:

- **OK -** to clear the error and dismiss the **Action List** box.
  - The **PDSIS OI Error Screen** (Figure 100) is displayed.
  - The status of the order/unit changes to its pre-error state and condition.
    - The error is removed (logged) and is no longer visible on the **PDSIS OI Error Screen**.
    - The order/unit restarts from its pre-error state.
    - The same error or a different error may occur if the root cause of the error has not been corrected.

- **Cancel** - to dismiss the **Action List** box without clearing the error and return to the **PDSIS OI Error Screen** (Figure 100).
  - The **PDSIS OI Error Screen** (Figure 100) is displayed.

4 Return to the procedure for **Checking/Clearing Errors on PDSIS** (previous section of this lesson).

Determining Output Specifications Using the PDS Maintenance Module

It may be necessary to determine product output specifications when performing other procedures associated with PDS processing; e.g., responding to a job on a Lag Report or changing the values of job or order parameters.

The procedure for determining output specifications using the PDS Maintenance Module starts with the assumption that all applicable servers (e.g., the Oracle DBMS server) are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Determining Output Specifications Using the PDS Maintenance Module

---

1 Perform the procedure for **Starting the PDS Maintenance Module** (previous section of this lesson).

2 Click on the **Product Media Descriptions** button on the PDS **Maintenance Module Main Menu**.

- The **Product Media Descriptions Maintenance Form (PDSMTPMD)** (Figure 116) is displayed.

3 Click on the **Execute Query** button on the **Product Media Descriptions Maintenance Form**.

- Product codes are displayed on the **Product Media Descriptions Maintenance Form** (Figure 117).
- The following types of data are displayed on the **Product Media Descriptions Maintenance Form** (Figure 117):
  - **Output Spec** - output specification of the product ordered.
  - **Description** - a longer (more understandable) description of what the output specification is.
  - **PDS Description** - Grouping of output specifications.

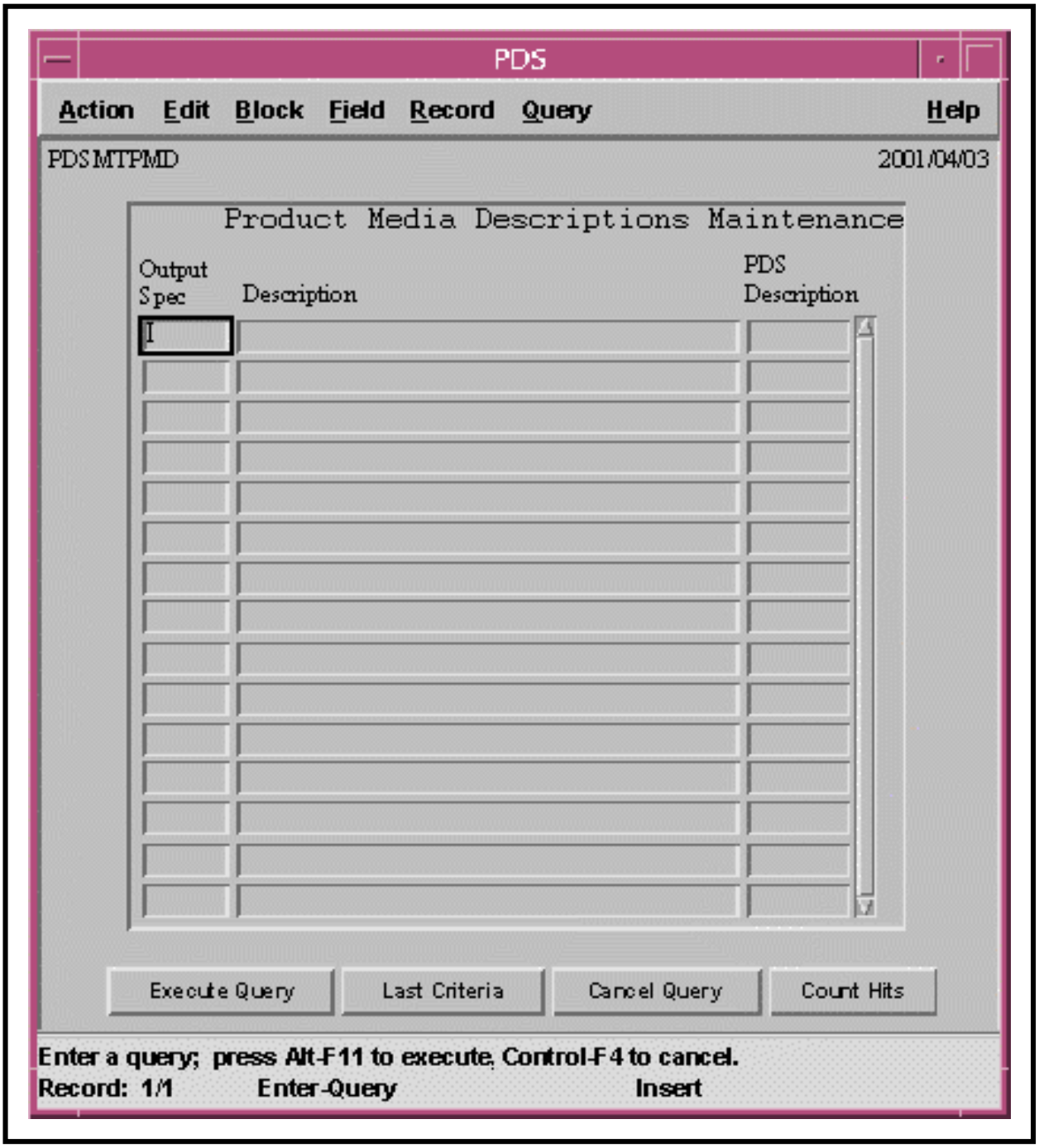

Figure 116. Product Media Descriptions Maintenance Form (PDSMTPMD)

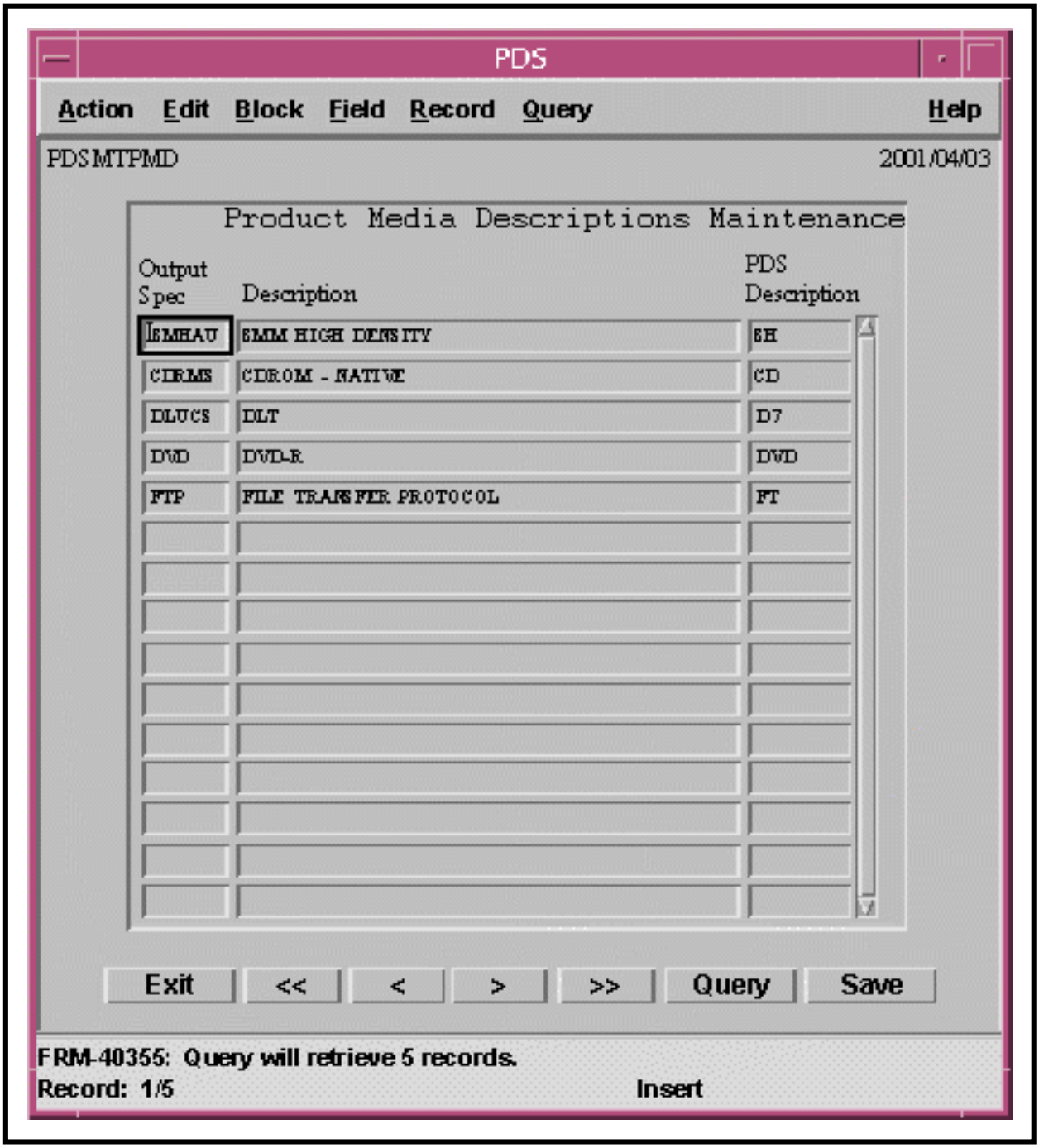

Figure 117. Product Media Descriptions Maintenance Form Displaying Output Specifications

4 Observe the data displayed on the **Product Media Descriptions Maintenance Form** (Figure 117) to determine whether the relevant output specification has the appropriate value.

- The entries displayed on the **Product Media Descriptions Maintenance Form** are the values in the OUT_OTSPTBLV_TBL database table.

5 If the relevant output specification does not have the appropriate value on the **Product Media Descriptions Maintenance Form** (in the OUT_OTSPTBLV_TBL database table), call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

6 To close the **Product Media Descriptions Maintenance Form** click on the **Exit** button at the bottom of the window.

- If the **Exit** button is not visible on the maintenance module form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

7 Click on the **Exit** button at the bottom of the PDS **Maintenance Module Main Menu** window.

- The PDS **Maintenance Module Main Menu** is dismissed.
- The PDS maintenance module has been shut down.

Determining Output Specifications Using the PDSIS Maintenance Module

It may be necessary to determine product output specifications when performing other procedures associated with PDS processing; e.g., responding to a job on a Lag Report or changing the values of job or order parameters.

The procedure for determining output specifications using the PDSIS Maintenance Module starts with the assumption that all applicable servers are currently running and the **PDSIS OI Main Screen** (Figure 78) is being displayed.

Determining Output Specifications Using the PDSIS Maintenance Module

---

1 Perform the procedure for **Starting the PDSIS Maintenance Module** (previous section of this lesson).

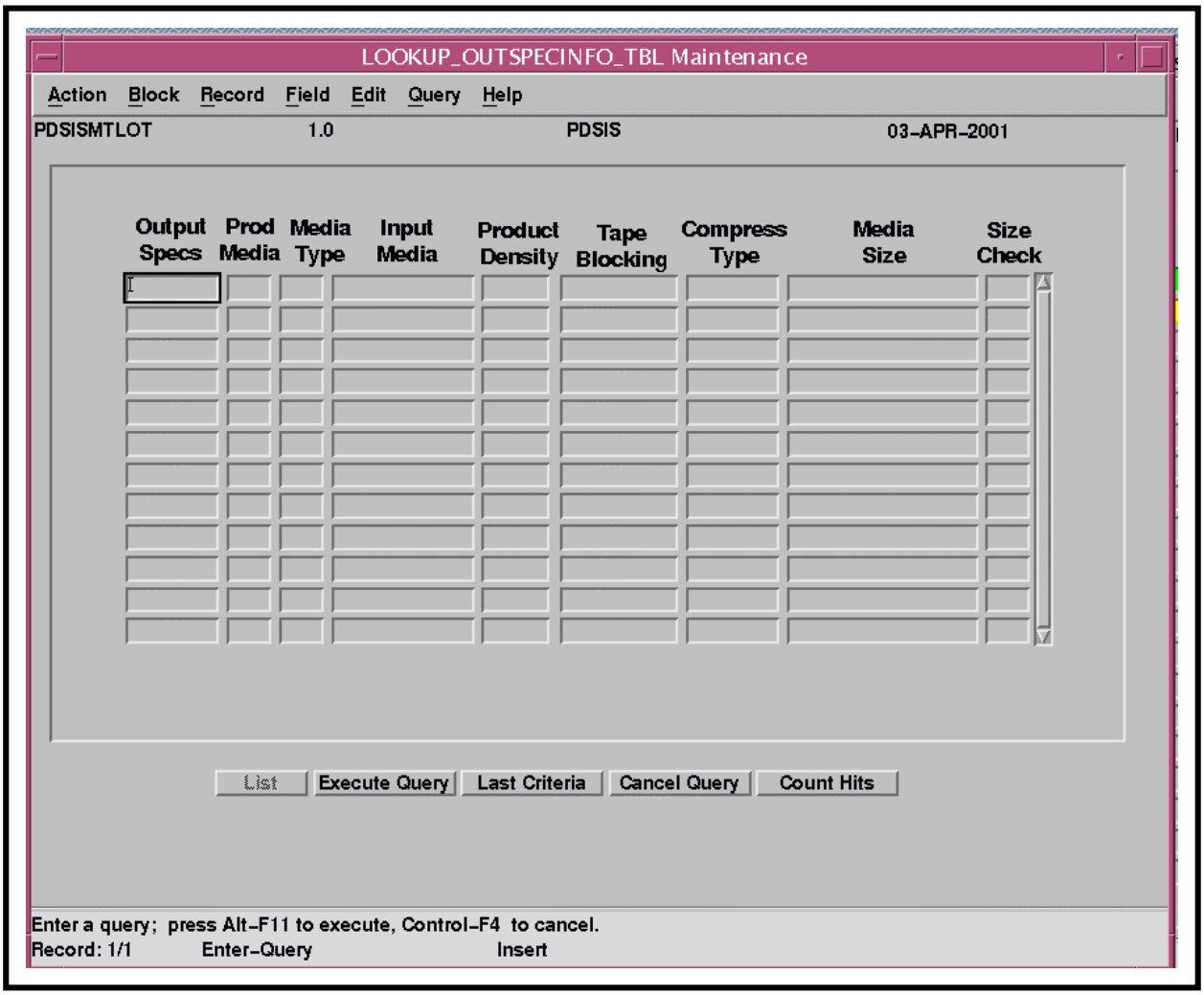

Figure 118. PDSIS Output Specifications Window

2 Click on the **Outspec Info** button on the **PDSIS Maintenance Module Main Menu** (Figure 83).

- The **PDSIS Output Specifications Window (PDSISMTLOT)** (Figure 118) is displayed.

3 Click on the **Execute Query** button on the **PDSIS Output Specifications Window**.

- Output specifications are displayed on the **PDSIS Output Specifications Window** (Figure 119).
- The following types of data are displayed on the **PDSIS Output Specifications Window** (Figure 119):
  - **Output Specs -** output specifications.

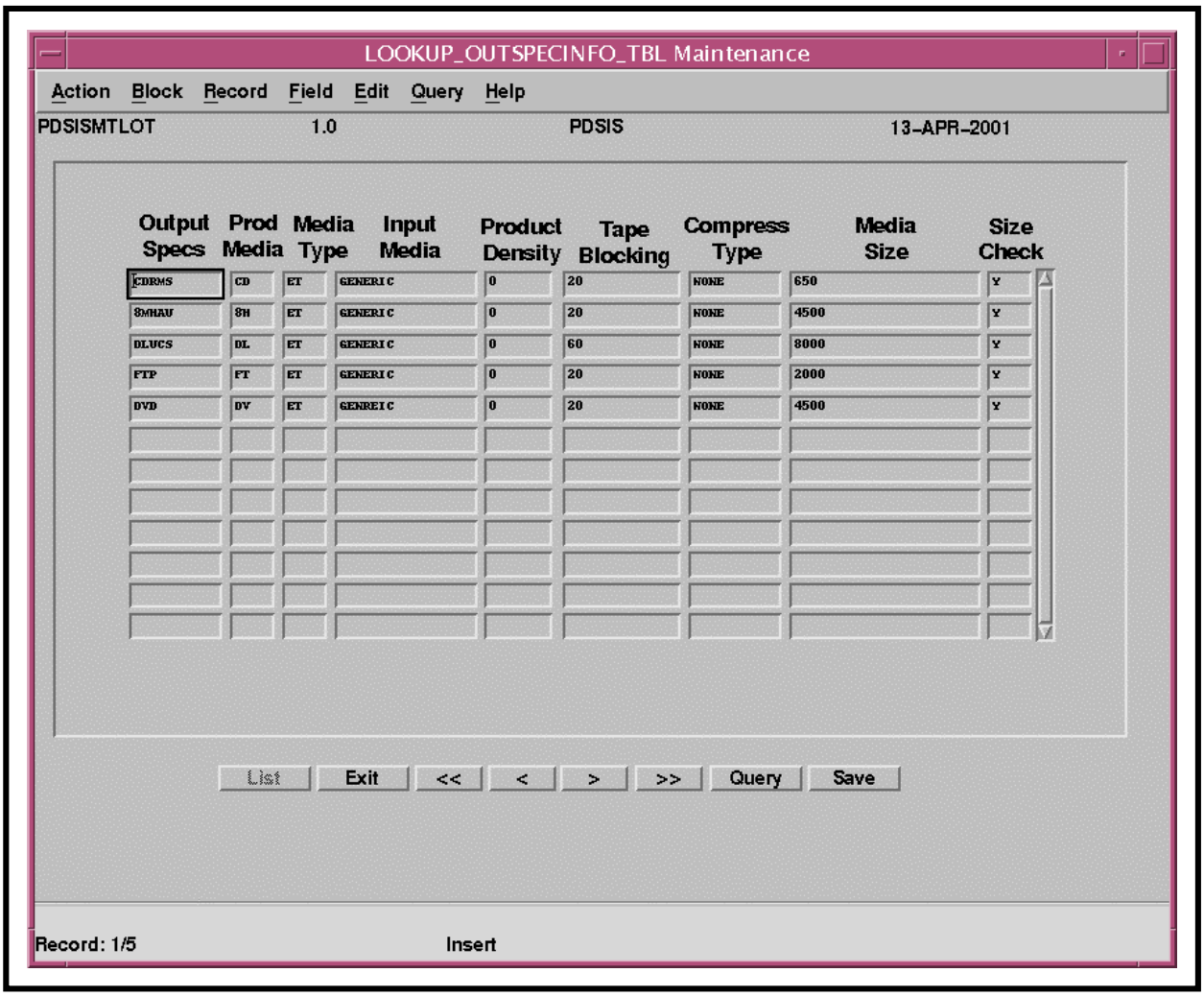

Figure 119. PDSIS Output Specifications Window Displaying Output Specifications

- **Prod Media** - product medium on which the data are to be recorded.
- **Media Type** - type of input medium (ET = Electronic Transfer).
- **Input Media** - format of the incoming data.
- **Product Density** - density of the product (primarily used for tape density).
- **Tape Blocking** - tape blocking factor.
- **Compress Type** - compression type (default is NONE).
- **Media Size** - storage size of the product medium in megabytes.

- **Size Check** - whether or not PDSIS issues errors for units that are too large to fit on the specified medium (Y = Yes, PDSIS checks; N = No, PDSIS does not check).

4 Observe the data displayed on the **PDSIS Output Specifications Window** (Figure 119) to determine the relevant output specification(s).

5 To close the **PDSIS Output Specifications Window** click on the **Exit** button at the bottom of the window.

- If the **Exit** button is not visible on the maintenance module form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- The **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.

6 To shut down the **PDSIS Maintenance Module** click on the **Exit** button at the bottom of the **PDSIS Maintenance Module Main Menu** window.

- The **PDSIS Maintenance Module Main Menu** is dismissed.

Determining Product Codes Using the PDS Maintenance Module

It may be necessary to determine product codes when troubleshooting problems with PDS processing; e.g., responding to a job on a Lag Report.

The procedure for determining product codes using the PDS Maintenance Module starts with the assumption that all applicable servers (e.g., the Oracle DBMS server) are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Determining Product Codes Using the PDS Maintenance Module

---

1 Perform the procedure for **Starting the PDS Maintenance Module** (previous section of this lesson).

2 Click on the **Product Code Descriptions** button on the PDS **Maintenance Module Main Menu**.

- The **Product Code Descriptions Maintenance Form (PDSMTPCD)** (Figure 120) is displayed.

3 Click on the **Execute Query** button on the **Product Code Descriptions Maintenance Form**.

- Product codes are displayed on the **Product Code Descriptions Maintenance Form** (Figure 121).

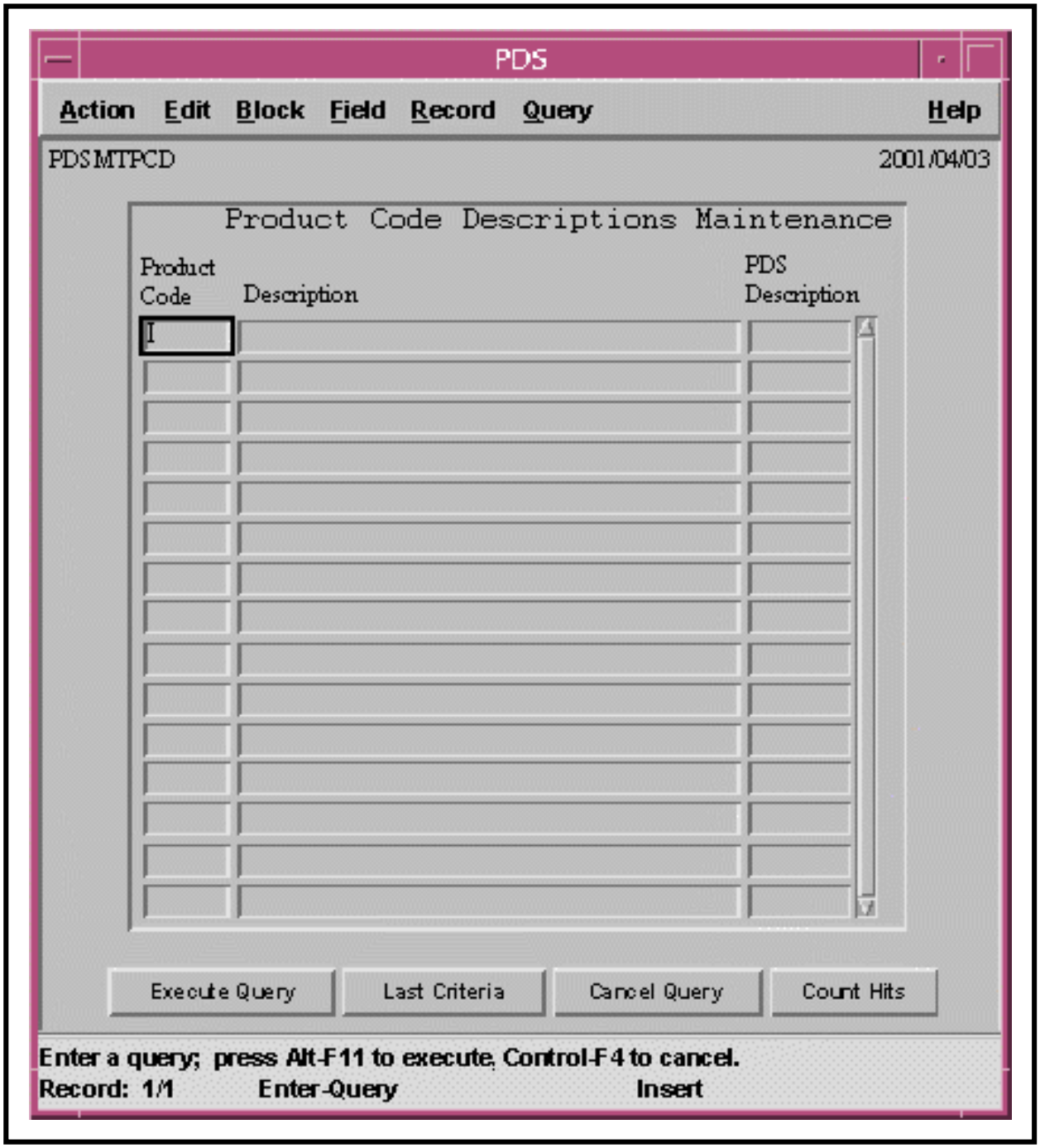

Figure 120. Product Code Descriptions Maintenance Form (PDSMTPCD)

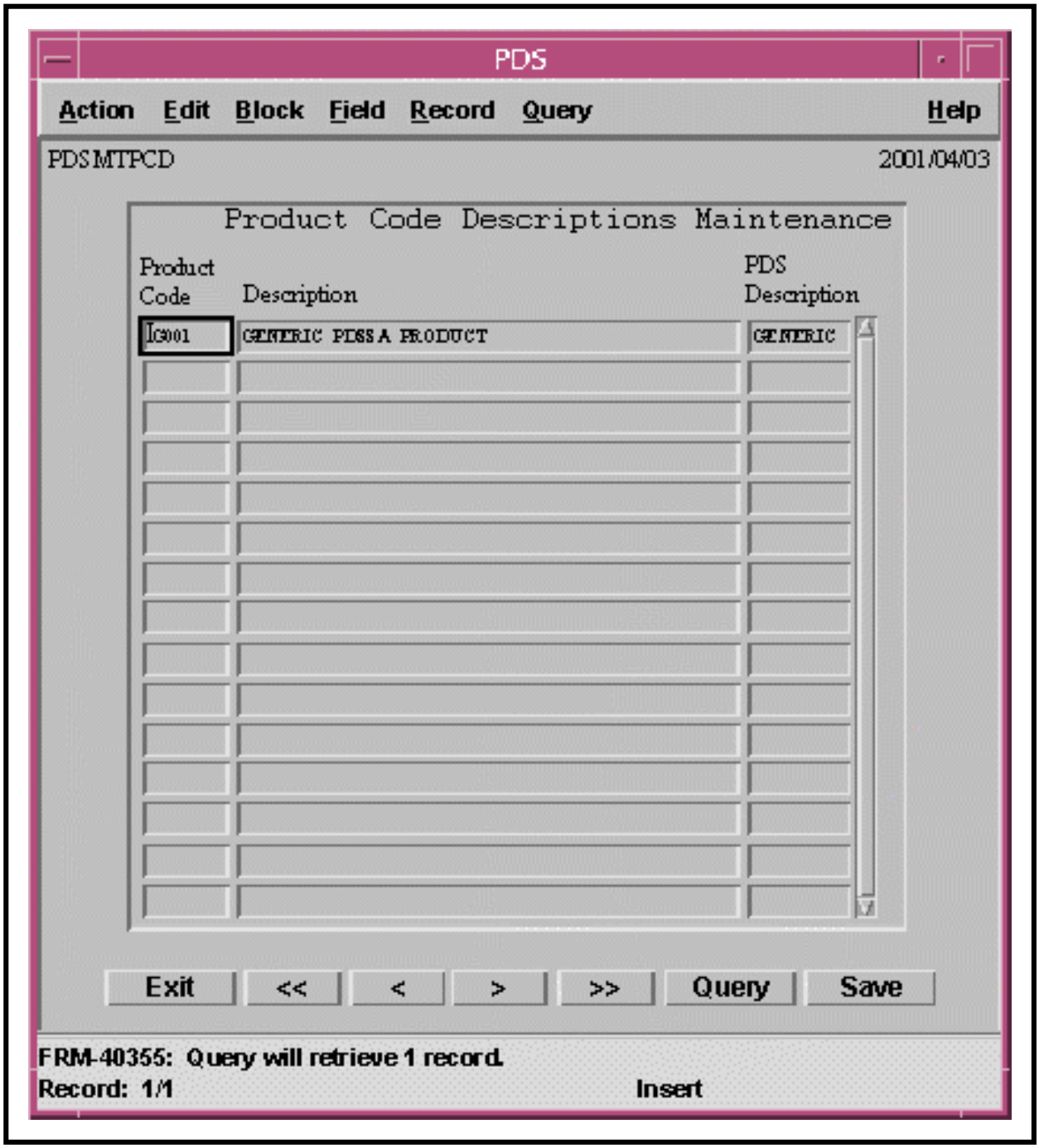

Figure 121. Product Code Descriptions Maintenance Form Displaying Product Code

- The following types of data are displayed on the **Product Code Descriptions Maintenance Form** (Figure 121):
  - **Prod Code -** product code used to describe what is being ordered.
  - **Description -** a longer (more understandable) description of what the product code is.
  - **PDS Description -** Grouping of product codes.

4 Observe the data displayed on the **Product Code Descriptions Maintenance Form** (Figure 121) to determine whether the relevant product code has the appropriate value.

- The entries displayed on the **Product Code Descriptions Maintenance Form** are the values in the PVT_PRCDTBL_TBL database table.

5 If the relevant product code does not have appropriate values on the **Product Code Descriptions Maintenance Form** (in the PVT_PRCDTBL_TBL database table), call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

6 To close the **Product Code Descriptions Maintenance Form** click on the **Exit** button at the bottom of the window.

- If the **Exit** button is not visible on the maintenance module form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

7 Click on the **Exit** button at the bottom of the PDS **Maintenance Module Main Menu** window.

- The PDS **Maintenance Module Main Menu** is dismissed.
- The PDS maintenance module has been shut down.

Determining Product Codes Using the PDSIS Maintenance Module

It may be necessary to determine product codes when troubleshooting problems with PDS processing; e.g., responding to a job on a Lag Report.

The procedure for determining product codes using the PDSIS Maintenance Module starts with the assumption that all applicable servers are currently running and the **PDSIS OI Main Screen** (Figure 78) is being displayed.

Determining Product Codes Using the PDSIS Maintenance Module

1 Perform the procedure for **Starting the PDSIS Maintenance Module** (previous section of this lesson).

2 Click on the **Prod Code Info** button on the **PDSIS Maintenance Module Main Menu** (Figure 83).

- The **PDSIS Product Code Info Window (PDSISMTLPT)** (Figure 122) is displayed.

3 Click on the **Execute Query** button on the **PDSIS Product Code Info Window**.

- Product codes are displayed on the **PDSIS Product Code Info Window** (Figure 123).
- The following types of data are displayed on the **PDSIS Product Code Info Window** (Figure 123):
  - **Prod Code -** product code.
  - **Product Format -** product format of the output data (e.g., GENERIC).
  - **PDS Project -** PDS Project (e.g., LPDAAC, LARC, MODIS).
  - **Order Node -** first three characters of an order number for an order of this type.
  - **Default Size -** default size of a granule in megabytes (used if the ECS query returns a NULL size).
  - **Receive Email -** indicates whether (Y or N) PDSIS sends an e-mail for the particular product code on initial receipt of an order.

4 Observe the data displayed on the **PDSIS Product Code Info Window** (Figure 123) to determine the relevant product code.

5 To close the **PDSIS Product Code Info Window** click on the **Exit** button at the bottom of the window.

- If the **Exit** button is not visible on the maintenance module form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- The **PDSIS Maintenance Module Main Menu** (Figure 83) is displayed.

6 To shut down the **PDSIS Maintenance Module** click on the **Exit** button at the bottom of the **PDSIS Maintenance Module Main Menu** window.

- The **PDSIS Maintenance Module Main Menu** is dismissed.

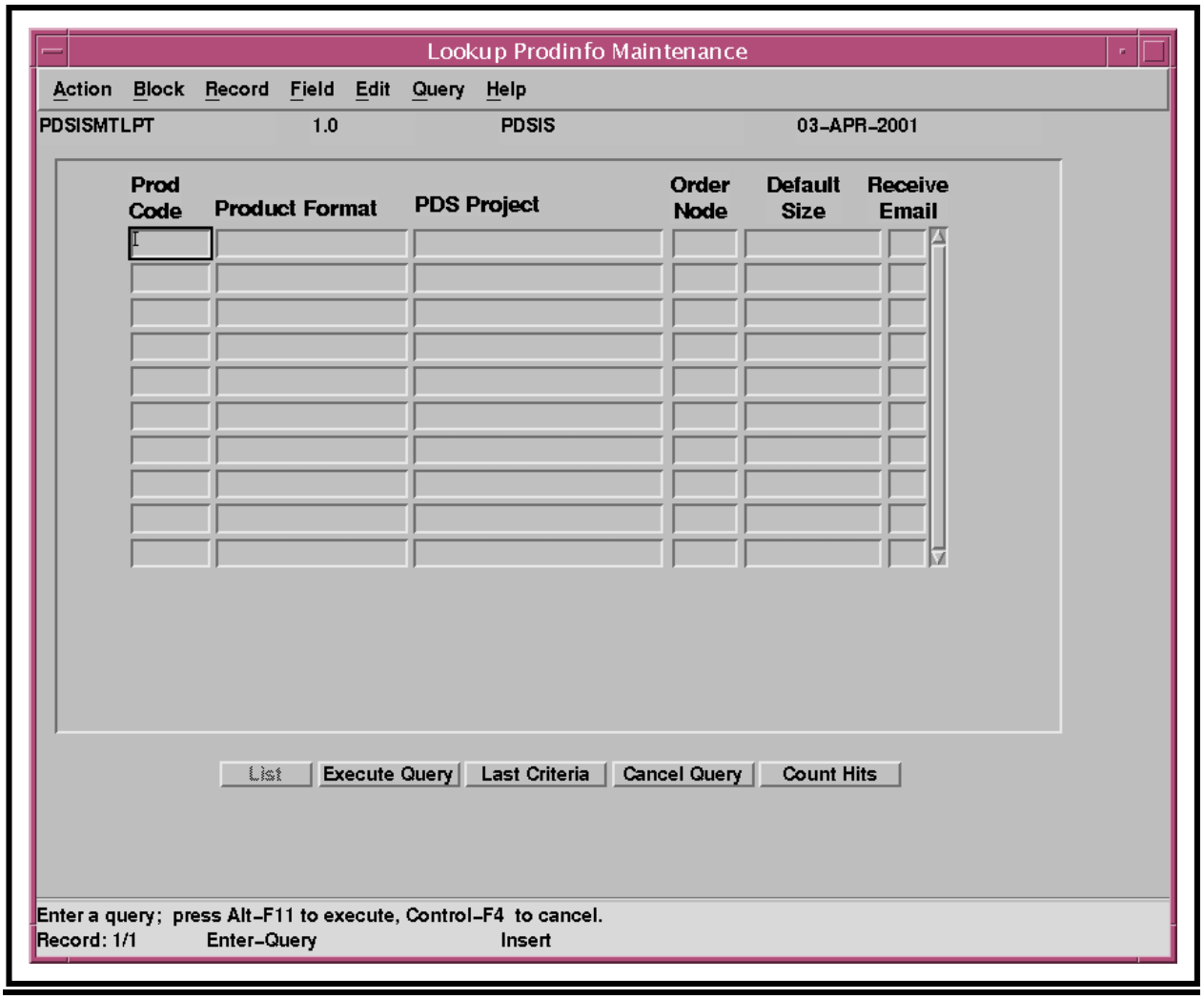

Figure 122. PDSIS Product Code Info Window

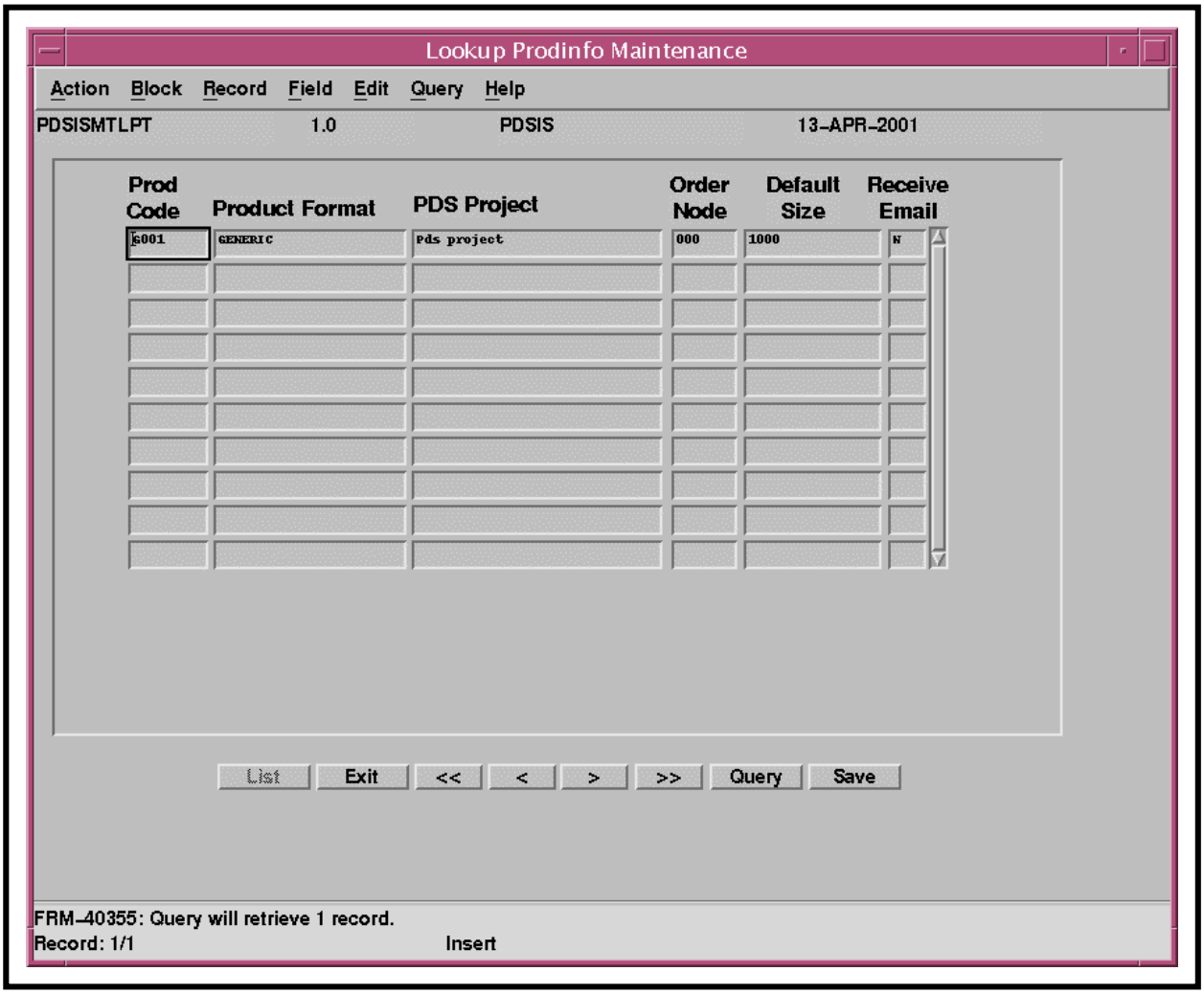

Figure 123. PDSIS Product Code Info Window Displaying Product Code

Determining the Status of PDS Tape/Disk Drives

The purpose of the procedure is to determine the current status of PDS tape and/or disk drives.

The procedure for determining the status of PDS tape/disk drives starts with the assumption that all applicable servers are currently running.

Determining the Status of PDS Tape/Disk Drives

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06,** and **n0dig06**.

- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (previous section of this lesson).

2 Type **tpstat** then press the **Return/Enter** key on the keyboard.

- The following type of response is displayed:

DRIVE NAME	DRIVE TYPE	HOST	USER	DEVICE
dlt1	dlt7000	x0dig06	----	/dev/rmt/tps42d4nrnsv.7000c
dlt2	dlt7000	x0dig06	----	/dev/rmt/tps42d5nrnsv.7000c
drive1	8mm	x0dig06	----	/dev/rmt/tps2d5nrnsv.8500
drive2	8mm	x0dig06	----	/dev/rmt/tps3d2nrnsv.8500
dvdrimage1	dvdr	x0dig06	----	/pdssa/rimage_jobcontrol
cdrimage1	cdr	x0dig06	----	/pdssa/rimage_jobcontrol

- **tpstat** shows each of the drives connected to the PDS Server host and the owner of each drive.

3 To determine the current status of one of the devices connected to the PDS Server, type **mt –f *device* status** then press the **Return/Enter** key on the keyboard.

- ***device*** is a device identifier such as those specified as a result of running the tpstat command.
- The following type of response is displayed:

  Controller: SCSI
  Device: EXABYTE: EXB-85058HE-00000112
  Status: 0x20262
  Drive type: 8mm(8500) cartridge
  Media : READY, writable, at BOT

  – The example shows the report from an 8mm drive that is ready, will accept commands to write to tape (is not write-protected or read-only), and is positioned at the beginning of the tape.

4 To determine other commands available for manual tape control (in addition to **status**), type **mt –f *device* help** then press the **Return/Enter** key on the keyboard.

- Some other commands include (but are not limited to) the following commands:
  – **erase.**
  – **offline.**
  – **rewind.**
  – **unload.**

Determining Which Instance of PDSOI Was Used to Activate a Job

The purpose of the procedure for determining which instance of PDSOI was used to activate a job is to identify the instance of the PDSOI that can be used for completing the job. The instance is important because each activated job's status file name starts with the OI ID (which identifies the PDSOI instance). Only an instance of the PDSOI with that OI ID can change the job's status to "QC-Hold" after the production module has sent the job's status file to the "status" subdirectory. So typically the procedure for determining which instance of PDSOI was used to activate a job is performed while trying to determine why a PDS job does not change to a QC-Hold status although production was successful.

There are at least two sources of information for determining which instance of PDSOI was used to activate a job:

- Name of the status file for the job.
- Contents of the PPF for the job.

The procedure for determining which instance of PDSOI was used to activate a job starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Determining Which Instance of PDSOI Was Used to Activate a Job

---

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06,** and **n0dig06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (previous section of this lesson).

2 Type **cd** then press the **Return/Enter** key on the keyboard.

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID type **echo $PDSROOT** then press the **Return/Enter** key.

3 Type **cd status** then press the **Return/Enter** key on the keyboard.

- Change to the "status" directory.

4 Type **ls** then press the **Return/Enter** key on the keyboard.

- A list of the subdirectories and files in the current directory is displayed.

5 Observe the entries in the list of subdirectories and files in the current directory to identify the status file for the job.

- The file has the format *MachineID_ConsoleID_JobKey*.status
- For example:
  - **DIG06_ops_YEA0203190048_0001.status**
    - **DIG06** is the Machine ID.
    - **ops** is the Console ID.
    - **YEA0203190048_0001** is the Job Key.

6 If there is a status file for the job (and if applicable), return to the appropriate step of the procedure for **Responding to a Job's Status Not Changing to QC-Hold Upon Successful Completion** (previous section of this lesson).

7 If the current directory is the status directory, continue with Step 8; otherwise, go to Step 10.

8 If there is no status file for the job in the status directory, type **cd ../summary** then press the **Return/Enter** key on the keyboard.

- Change to the "summary" directory.

9 Return to Step 4.

10 If there is no status file for the job in either the status directory or the summary directory, type **pg *filename*** then press **Return/Enter**.

- ***filename*** refers to the PPF to be reviewed (e.g., YEA0203190048_0001.ppf).
  - The order ID (e.g., YEA0203190048) portion of the filename is listed on the product summary that was printed for the job.
- The PPF is displayed.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view, more**) can be used to review the log file.

11 Observe the entries in the PPF to determine the OI ID of the PDSOI instance that initiated the job.

- The PPF contains the following type of entry identifying the OI ID of the PDSOI instance that initiated the job:

  OI_ID S 1 DIG06_ops

  - In the example the OI ID is **DIG06_ops**.

12 If applicable, return to the appropriate step of the procedure for **Responding to a Job's Status Not Changing to QC-Hold Upon Successful Completion** (subsequent section of this lesson).

Forcing AutoRimage Completion

The PDS Job Monitor provides the Distribution Technician with a means of forcing AutoRimage completion. It results in a signal being sent to the job telling it to stop waiting needlessly and complete processing in a normal fashion. This is useful when a number of jobs are queued for a Rimage, but the waiting job has produced the media and is waiting needlessly.

The procedure for forcing AutoRimage completion starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) and **Job Monitor Main Window** (Figure 79) are being displayed.

Forcing AutoRimage Completion

---

1 Place the mouse cursor on the relevant job in the running job list of the **Job Monitor Main Window** and click and hold the **right** mouse button.

- Pop-up menu appears. It has the following entries:
  - **View Job Log.**
  - **View Job PPF.**
  - **Force AutoRimage Completion** (appears only when the selected job is waiting for a completion message from a Rimage writer).
  - **Terminate Job.**

2 Select (highlight) **Force AutoRimage Completion** from the pop-up menu (release the right mouse button).

- A confirmation prompt is displayed.

3 Click on the appropriate button from the following selections:

- **Yes -** to force AutoRimage completion and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The Rimage unit stops waiting and completes processing of the medium.

- **No** - to dismiss the dialogue box without forcing AutoRimage completion.
  - The dialogue box is dismissed.

Reactivating Units

The problem is that units of a job were completed and later need to be redone.

Both the **Main OI Screen** and the PDS **Maintenance Module Main Menu** are involved in reactivating units.

The procedure for reactivating units starts with the following assumptions:

- All applicable servers are currently running.
- The **Main OI Screen** (Figure 77) is being displayed.
- Data concerning the job/units is still available in the PDSSA database tables. (The job has not been marked "complete" on the **Main OI Screen**.)

Reactivating Units

---

1 In the **PDSINFO Work Table** reset the **Status** field value for all affected units to **Q** (pending).

- For detailed instructions refer to the procedure for **Changing the Values of Job Parameters Using the PDS Maintenance Module** (previous section of this lesson).
- The job key is either available on the **Main OI Screen** (Figure 77) or can be derived from the order number on the **PDSIS OI Main Screen** (Figure 78).
  - The job key is derived from the order number by adding an underscore and the zero padded unit number of the first unit of the job (typically 0001); for example, job key YEA0203060028_0001 is composed of order number YEA0203060028, an underscore, and unit number 0001.

2 In the **PDSINFO Jobs Table** reset the **Status** field value for the job to **Q** (pending).

- For detailed instructions refer to the procedure for **Changing the Values of Job Parameters Using the PDS Maintenance Module** (previous section of this lesson).

3 Reactivate the job using the **Main OI Screen**.

- For detailed instructions refer to the procedure for **Activating a Job** (preceding section of this lesson).

- The units may not be displayed immediately on the PDSOI; however, they should appear on the **Main OI Screen** within 15 to 30 minutes.

Reprinting a Label Stamped on a Disk

The problem is that the Rimage unit failed to print a legible label on a CD or DVD.

The procedure for reprinting a label stamped on a disk starts with the assumption that the Distribution Technician has logged on to the Rimage PC using an account that is valid on the PDS system.

Reprinting a Label Stamped on a Disk

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1 Clean any ink from the disk with a cloth and alcohol-based cleaner.

- The surface may need to be cleaned twice to eliminate all ink smears.

2 On the Rimage PC double-click on the **Label Editor** icon on the Windows desktop.

- A **Label Editor** window is displayed.

3 Select **File** → **Open** from the pull-down menu in the **Label Editor** window on the PC.

- An **Open** window is displayed containing a list of files.

4 Select the appropriate drive (e.g., C:) in the **Open** window.

- The appropriate drive may vary with system set-up.

5 Click on the icon for **reprint.lab** in the list of files in the **Open** window.

- The selected file is selected (highlighted).
- If there is no icon labeled “reprint.lab,” click on a label icon for a similar type of job.

6 Click on the **Open** button.

- The **Open** window is dismissed.
- The selected file is opened and displayed in the **Label Editor** window.

7 Edit the file in the **Label Editor** window.

- Use the jewel-case insert for the disk as a guide to the appropriate data to be entered.

8 Select **File** → **Save As** from the pull-down menu in the **Label Editor** window on the PC.

- A **Save As** window is displayed.

9 Ensure that **reprint.lab** is entered in the **File Name** field.

- Save the template with the name **reprint.lab** (do not change the name).

10 Click on the **Save** button.

- The **Save As** window is dismissed.
- The file is saved with the specified file name.
- The file is displayed in the **Label Editor** window.

11 Select **File** → **Exit** from the pull-down menu to exit from the **Label Editor**.

12 Double-click on the **CD-R Workstation** icon on the Windows desktop.

- A window similar to the **Production Server** window is displayed.

13 Click on the **Start** button on the toolbar.

14 Click on the **Add** button on the toolbar.

- The **Add Job Wizard - Select Job Option** window is displayed.

15 Click on the button corresponding to **Print Labels Only**.

16 Click on the **Next** button.

17 Click on the **Next** button again.

18 Ensure that **Rimage Label (No Merge Fields)** is selected in the **Label Type** field.

- If necessary, click and hold the **Label Type** option button to display a list of label types, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

19 Click on the **Next** button again.

20 Click on the **Browse** button adjacent to the **Enter the Label File Name** field.

- A window containing a list of file icons is displayed.

21 Double-click on the icon for **reprint.lab** (the file name of the label template created and saved in Steps 5 through 8).

- An alternative is to single-click on the icon for the file name of the label template then single-click on the **Open** button.

22 Place the disk that needs the label in the appropriate Rimage input bin.

- If a CD is to be labeled, it should be placed in the CD input bin.
- If a DVD is to be labeled, it should be placed in the DVD input bin.
- The disk needing to be re-labeled may be placed on top of blank disks.

23 Click on the **Finish** button.

- The robot picks and labels the disk and places it in the output bin.

24 When the label has been reprinted, select **File → Exit** from the pull-down menu to exit from the **CD-R Workstation**.

Reprinting PDS Documents and Labels

The problem may be that PDSSA or PDSIS has failed to print one of the following items or one of the following items has been damaged, lost, or misprinted:

- Summary report.
- Tape label.
- Packing list.
- Shipping label.

Packing lists and shipping labels can be reprinted in another way as well as by using the method described in the procedure for reprinting PDS documents and labels. The process involves the use of the **PDSIS Orders Maintenance Form** to set the **Action Code** for the relevant order to "S", which provides a stimulus for PDSIS to print packing lists and shipping labels. (Both types of documents are printed in response to an "S" action code.) For detailed instructions refer to the procedure for **Changing the Values of Order Parameters Using the PDSIS Maintenance Module** (preceding section of this lesson).

To reprint a jewel-case insert go to the procedure for **Responding to a Jewel-Case Insert Printing Failure** (subsequent section of this lesson).

Verification [i.e., quality control (QC) check] report files are not saved; consequently, if a verification report is needed, rerun the verification by performing the procedure for **Responding to a Status of QC-Hold (Performing a QC Check or Verification)** (previous section of this lesson).

The procedure for reprinting PDS documents and labels starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed. In addition, it is assumed that the Distribution Technician has ensured that the printer input is loaded with blank paper, labels, or inserts (as applicable) and that there are no obvious printer faults (e.g., paper jam).

NOTE: If a packing list or shipping label is needed, consider using the procedure for **Changing the Values of Order Parameters Using the PDSIS Maintenance Module** (preceding section of this lesson) unless access to the **PDSIS Maintenance Module** is not currently feasible. As previously mentioned, the process involves the use of the **PDSIS Orders Maintenance Form** to set the **Action Code** for the relevant order to "S", which provides a stimulus for PDSIS to print both packing lists and shipping labels.

If use of the **PDSIS Maintenance Module** is not an option, use the procedure that follows.

1 Access a terminal window logged in to the PDS Server (e.g., **e0dig06**, **g0dig06**, **l0dig06** or **n0dig06**) with the appropriate PDS user ID for the type of document to be printed.

- Click in or open a UNIX (terminal) window.
- Use the appropriate PDSSA log-in (i.e., pds, pds_st, or pds_it) for printing the following types of documents:
  - Summary report.
  - Tape label.
- Use the appropriate PDSIS log-in (i.e., pdsis, pdsis_ts1, or pdsis_ts2) for printing the following types of documents:
  - Packing list.
  - Shipping label.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 At the UNIX command line prompt type **cd** then press the **Return/Enter** key on the keyboard.

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID type **echo $PDSROOT** then press the **Return/Enter** key.
- Typical PDS root directories for PDS user IDs are as follows:
  - /usr/local/pds (linked to /data1/pds) (for PDSSA user "pds").
  - /usr/local/pds_st (linked to /data1/pds_st) (for PDSSA user "pds_st").

- /usr/local/pds_it (linked to /data1/pds_it) (for PDSSA user “pds_it”).
- /usr/local/pdsis (linked to /data1/pdsis) (for PDSIS user “pdsis”).
- /usr/local/pdsis_ts1 (linked to /data1/pdsis_ts1) (for PDSSA user “pdsis_ts1”).
- /usr/local/pdsis_ts2 (linked to /data1/pdsis_ts2) (for PDSSA user “pdsis_ts2”).

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

- Change to the appropriate subdirectory:
  - **label** (to reprint a tape label).
    - For example, /usr/local/pds/label or /data1/pds/label.
  - **summary** (to reprint a summary report).
    - For example, /usr/local/pds/summary or /data1/pds/summary.
  - **logs/labels** (to reprint a packing list or shipping label).
    - For example, /usr/local/pdsis/logs/labels or /data1/pdsis/logs/labels.
- Actual subdirectories may vary from site to site.

4 Type **lp -d** ***printerID filename*** then press the **Return/Enter** key on the keyboard.

- An alternative command is **lpr -P** ***printerID filename***
- The document prints on the specified printer.
- ***printerID*** is the name of the appropriate printer.
  - For example, …
    - **x0dih05** prints summary reports and packing lists.
    - **x0dil09** prints tape labels.
    - **x0dil10** prints shipping labels.
  - Actual printer names vary from site to site.
- ***filename*** is the name of the document or label file to be printed.
  - ***filename*** is composed of the order number (as displayed on the **PDSIS OI Main Screen**) or job key (as displayed on the **Main OI Screen**) and a file-name extension that indicates the type of document.
  - For example, …
    - **TS20112020001_0001_1.lbl** is a tape label for job TS20112020001_0001.

- **TS20112130001_0001.sum** is the summary report for job TS20112130001_0001.
- **TS20112130001.lbl** is the shipping label for order TS20112130001.
- **TS20112130001.note** is the packing list for order TS20112130001 (actually, it's the text of the e-mail distribution notice).

Reprocessing a Job

In general jobs are reprocessed in response to one of the following problems:

- Processing of an order will not complete.
- An error occurs during processing.
- The medium does not pass verification.

If a job is in an error status, it may be possible to reprocess the job by activating the units associated with the job. If the job is not in an error status or if it has failed the QC check (and is in QC-Hold status), it will probably be necessary to perform the following actions:

- Remove (delete) the associated PPF, status file, and image files.
- Reset the unit and job status to Pending.
- Reactivate the job.

The procedure for reprocessing a job starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Reprocessing a Job

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1 If the job requiring reprocessing is an 8mm job, check the job log to determine whether there was an I/O (input/output) error.

- For detailed instructions refer to either the procedure for **Viewing a Job Log Using the PDS Job Monitor** or the procedure for **Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** (subsequent sections of this lesson).

2 If the job requiring reprocessing is an 8mm job and the job log indicated an I/O (input/output) error, turn the power switch for the affected 8mm drive **off** then **on**.

3 If the job is in an **Error** status (as indicated by the job line turning red on the **Main OI Screen**), reactivate units in the job.

- For detailed instructions refer to the procedure for **Using the OI Detail Screen** (previous section of this lesson).

- All units that require reprocessing must be selected before activating.
  - Unit status before activation must be either **Pending** or **Error**.
- If multiple media are involved in processing the job, PDS starts numbering the media volumes being produced with one and numbering consecutively even though the volume numbers do not coincide with the original production.
  - This may or not be acceptable at a particular site.
    - Refer to DAAC policy.

4 If units in a job should not be reactivated as described in the preceding step, go to Step 6.

5 If a job (or units in a job) has (have) been reactivated, go to Step 16.

6 Access a terminal window logged in to the PDS Server (e.g., **e0dig06**, **g0dig06**, **l0dig06** or **n0dig06**).

- Click in or open a UNIX (terminal) window.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

7 At the UNIX command line prompt type **cd** then press the **Return/Enter** key on the keyboard.

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID type **echo $PDSROOT** then press the **Return/Enter** key.

8 Type **ls** then press the **Return/Enter** key on the keyboard.

- A list of subdirectories and files in the PDS root directory is displayed.

9 Type **rm *JobKey*.ppf** then press the **Return/Enter** key.

- Remove the PPF for the job.
- ***JobKey*.ppf** refers to the PPF for the job.
  - For example:

    YEA0203190048_0001.ppf
  - The job key is a unique label for the job composed of the order number, an underscore and a zero-padded unit number of the first unit of the job.

10 Type **rm *MachineID_ConsoleID_JobKey*.status** then press the **Return/Enter** key.

- Remove the status file for the job.

- ***MachineID_ConsoleID_JobKey*.status** refers to the applicable status file.

11 Type **cd /pdssa/assemble** then press the **Return/Enter** key.

- Change to the "assemble" directory.

12 Type **ls** then press the **Return/Enter** key on the keyboard.

- A list of subdirectories and files in the "assemble" directory is displayed.

13 Type **rm -r *JobKey*** then press the **Return/Enter** key.

- Remove data directory associated with the job (and identified by the job key).

14 Type **rm *JobKey*.image** then press the **Return/Enter** key.

- Remove image data associated with the job from the directory.
- ***JobKey*.image** refers to the applicable image file.

15 Change the status of the job and its units to **Q** (Pending) and reactivate the units/job.

- For detailed instructions refer to the procedure for **Reactivating Units** (previous section of this lesson).

16 Monitor job processing.

- For detailed instructions refer to the procedure for **Monitoring/Controlling Product Processing Using PDS** (previous section of this lesson).

Resetting an Order or a Unit

The problem is that an order or a unit within an order needs to be reset.

The procedure for resetting an order or unit starts with the assumption that all applicable servers are currently running.

Resetting an Order or a Unit

NOTE: A **PDSIS** user ID (e.g., **pdsis**, **pdsis_ts1**, or **pdsis_ts2**) is used in this procedure.

1 Log in to the PDS Server host using the appropriate PDSIS user ID for the operating mode being used.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06**, and **n0dig06**.
- PDSIS user IDs are **pdsis**, **pdsis_ts1**, and **pdsis_ts2**, which are used for PDSIS operations in the OPS, TS1, and TS2 modes respectively.

- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 At the UNIX command line prompt type **cd /usr/local/pdsis_*mode*/utilities** then press the **Return/Enter** key on the keyboard.

- Change directory to the directory containing the PDSIS ResetOrder script (e.g., EcPdPDSISResetOrder).
- **pdsis_*mode*** refers to one of the following subdirectories:
  - pdsis (for OPS-mode operations).
  - pdsis_ts1 (for TS1-mode operations).
  - pdsis_ts2 (for TS2-mode operations).

3 Type **EcPdPDSISResetOrder *MODE orderId [unitID]* &** then press **Return/Enter**.

- ***MODE*** is one of the following values:
  - **pdsis.**
  - **pdsis_ts1.**
  - **pdsis_ts2.**
- ***orderId*** is the applicable PDSIS order ID (e.g., 0000302190001).
- ***unitId*** is the applicable PDSIS unit ID (e.g., 1).
  - ***unitId*** is specified when a particular unit within an order (rather than the whole order) is to be reset.
- The PDSIS Reset Order process starts.

4 Repeat Step 3 as necessary to reset additional order(s)/unit(s).

Responding to a CD/DVD Job Error Indicated on PDSOI

The problem is that an error with a CD or DVD job is indicated on PDSOI.

The procedure for responding to a CD/DVD job error indicated on PDSOI starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Responding to a CD/DVD Job Error Indicated on PDSOI

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06,** and **n0dig06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 At the UNIX command line prompt type **cd /pdssa/rimage_jobcontrol** then press the **Return/Enter** key on the keyboard.

- Change to the Rimage job control directory.

3 Type **more pwrtool.log** then press the **Return/Enter** key on the keyboard.

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

4 Examine the content of the PowerTools log for the following types of entries:

- File already exists.
- File not found.

5 If one of the preceding types of problems is found in the PowerTools log, perform the procedure for **Cleaning up the CD-R_Images Folder on the Rimage PC** (previous section of this lesson).

Responding to a Jewel-Case Insert Printing Failure

The problem is that a jewel-case insert has failed to print and the following circumstances exist:

- Data have been written to the medium.
- Status has changed to QC-Hold.
- Summary sheet has printed.
- There are no obvious printer faults (e.g., paper supply empty, paper jam).
- Jewel-case insert has not printed.

The procedure for responding to a jewel-case insert printing failure starts with the assumption that all applicable servers (e.g., the Oracle DBMS server) are currently running and the **Main OI Screen** (Figure 77) is being displayed. In addition, it is assumed that the Distribution Technician

has ensured that there are blank inserts in the printer input tray and that there are no obvious printer faults (e.g., paper jam).

Responding to a Jewel-Case Insert Printing Failure

NOTE: Do not change the status of units that have no inserts to "Complete."

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06,** and **n0dig06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (previous section of this lesson).

2 Type **cd** then press the **Return/Enter** key on the keyboard.

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID type **echo $PDSROOT** then press the **Return/Enter** key.

3 Type **cd summary** then press the **Return/Enter** key on the keyboard.

- Change to the “summary” directory.

4 Type **ls** then press the **Return/Enter** key on the keyboard.

- A list of the subdirectories and files in the “summary” directory is displayed.

5 Observe the entries in the list of subdirectories and files in the “summary” directory to identify the status file for the job.

- The file has the format *MachineID_ConsoleID_JobKey*.status
- For example:
  - **DIG6-IT_pds_TS20112130001_0001.status**
    - **DIG6-IT** is the Machine ID.
    - **pds** is the Console ID.
    - **TS20112130001_0001** is the Job Key.

6 If reprinting all jewel-case inserts for a multiple CD/DVD job, type **mv *statusfilename* ../status** then press the **Return/Enter** key on the keyboard.

- For example:

  mv DIG6-IT_pds_TS20112130001_0001.status ../status

- ***statusfilename*** refers to the status file for the job.

NOTE: The units in the status file cannot have been completed or subsequent reading of the status file will return an error.

7 If the printer still does not provide output or if reprinting an individual jewel-case insert, at the UNIX command line prompt type **lp -d *printerID insertfilename*** then press the **Return/Enter** key on the keyboard.

- ***printerID*** refers to the jewel-case insert printer to be tested.
- ***insertfilename*** refers to the name of a jewel-case insert file to be printed on the printer.
- For example:

  lp -d x0dit09 PDSGENDAAC_TS20112130001_0001_1.1

  - **x0dit09** is the printer being tested.
  - **PDSGENDAAC_TS20112130001_0001_1.1** is a jewel-case insert for Job Key TS20112130001_0001.
  - The jewel-case insert file should be printed on x0dit09 (the jewel-case insert printer).
  - When jewel-case inserts are reprinted using the **lp** command, the bar code is not printed on the insert.
    - Check the local DAAC policy to determine whether jewel-case inserts without bar codes are acceptable.

8 If the specified file did not print on the printer, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

9 Return to Step 7 if it is necessary to print jewel-case inserts for additional disks associated with the job.

Responding to a Job's Status Not Changing to QC-Hold Although Production is Successful

The problem is that a PDS job does not change to a QC-Hold status although production was successful. The possible causes include the following items:

- At least two instances of PDSOI with the same OI ID are currently active.
- The instance of PDSOI with the OI ID that activated the job is not currently active.

- The time on the Rimage PC is not set to within five minutes of the time on the PDS Server host (CD or DVD job only).

The procedure for responding to a job's status not changing to QC-Hold upon successful completion starts with the following assumptions:

- Tape(s) or disk(s) [including appropriate label(s)] was (were) produced.
- Summary report was printed and indicates that data were written to the tape(s) or disk(s).
- All applicable servers are currently running.
- The **Main OI Screen** (Figure 77) is being displayed.

Responding to a Job's Status Not Changing to QC-Hold Upon Successful Completion

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1 Review the contents of the job log to verify that production of the affected job was in fact successful.

- For detailed instructions refer to either the procedure for **Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** or the procedure for **Viewing a Job Log Using the PDS Job Monitor** (subsequent sections of this lesson).
- If job production was successful, the following types of entries should be observed at the end of the job log:

  volcount = 1
  volsize = 520279040.000000
  ENTERING STAGE: Cleaning Up
  request id is x0dph10-45 (standard input)
  Job complete

- If the types of entries shown in the example (i.e., volcount, volsize, "ENTERING STAGE: Cleaning Up", request id, and "Job complete") are not present at the end of the job log, job production was not successful.

2 If job production was not successful, go to the procedure for **Reprocessing a Job**.

- For detailed instructions refer to the procedure for **Reprocessing a Job** (previous section of this lesson).

3 If the affected job is a CD or DVD job, check the synchronization of the Rimage PC time with PDS system time.

- The time on the Rimage PC must be set to within five (5) minutes of the time on the PDS Server host (e.g., x0dig06).
  - If the time is not properly synchronized, CD and DVD jobs cannot proceed to a QC-Hold status.
- For detailed instructions refer to the procedure for **Checking/Restoring Synchronization of the Rimage PC Time with PDS System Time** (previous section of this lesson).

4 If the affected job is not a CD or DVD job or if checking/restoring synchronization of the Rimage PC time with PDS system time is not effective, determine which instance of PDSOI was used to activate the job.

- For detailed instructions refer to the procedure for **Determining Which Instance of PDSOI Was Used to Activate a Job** (previous section of this lesson).

5 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06,** and **n0dig06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (previous section of this lesson).

6 At the UNIX command line prompt type **ps -ef | grep PDSMTOIX** then press the **Return/Enter** key on the keyboard.

- The command searches the current processes on the host for the string "**PDSMTOIX**" and displays the results of the search.
  - **PDSMTOIX** is the name of the Oracle Form for the PDSOI.
- The following type of response is displayed:

```
pds    4174557        1  0 10:13:25 pts/5   0:03 f45runm PDSMTOIX
pdssa/xxx
pds    4167754    4161497  0 10:17:03 pts/9   0:00 grep PDSMTOIX
```

  - The example shown indicates that there is only one instance of PDSOI currently running and it is user "pds" who is running it.
  - The entry that ends in "grep PDSMTOIX" is the process that was searching for PDSMTOIX.

- The following example is another type of response:

  pds 4179615 4161497 0 11:00:43 pts/9 0:00 grep PDSMTOIX
  pds 4174557 1 0 10:13:25 pts/5 0:03 f45runm PDSMTOIX pdssa/xxx
  pds 4180400 1 0 10:58:11 pts/10 0:03 f45runm PDSMTOIX pdssa/xxx

  – The second example indicates that there are two instances of PDSOI currently running and user "pds" is running both, although through different connections (i.e., pts/5 and pts/10).

    · It is possible that there are different individuals running the two instances of PDSOI with the same user ID.

  – If both instances of PDSOI were launched using the same OI ID (i.e., Machine ID and Console ID), there is a significant chance of causing confusion when writing to the Operator Interface log (oilog).

7 If there are any active instances of PDSOI currently running, observe the header of each **Main OI Screen** to identify the OI ID that applies to each open instance of the PDSOI.

- The format of the **Main OI Screen** header is PDS *OI_ID*, where *OI_ID* has the format *MachineID_ConsoleID*.
- For example:

– **PDS DIG06_ops** is in the header of a **Main OI Screen**.

  · **DIG06_ops** is the OI ID.

  · **DIG06** is the Machine ID.

  · **ops** is the Console ID.

8 If there are multiple instances of PDSOI currently running with what should be the single controlling OI ID on each instance of the GUI, shut down all but one instance of the PDSOI with that OI ID.

- For detailed instructions refer to the procedure for **Shutting Down the PDS Operator Interface (PDSOI)** (previous section of this lesson).
- In general it is good practice to have only one controlling instance of the PDSOI active at a time.

  – Any other instances of the PDSOI that are launched for monitoring purposes should have different OI IDs (i.e., different Console IDs).

- For example:
  - **DIG06_ops** might be the instance of PDSOI that is always brought up on a workstation in the PDS area for the purpose of controlling the processing of jobs in OPS mode.
  - **DIG06_mon** might be brought up on a workstation in a remote location to allow monitoring jobs in OPS mode without ever being used to activate or otherwise control jobs.

- If for some reason there are multiple controlling instances of the PDSOI, it is crucial for each to have a different OI ID (i.e., different Console ID) to avoid conflicts.

9 If there is no current instance of PDSOI with the OI ID indicated in the status file name or .ppf contents, start another PDSOI using the specified OI ID.

- For detailed instructions refer to the procedure for **Starting the PDS Operator Interface (PDSOI)** (previous section of this lesson).

10 Change the values of the following job parameters using the PDS Maintenance Module as described in the procedure for **Changing the Values of Job Parameters Using the PDS Maintenance Module** (previous section of this lesson):

- PDSINFO Work Table:
  - Change the **Status** of each unit in the job to **F**.
- PDSINFO Jobs Table:
  - Change the **Status** of the job to **F**.
  - Change the **Job Status** of the job to **QC-Hold**.

11 Observe the information displayed on the PDSOI **Main OI Screen** to determine whether the **Job Status** for the job has changed to **QC-Hold**.

- If the **Job Status** for the job has changed to **QC-Hold**, the job line for the job is yellow.

12 If the **Job Status** for the job has changed to **QC-Hold**, perform the QC check.

- For detailed instructions refer to the procedure for **Responding to a Status of QC-Hold (Performing a QC Check or Verification)** (previous section of this lesson).

13 If the **Job Status** for the job has not changed to **QC-Hold**, reprocess the job.

- For detailed instructions refer to the procedure for **Reprocessing a Job** (previous section of this lesson).

Responding to a Job on a Lag Report

A lag report specifies all orders that still need to be produced, broken down by various time-frame ranges. A corresponding file (i.e., $PDSROOT/summary/lag<timestamp>.rpt) is generated.

A job may show up on the lag report but not show up on the PDSOI. This condition is usually due to a data problem.

The procedure for responding to a job on a Lag Report starts with the assumption that all applicable servers (e.g., the Oracle DBMS server) are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Responding to a Job on a Lag Report

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1 Perform the procedure for **Starting the PDS Maintenance Module** (previous section of this lesson).

2 Click on the **PDSINFO Work Table** button on the PDS **Maintenance Module Main Menu**.

- The **PDSINFO Table Maintenance Form (PDSMTPDT)** or **PDSINFO Work Table** (Figure 112) is displayed.

3 Type the job key (as shown on the Lag Report) in the **Job Key** field on the **PDSINFO Work Table**.

4 Click on the **Execute Query** button near the bottom of the **PDSINFO Work Table**.

- The database is queried for data concerning the job represented by the **Job Key** and the relevant data are displayed on the **PDSINFO Work Table**.

5 Observe the data in all of the various fields on the **PDSINFO Work Table** to determine whether there is missing data in any field, especially the **Product Code** and **Output Specs** fields.

- At least during the initial implementation of PDS in ECS there is only one **Product Code**; i.e., G001.
  - To determine acceptable product codes perform the procedure for **Determining Product Codes Using the PDS Maintenance Module** (subsequent section of this lesson).

- To check the **Output Specs** compare the entries in the **Output Specs** and **Product Media** fields of the **PDSINFO Work Table** to determine whether the entries are consistent.
  - To determine acceptable output specifications perform the procedure for **Determining Output Specifications Using the PDS Maintenance Module** (subsequent section of this lesson).

6 If there is missing or incorrect data in any field, first click in the appropriate field of the **PDSINFO Work Table**.

7 If there is missing or incorrect data in any field, type the appropriate value in the field.

8 Click on the **Save** button on the **PDSINFO Work Table**.

- The record is saved in the database with the new value entered in the appropriate field.
- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

9 Click on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display additional records (units) for the job.

10 Repeat Steps 5 through 9 for all additional records that need to be modified for the job.

11 When all records that need to be modified for the job have been corrected, click on the **Exit** button at the bottom of the window.

- If the **Exit** button is not visible on the maintenance module form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

12 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, click on the appropriate button from the following selections:

- **Yes -** to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

- **No** - to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

13 Perform the procedure for **Determining Product Codes Using the PDS Maintenance Module** (subsequent section of this lesson) to determine whether there are appropriate entries in the PVT_PRCDTBL_TBL database table (including an entry in the PDS Description field) for **Product Code**.

14 Perform the procedure for **Determining Output Specifications Using the PDS Maintenance Module** (subsequent section of this lesson) to determine whether there are appropriate entries in the OUT_OTSPTBLV_TBL database table (including an entry in the PDS Description field) for **Output Specs**.

15 Perform the procedure for **Specifying Job Selection Criteria** (previous section of this lesson), ensuring that the specified criteria include the values for the job on the lag report.

- The **Main OI Screen** (Figure 77) is displayed.

16 Observe information displayed on the **Main OI Screen** (Figure 77).

- The job on the lag report should be displayed on the **Main OI Screen**.

17 If the problem could not be identified through any of the preceding steps (e.g., if the job on the lag report is still not displayed on the **Main OI Screen**), call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Responding to a Locked-Up Screen

The problem is that the PDSOI screen is locked up and it is not possible to get access to the main menu in order to shut down the GUI.

The procedure for responding to a locked-up screen (PDSOI) starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Responding to a Locked-Up Screen

---

1 In the UNIX window where the PDSOI was originally started type **ps -ef | grep PDSMTOIX** then press the **Return/Enter** key.

- The following type of message is displayed:

```
pds    790367    790059  0 10:15:11 pts/8   0:00 grep PDSMTOIX
pds    233139          1  0   Feb 08  pts/66  0:27 f45runm PDSMTOIX
```

pds 779612 1 0 09:25:06 pts/8 0:03 f45runm PDSMTOIX

- All current processes owned by the user ID are displayed.
- PDSMTOIX is the name of the Oracle Form for PDSOI.
- In the preceding example the **grep** command returns the same pts/8 as one of the PDSMTOIX lines.
- In the example the process ID (pid) of the PDSMTOIX process is 779612.

2 Type **kill -15** ***processID*** then press the **Return/Enter** key.

- The PDSOI screen is dismissed.
- ***processID*** refers to the process ID of the process to be killed.

Responding to a Problem Starting PDSOI

The problem is that the pdsoi alias was typed but the PDSOI GUI was not displayed. Likely causes include improper setting of the DISPLAY environmental variable and inadvertent deletion of the pdsoi alias from the alias list.

The procedure for responding to a problem starting PDSOI starts with the assumption that all applicable servers (e.g., the Oracle DBMS server) are currently running and the Distribution Technician has logged in to the ECS system. In addition, the Distribution Technician has logged in to the PDS Server host and entered the PDSOI alias.

Responding to a Problem Starting PDSOI

NOTE: It may take a few seconds for the PDSOI to be displayed.

1 Wait a few seconds for the PDSOI to be displayed.

2 If the PDSOI is not displayed after a few seconds, on the command line type **echo $DISPLAY** then press the **Return/Enter** key on the keyboard.

- The following type of response should be received:

  x0dig06:12.0

- If a **DISPLAY - Undefined variable** message was received, the DISPLAY environmental variable was not set properly.

3 If the DISPLAY environmental variable was not set properly, type **ps -ef | grep PDSMTOIX** then press the **Return/Enter** key.

- The following type of message is displayed:

  pds 790367 790059 0 10:15:11 pts/8 0:00 grep PDSMTOIX
  pds 779612 1 0 09:25:06 pts/8 0:03 f45runm PDSMTOIX

- All current processes owned by the user ID are displayed.
- PDSMTOIX is the name of the Oracle Form for PDSOI.
- In the example the process ID (pid) of the PDSMTOIX process is 779612.

4 If the DISPLAY environmental variable was not set properly, type **kill -15** ***processID*** then press the **Return/Enter** key.

- The process is terminated.
- ***processID*** refers to the process ID of the process to be terminated.

5 If the DISPLAY environmental variable was not set properly, type **exit** then press the **Return/Enter** key.

- **logout** is an acceptable alternative command.
- The log-in to the PDS Server host is terminated; control is returned to the previous host.

6 If the DISPLAY environmental variable was not set properly, repeat Step 5 as necessary to return to the original log-in host.

7 If the DISPLAY environmental variable was not set properly, perform the procedure for **Starting the PDS Operator Interface (PDSOI)** (previous section of this lesson).

- Set the DISPLAY environmental variable properly this time.

8 If the DISPLAY environmental variable was set properly, on the command line type **alias pdsoi** then press the **Return/Enter** key.

- The actual executable name should be returned.
- For example:

  /data1/pds_it/run/pdsoi_prod.sh

9 If the executable name was not returned in response to the **alias pdsoi** command, type **alias pdsoi** ***/path/executable*** then press the **Return/Enter** key.

- For example:

  alias pdsoi /data1/pds_it/run/pdsoi_prod.sh

- ***path*** represents the full directory path to the directory containing the executable program.
- ***executable*** represents the name of the executable program.

Responding to a Save Changes Dialogue Box When Exiting a Maintenance Module Window

The problem is that after having clicked on the **Exit** button to exit a maintenance module window a dialogue box containing the message "Do you want to save changes?" is displayed.

The procedure for responding to a save changes dialogue box when exiting a maintenance module window starts with the assumption that one of the maintenance module windows is being displayed, the Distribution Technician has clicked on the **Exit** button at the bottom of the window, and a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.

Responding to a Save Changes Dialogue Box When Exiting a Maintenance Module Window

---

1 Click on the appropriate button from the following selections:

- **Yes -** to accept the changes and dismiss the dialogue box and maintenance module window.
  - The dialogue box is dismissed.
  - The maintenance module window is dismissed.
  - The maintenance module main menu is displayed.
  - If changes have been made that cannot be saved to the database, clicking on **Yes** does not override the restrictions; in such a case it is not possible to get out of the maintenance module window except by clicking on **No**.
    - A permission problem could cause an inability to save changes.
- **No -** to dismiss the dialogue box and maintenance module window without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The maintenance module window is dismissed.
  - The maintenance module main menu is displayed.

- **Cancel** - to dismiss the dialogue box and return to the maintenance module window.
  - The dialogue box is dismissed.
  - The maintenance module window is displayed.

2 If changes should be saved but it is not possible to save changes and get out of the maintenance module window (if the dialogue does not accept **Yes** as a response), call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Responding to a "Waiting for Drive Selection" Message on the Job Monitor

The problem is that a job or unit has been activated from the PDS **Main OI Screen** or **OI Detail Screen** but the **Media Drive Selection** window (Figure 91) is not visible.

The procedure for responding to a "Waiting for Drive Selection" message on the Job Monitor starts with the assumption that all applicable servers (e.g., the Oracle DBMS server) are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Responding to a "Waiting for Drive Selection" Message on the Job Monitor

---

1 If the **Media Drive Selection** window (Figure 91) does not appear within a reasonable period of time (a couple of minutes), minimize other windows in the workspace and see if it was hidden behind another window.

- The **Media Drive Selection** window can sometimes be found behind other windows.

2 If the **Media Drive Selection** window is visible in the workspace, go to Step 4 of the procedure for **Activating a Job** (previous section of this lesson).

3 If the **Media Drive Selection** window is not visible anywhere in the workspace, access a terminal window logged in to the PDS Server host.

4 Type **cd** then press the **Return/Enter** key on the keyboard.

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID type **echo $PDSROOT** then press the **Return/Enter** key.

5 Type **cd run** then press the **Return/Enter** key on the keyboard.

- Change to the “run” directory.

6 Type **genericout** ***job_key*** then press the **Return/Enter** key on the keyboard.

- Run the **genericout** program using the job ID as an argument.
- The **Media Drive Selection** window should be displayed.

7 If the **Media Drive Selection** window is visible in the workspace, go to Step 4 of the procedure for **Activating a Job** (previous section of this lesson).

8 If the **Media Drive Selection** window is not visible anywhere in the workspace, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Responding to Duplicate Jobs on the PDSOI

The problem is that jobs are displayed on the PDSOI multiple times. If the PDSOI continues to create duplicate jobs after duplicates have been removed, there may be a data problem in the PDSINFO table.

The procedure for responding to duplicate jobs on the PDSOI starts with the assumption that all applicable servers (e.g., the Oracle DBMS server) are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Responding to Duplicate Jobs on the PDSOI

---

1 Observe the job keys of the "duplicate" jobs on the **Main OI Screen** to verify that the jobs are true duplicates.

- Verify that the jobs have the same exact job key (i.e., **all** digits the same).

2 Perform the procedure for **Starting the PDS Maintenance Module** (previous section of this lesson).

3 Click on the **PDSINFO Jobs Table** button on the PDS **Maintenance Module Main Menu** (Figure 82).

- The **PDSINFO Jobs Table Maintenance Form (PDSMTPJT)** or **PDSINFO Jobs Table** (Figure 111) is displayed.

4 Copy the job key by clicking and dragging (to highlight the text) in the **Job Key** field for the appropriate job on the **Main OI Screen**.

- **Job Key** text is highlighted on the **Main OI Screen**.

5 Paste the job key copied from the **Main OI Screen** by clicking in the **Job Key** field on the **PDSINFO Jobs Table** with the **center** mouse button.

- **Job Key** is pasted in the **Job Key** field on the **PDSINFO Jobs Table**.

6 Click on the **Execute Query** button near the bottom of the **PDSINFO Jobs Table**.

- The database is queried for data concerning the job represented by the **Job Key** and the relevant data are displayed on the **PDSINFO Jobs Table**.

7 Observe the data in all fields of the form.

8 Click on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display additional records with the same job key.

9 Observe the data in all fields of the form.

- Check **all** fields to identify any field with data that differs from that shown for the preceding record.

10 Repeat Steps 8 and 9 for all records with the same job key in the **PDSINFO Jobs Table**.

11 If any field has data that differ from preceding records, determine which record is the correct one.

- For example, if the **OI ID** is filled in on one record and blank on the others, the one that contains a value is the "correct" one.
  - It means that the job has been started using the specified OI ID and work will be performed using the specified OI ID only.
    - Another OI ID would not work on the job.

12 After determining which job is the correct one, record (make a note of) the values in the fields in the **PDSINFO Jobs Table**.

13 Ensure that the current record being displayed in the table is one of those to be removed, not the record to be kept by clicking on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display additional records with the same job key.

14 Select **Record** → **Remove** from the pull-down menu.

- The removed record is no longer displayed on the screen, but the record to be kept is displayed (unless there are multiple duplicates).

15 Click on the **Save** button on the **PDSINFO Jobs Table**.

16 If there are multiple duplicates, repeat Steps 13 through 15 to remove the additional duplicate(s).

17 If the **OI ID** specified in the **PDSINFO Jobs Table** is different from the OI ID used in starting the current PDSOI, start another PDSOI using the OI ID specified in the **PDSINFO Jobs Table**.

- Refer to the procedure for **Starting the PDS Operator Interface (PDSOI)** (previous section of this lesson).

18 If the **OI ID** specified in the **PDSINFO Jobs Table** is different from the OI ID used in starting the current PDSOI, process the job using the PDSOI started using the OI ID specified in the **PDSINFO Jobs Table**.

- Refer to the procedure for **Monitoring/Controlling Product Processing Using PDS** (previous section of this lesson).

19 Click on the **Exit** button at the bottom of the **PDSINFO Jobs Table**.

- If the **Exit** button is not visible on the form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.
- If the maintenance module window was dismissed, the PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

20 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, click on the appropriate button from the following selections:

- **Yes -** to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.
- **No -** to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

21 Click on the **PDSINFO Work Table** button on the PDS **Maintenance Module Main Menu**.

- The **PDSINFO Table Maintenance Form (PDSMTPDT)** or **PDSINFO Work Table** (Figure 112) is displayed.

22 Copy the job key by clicking and dragging (to highlight the text) in the **Job Key** field for the appropriate job on the **Main OI Screen**.

- **Job Key** text is highlighted on the **Main OI Screen**.

23 Paste the job key copied from the **Main OI Screen** by clicking in the **Job Key** field on the **PDSINFO Work Table** with the **center** mouse button.

- **Job Key** is pasted in the **Job Key** field on the **PDSINFO Work Table**.

24 Click on the **Execute Query** button near the bottom of the **PDSINFO Work Table**.

- The database is queried for data concerning the job represented by the **Job Key** and the relevant data are displayed on the **PDSINFO Work Table**.

25 Compare the values in the fields on the **PDSINFO Work Table** with the values recorded from the fields on the **PDSINFO Jobs Table** to identify all discrepancies.

26 If the values of any parameters on the **PDSINFO Work Table** are inconsistent with the values recorded from the fields on the **PDSINFO Jobs Table** (especially **Product Media** and **Product Code**), first click in the appropriate field of the **PDSINFO Work Table**.

27 If the values of any parameters on the **PDSINFO Work Table** are inconsistent with the values recorded from the fields on the **PDSINFO Jobs Table**, type the appropriate value in the field of the **PDSINFO Work Table**.

28 Repeat Steps 26 and 27 to modify values in other fields of the **PDSINFO Work Table**.

29 Click on the **Save** button on the **PDSINFO Work Table**.

- The record is saved in the database with the new value entered in the appropriate field.
- It is recommended that each record be saved immediately after it is changed (before making changes to another record).

30 Click on the next/previous record buttons (> >> < <<) near the bottom of the form as necessary to display additional records (units) for the job.

31 Repeat Steps 25 through 30 for all additional records that need to be modified for the job.

32 Click on the **Exit** button at the bottom of the **PDSINFO Work Table**.

- If the **Exit** button is not visible on the form, click on the **Cancel Query** button.
  - The buttons change and the **Exit** button becomes visible.
- Either the maintenance module window is dismissed or a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved.

- If the maintenance module window was dismissed, the PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

33 If a dialogue box is displayed with a message requesting whether changes made to the data on the form should be saved, click on the appropriate button from the following selections:

- **Yes -** to accept the changes and dismiss the dialogue box.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.
- **No -** to dismiss the dialogue box without accepting the changes made to the data on the form.
  - The dialogue box is dismissed.
  - The PDS **Maintenance Module Main Menu** (Figure 82) is displayed.

34 Click on the **Exit** button at the bottom of the PDS **Maintenance Module Main Menu** window.

- The PDS **Maintenance Module Main Menu** is dismissed.
- The PDS maintenance module has been shut down.

35 If the PDSOI continues to create duplicate jobs, perform the procedure for **Changing the Values of Job Parameters Using the PDS Maintenance Module** (subsequent section of this lesson) to identify and modify fields that are blank or contain invalid values.

- Make changes to the PDS Maintenance Module **PDSINFO Work Table** as necessary.

36 If the PDSOI has continued to create duplicate jobs, repeat the preceding steps as necessary to remove duplicate records.

Responding to Low Disk Space

The problem is that the available space on a disk has become low (e.g., as indicated in the **Assembly Disk Usage** section of the **Job Monitor Main Window**). The procedure that follows describes the process for responding to low disk space.

The procedure for responding to low disk space starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Responding to Low Disk Space

1 Wait before activating any jobs that would use the disk resource and perform the steps that follow.

2 Complete orders that are being processed.

3 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06,** and **n0dig06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

4 At the UNIX command line prompt type **cd /pdssa/assemble** then press the **Return/Enter** key on the keyboard.

- Change to the assembly directory.

5 Type **ls** then press the **Return/Enter** key on the keyboard.

- A list of subdirectories and files in the assembly directory is displayed.

6 Type **rm** ***filename*** then press the **Return/Enter** key on the keyboard.

- Remove unneeded data from the directory.
- ***filename*** refers to unneeded file(s) or subdirectory(ies).

7 Repeat Step 6 as necessary to remove unneeded data from the assembly directory.

8 Return to the procedure for **Monitoring/Controlling Product Processing Using PDS**.

Responding to No Printouts (Either Jewel-Case Inserts or Paper Reports)

The problem is that either jewel-case inserts or paper reports (e.g., summary reports, quality check reports) are not printing.

The procedure for responding to no printouts starts with the assumption that all applicable servers (e.g., the Oracle DBMS server) are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Responding to No Printouts (Either Jewel-Case Inserts or Paper Reports)

1 Observe the printer to determine whether there are any obvious faults (e.g., power off, paper supply empty, paper jam).

2 Respond to obvious faults, if any.

- Turn the power on, replenish the paper supply, clear the paper jam, etc. as necessary.
- For detailed instructions refer to the applicable printer manual.
- If the problem has not been resolved, continue with Step 3.

3 If the jewel-case printer is affected and the printer displays a "Wrong Media in Multi-Purpose Tray" message, reset the printer settings.

- From the **Menu** on the front panel, select **Printer Settings** → **Multi-Purpose Tray** → **Paper Type** → **Tek Labels** then select **Paper Size** → **#10 Envelope**.
- For detailed instructions refer to the jewel-case printer manual.
- The printer should start printing properly.
- If the problem has not been resolved, continue with Step 4.

4 Click on **Printers** on the menu bar of the **Main OI Screen**.

- The **Default Printers** dialogue box (Figure 99) is displayed.
- The current selections for printers for reports and jewel-case inserts are displayed.

5 If no printer is selected for either Report Printer or Jewel Case Printer, click and **hold** the applicable option button (either **Report Printer** or **Jewel Case Printer**) to display a menu of printers, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.

- If the desired printer is not available on the list of printers, submit a request to the supervisor to have it added to the list.
- Selected printer is displayed on the option button when the mouse button is released.

6 If an alternate printer is to be designated for the other type of printer, repeat Step 5 for the other printer.

7 Click on the **Return** button.

- The **Main OI Screen** (Figure 77) is displayed.

8 If either printer still does not provide output, access a terminal window logged in to the PDS Server host.

9 If either printer still does not provide output, at the UNIX command line prompt type **lp -d *printerID* *filename*** then press the **Return/Enter** key on the keyboard.

- ***printerID*** refers to the printer to be tested.
- ***filename*** refers to the name of a file to be printed on the printer to be tested.

- For example:

  lp -d x0dih04 0000104030361_0001.ppf

  - **x0dih04** is the printer being tested.
  - **0000104030361_0001.ppf** is a ppf file being used as a test file.
  - The ppf file should be printed on x0dih04.

- For additional details refer to the procedure for **Reprinting PDS Documents and Labels** (preceding section of this lesson).

10 If the specified file did not print on the printer being tested, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

11 If the test file did print on the printer and it is not the jewel-case printer that is affected, go to Step 15.

12 If the test file did print on the printer and it is the jewel-case printer that is affected, examine the job log for an entry indicating that the job has stalled while waiting for status from Rimage.

- For example, if the last message is "Waiting for Rimage to signal status" and there have been no further entries for several minutes or there are multiple entries that include "volsdone:0 sleepcount…," the NFS connection may have been lost.
  - A Network File System (NFS) mount is needed in order to see the job control directory (e.g., /pdssa/rimage_jobcontrol) on the PDS system.
  - When the Windows NT system for the Rimage PC is set up, the PDS job control directory on the PDS Server host (e.g., x0dig06) is typically mapped to the PC's Z: drive.
- For detailed instructions refer to either the procedure for **Viewing a Job Log Using the PDS Job Monitor** or the procedure for **Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** (subsequent sections of this lesson).

13 If the job has stalled while waiting for status from Rimage, check the NFS connection.

- For detailed instructions refer to the procedure for **Checking/Restoring the Rimage PC NFS Connection** (previous section of this lesson).

14 If the NFS connection is good or if the job does not go to completion after the NFS connection has been restored, check synchronization of the Rimage PC time with the PDS system time.

- For detailed instructions refer to the procedure for **Checking/Restoring Synchronization of the Rimage PC Time with PDS System Time** (previous section of this lesson).

15 If the problem has not been resolved through any of the preceding actions, call the help desk and submit a trouble ticket in accordance with site Problem Management policy.

Responding to PDSOI's Failure to Update Status

The problem is that the PDSOI does not seem to be picking up status files. The likely cause is that there is no corresponding instance of PDSOI currently running.

The procedure for responding to PDSOI's failure to update status starts with the assumption that all applicable servers (e.g., the Oracle DBMS server) are currently running and the **Main OI Screen** (Figure 77) is being displayed.

Responding to PDSOI's Failure to Update Status

---

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06,** and **n0dig06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **cd** then press the **Return/Enter** key on the keyboard.

- The alias **cd** changes the current directory to the PDS root directory for the PDS user ID of the log-in.
  - To identify the PDS root directory for the current PDS user ID type **echo $PDSROOT** then press the **Return/Enter** key.

3 Type **cd status** then press the **Return/Enter** key on the keyboard.

- Change to the "status" directory.

4 Type **ls** then press the **Return/Enter** key on the keyboard.

- A list of the subdirectories and files in the "status" directory is displayed.

5 Observe the entries in the list of subdirectories and files in the "status" directory to identify the status file for the job.

- The file has the format *MachineID_ConsoleID_JobKey*.status
- For example:
  - **DIG6-IT_pds_0000104030361_0001.status**
    - **DIG6-IT** is the Machine ID.

- **pds** is the Console ID.
- **0000104030361_0001** is the Job Key.

6 If there is no status file for the job, go to the procedure for **Responding to a Job's Status Not Changing to QC-Hold Although Production is Successful** (previous section of this lesson).

7 Observe the header of each current **Main OI Screen** to identify the OI ID that applies to each open instance of the PDSOI.

- The format of the **Main OI Screen** header is PDS *OI ID*, where *OI ID* has the format *MachineID_ConsoleID*
- For example:
  - **PDS DIG6-ST_pds** is in the header of a **Main OI Screen**.
    - **DIG6-ST** is the Machine ID.
    - **pds** is the Console ID.

8 If there is no current instance of PDSOI with the OI ID specified in the status file name, start another PDSOI using the OI ID specified in the status file name.

- For detailed information refer to the procedure for **Starting the PDS Operator Interface (PDSOI)** (previous section of this lesson).

9 Process the job (that has the job key specified in the status file name) using the PDSOI started using the OI ID specified in the status file name.

- For detailed information refer to the procedure for **Monitoring/Controlling Product Processing Using PDS** (previous section of this lesson).

Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands

Although the PDS Job Monitor provides the Distribution Technician with a relatively easy means of gaining access to the log for a particular job, if it is not available, UNIX commands can be used to gain access to a log file or job Production Parameter File (PPF).

The procedure for viewing a job log or PPF using UNIX commands starts with the assumption that the PDS Server host is running.

Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands

1 Access a terminal window logged in to the PDS Server host.

- Examples of PDS Server host names include **e0dig06**, **g0dig06**, **l0dig06,** and **n0dig06**.
- For detailed instructions refer to the procedure for **Logging in to ECS Hosts** (preceding section of this lesson).

2 Type **cd** then press **Return/Enter**.

- Change directory to the PDS root directory, which contains the PPF files for the jobs being processed by PDS.
- When logged in with a PDS user ID, **cd** is an alias that changes the current working directory to the PDS root directory.
- If a PPF is to be viewed, go to Step 4.
- If a job log is to be viewed, continue with Step 3.

3 If a job log is to be viewed, type **cd summary** then press **Return/Enter**.

- Change directory to the "summary" directory, which contains the log files for the jobs being processed by PDS.

4 Type **pg** ***filename*** then press **Return/Enter**.

- ***filename*** refers to the PPF or log file to be reviewed and consists of the job key (as displayed on the **Main OI Screen**) and the file-name extension, either "ppf" or "log," as applicable (e.g., TS20112130001_0001.ppf, TS20112130001_0001.log).
- Either the PPF file or the first page of the log file (as applicable) is displayed.
- Although this procedure has been written for the **pg** command, any UNIX editor or visualizing command (e.g., **vi**, **view, more**) can be used to review the log file.

5 Review the PPF or log.

- The following **pg** commands (at the **:** prompt) are useful:
  - ***n*** then **Return/Enter** (go to Page *n*).
  - **Return/Enter** or **+1** then **Return/Enter** (go down to the next page).
  - **-1** then **Return/Enter** (go back to the preceding page).
  - **+*n*** then **Return/Enter** (go down *n* number of pages).
  - **-*n*** then **Return/Enter** (go back *n* number of pages).

- **+*n*l** then **Return/Enter** (go down *n* number of lines).
- **-*n*l** then **Return/Enter** (go back *n* number of lines).
- **$** then **Return/Enter** [go to the last page (end of file)].
- **q** then **Return/Enter** (exit from **pg**).

Viewing a Job Log Using the PDS Job Monitor

The PDS Job Monitor provides the Distribution Technician with a relatively easy means of gaining access to the log for a particular job. If the PDS Job Monitor is not available, UNIX commands can be used to gain access to log files, as described in the procedure for **Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** (previous section of this lesson).

The procedure for viewing a job log using the PDS Job Monitor starts with the assumption that all applicable servers are currently running and the PDS **Main OI Screen** (Figure 77) and **Job Monitor Main Window** (Figure 79) are being displayed.

Viewing a Job Log Using the PDS Job Monitor

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1 Place the mouse cursor on the relevant job in the running job list of the **Job Monitor Main Window** and click and hold the **right** mouse button.

- Pop-up menu appears. It has the following entries:
  - **View Job Log.**
  - **View Job PPF.**
  - **Force AutoRimage Completion** (appears only when the selected job is waiting for a completion message from a Rimage writer).
  - **Terminate Job.**

2 Select (highlight) **View Job Log** from the pop-up menu (release the right mouse button).

- The log for the selected job is displayed in a text window (refer to the example in Figure 124).

3 Review the log.

4 To exit from the log click on the **Exit** button at the bottom of the window.

- The window is dismissed.

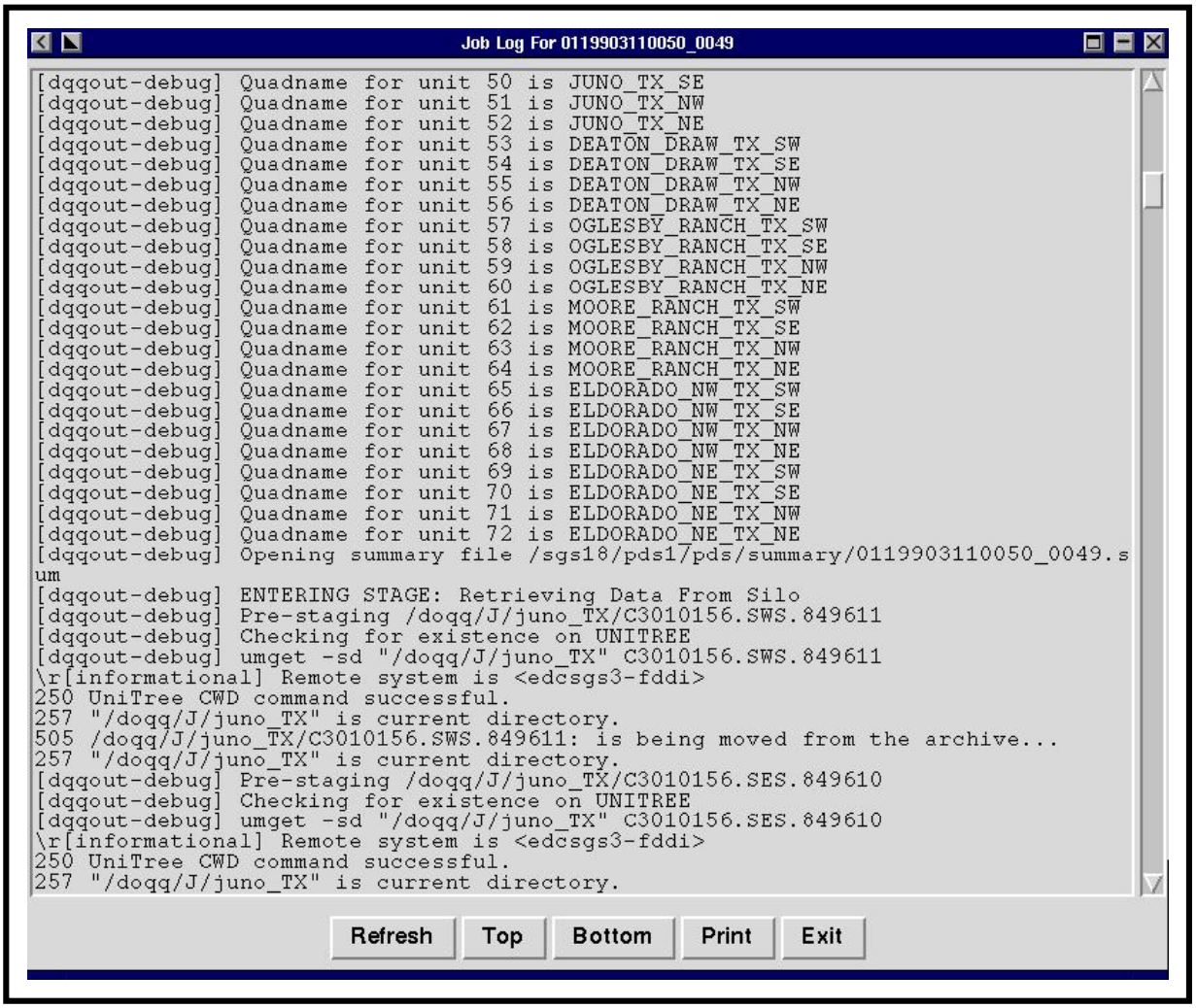

Figure 124. Example of a PDS Job Log

Viewing a Job Production Parameter File (PPF) Using the PDS Job Monitor

The PDS Job Monitor provides the Distribution Technician with a relatively easy means of gaining access to the production parameter file for a particular job. The PPF specifies all of the information that the job needs to run (e.g., the media type, data path, bin number, etc.). If the PDS Job Monitor is not available, UNIX commands can be used to gain access to PPFs, as described in the procedure for **Viewing a Job Log or Job Production Parameter File (PPF) Using UNIX Commands** (previous section of this lesson).

The procedure for viewing a job PPF using the PDS Job Monitor starts with the assumption that all applicable servers are currently running and the **Main OI Screen** (Figure 77) and **Job Monitor Main Window** (Figure 79) are being displayed.

Viewing a Job Production Parameter File (PPF) Using the PDS Job Monitor

1 Place the mouse cursor on the relevant job in the running job list of the **Job Monitor Main Window** and click and hold the **right** mouse button.

- Pop-up menu appears. It has the following entries:
  - **View Job Log.**
  - **View Job PPF.**
  - **Force AutoRimage Completion** (appears only when the selected job is waiting for a completion message from a Rimage writer).
  - **Terminate Job.**

2 Select (highlight) **View Job PPF** from the pop-up menu (release the right mouse button).

- The production parameter file (PPF) for the selected job is displayed in a text window (refer to the example in Figure 125).

3 Review the PPF file.

4 To exit from the PPF file click on the **Exit** button at the bottom of the window.

- The window is dismissed.

Viewing an Extended Error Message

The procedure for **Viewing an Extended Error Message** is performed as part of the procedure for **Checking/Clearing Errors on PDSIS** (previous section of this lesson).

The procedure for viewing an extended error message starts with the assumption that all applicable servers are currently running and the **PDSIS OI Error Screen** (Figure 100) is being displayed.

Viewing an Extended Error Message

1 Click on the action button at the beginning of the relevant error status line.

- The **Action List** box (similar to the one shown in Figure 88) is displayed.

2 Select (highlight) **Expanded Message** in the **Action List** box.

- **Expanded Message** is highlighted.

3 Click on the appropriate button from the following selections:

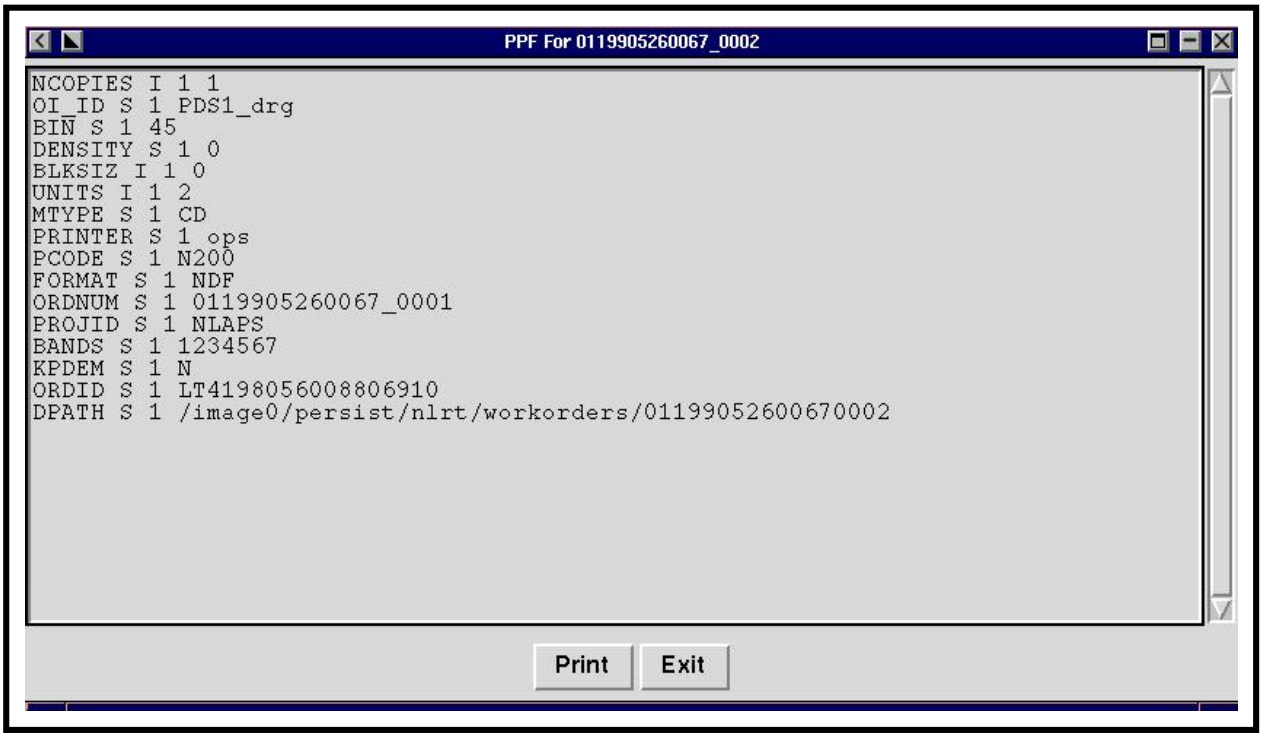

Figure 125. Example of a PDS Job Production Parameter File (PPF)

- **OK -** to display the extended message window.
  - The **Extended Error Message Window** (Figure 126) is displayed.
- **Cancel -** to dismiss the **Action List** box and return to the screen that was displayed before the action button was selected.
  - The **PDSIS OI Error Screen** (Figure 100) is displayed.

4 Observe information displayed on the extended message window.

5 To return to the **Checking/Clearing Errors on PDSIS** procedure click on the **Close** button.

- The **Extended Message Window** is dismissed.
- The **PDSIS OI Error Screen** (Figure 100) is displayed.

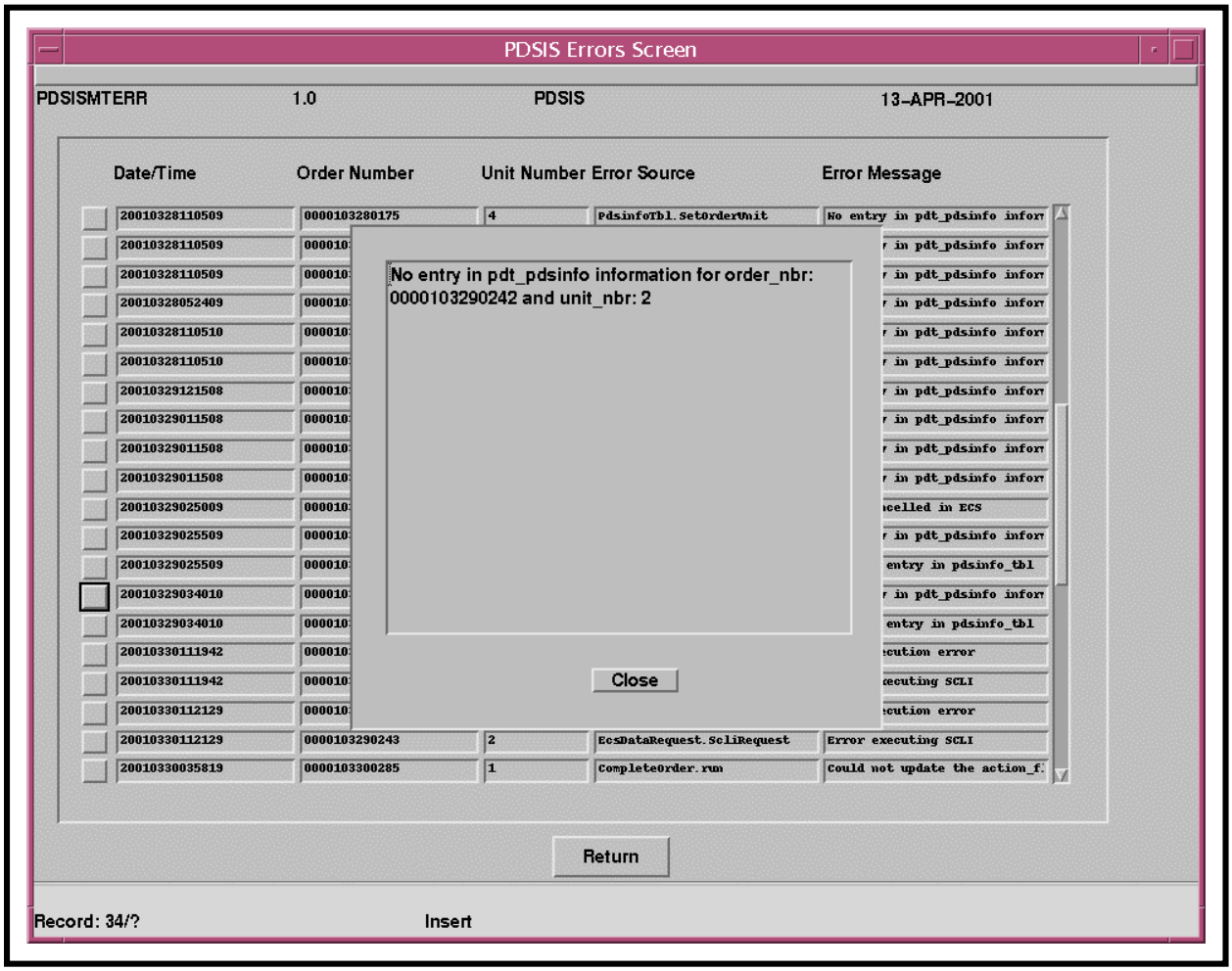

Figure 126. PDSIS Extended Error Message Window

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Practical Exercise

Introduction

This exercise is designed to give the students practice in data distribution activities.

Equipment and Materials

One ECS workstation per student.

One PDS workstation per student.

One Rimage PC per student.

Statement of the requirements for the exercise.

Release 6B Operations Tools Manual for the ECS Project, 609-CD-610-003, one copy per student.

Mission Operation Procedures for the ECS Project, 611-CD-610-002, one copy per student.

Logging in to ECS Hosts

The exercise involves logging in to ECS hosts. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/ requirements for logging in to an ECS host. The student logs in to an ECS host as specified in the requirements.

Perform the following steps:

1. Access the command shell.
2. Set the DISPLAY environmental variable.
3. Log in to the specified host using secure shell and the specified user ID.

Launching the Data Distribution Operator and Storage Management Control GUIs

The exercise involves launching the Data Distribution Operator and Storage Management Control GUIs. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/ requirements for launching the Data Distribution Operator and Storage Management Control GUIs. The student launches the data distribution and storage management control GUIs as specified in the requirements.

Perform the following steps:

1. Log in to the Operations Workstation using secure shell.
2. Set the environmental variables.
3. Enter the path to the “utilities” directory.
4. Enter the command to start the **Data Distribution Operator GUI** in the specified mode.
5. Enter the command to start the **Storage Management Control** GUI in the specified mode.

Monitoring/Controlling Data Distribution Requests

The exercise involves monitoring and controlling data distribution requests via ftp push or ftp pull. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for monitoring/controlling data distribution requests. The requirements may include instructions to configure data distribution polling, filter data distribution requests, change the priority of a distribution request, or change the status of a distribution request (e.g., cancel, suspend, or resume). The student monitors/controls data distribution requests as specified in the requirements.

Perform the following steps:

1. Monitor/control data distribution requests as specified in the written or stated requirements.
2. Configure data distribution polling as specified in the written or stated requirements.
3. Filter requests as necessary.
4. Change the status of distribution requests as specified in the written or stated requirements.
5. Respond to questions concerning the current status of distribution requests.

Modifying Preambles

The exercise involves modifying an e-mail preamble applicable to data distribution. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for modifying an e-mail preamble. The student modifies the e-mail preamble in accordance with the requirements.

Perform the following steps:

1. Select the **Preamble Editor** tab of the **Data Distribution Operator GUI**.
2. Select the appropriate media type.
3. Select the appropriate preamble type.
4. Edit the preamble text.
5. Save the edited preamble.

Configuring Storage Management Polling

The exercise involves configuring Storage Management polling functions. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements to configure Storage Management polling functions. The student configures Storage Management polling functions as specified in the requirements.

Perform the following steps:

1. Select **Options** → **System Settings** from the pull-down menu on the **Storage Management Control** GUI.
2. Set the **Operator Notification Timer** and/or **Cache Statistics Timer** to the appropriate polling states (off or on) if applicable.
3. Enter the database polling rate for the **Operator Notification Timer** and/or **Cache Statistics Timer** if applicable.
4. Set the error retry rate for the **Operator Notification Timer** if applicable.
5. Apply the modifications.

Deleting Files from Cache

The exercise involves deleting files from cache. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements to delete files from cache. The student deletes files from cache as specified in the requirements.

Perform the following steps:

1. Select the **Cache Stats.** tab on the **Storage Management Control** GUI.
2. Select the cache containing the files to be deleted.
3. Select the file to be deleted from the cache.
4. Click on the **Mark Delete** button.

Viewing Storage Management Event Log Information

The exercise involves viewing storage management event log information. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for viewing storage management event log information. The student views storage management event log information as specified in the requirements.

Perform the following steps:

1. Select the **Storage Events** tab of the **Storage Management Control** GUI.
2. Enter the defining characteristic(s) (e.g., time period, event type, event level) of the event.
3. Click on the **Search** button to search the event log for events that meet the specified criteria.

4. Respond to questions concerning the event information that is displayed in the **Event Log** table.

Monitoring Storage Management Server Operations

The exercise involves monitoring storage management server operations. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for monitoring storage management server operations. The requirements may include instructions to filter storage management requests. The student monitors storage management server operations as specified in the requirements.

Perform the following steps:

1. Monitor storage management server operations as specified in the written or stated requirements.
2. Filter requests as necessary.
3. Respond to questions concerning the current status of requests.

Launching the OM GUI

The exercise involves launching the OM GUI. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for launching the OM GUI. The student launches the OM GUI as specified in the requirements.

Perform the following steps:

1. Log in to an appropriate host using secure shell.
2. Enter the command to start the Netscape browser.
3. Enter the URL to access the **OM GUI** in the specified mode.
4. Enter the appropriate user name in the security dialogue box.
5. Enter the appropriate password in the security dialogue box.

Viewing Open Intervention Information on the OM GUI

The exercise involves viewing open intervention information on the OM GUI. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for viewing open intervention information on the OM GUI. The requirements include which intervention to check. The student observes the information associated with the specified intervention on the OM GUI and responds to questions concerning the specified intervention.

Perform the following steps:

1. Select the **Open Interventions** link from the **OM GUI**.
2. Respond to questions concerning the specified intervention as displayed on the **Open Interventions** page.
3. Select the **Open Intervention Detail** page for the specified intervention.
4. Respond to questions concerning the specified intervention as displayed on the **Open Intervention Detail** page.

Responding to an Open Intervention

The exercise involves responding to an open intervention using the OM GUI. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for responding to an open intervention using the OM GUI. The requirements include which open intervention to access and the attributes to be applied during the intervention. The student responds to the open intervention using the OM GUI as specified in the requirements.

Perform the following steps:

1. Select the **Open Interventions** link from the **OM GUI**.
2. Select the specified intervention.
3. Assign self to work on the intervention.
4. Select the appropriate attributes of the intervention as specified in the requirements.
5. Apply the attributes.
6. Confirm the disposition of the intervention.

Monitoring/Controlling Distribution Request Information on the OM GUI

The exercise involves monitoring and controlling distribution request information on the OM GUI. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for monitoring and controlling distribution request information on the OM GUI. The requirements include which distribution requests to check. The student observes the status of distribution requests using the OM GUI and responds to questions concerning the status of specified distribution requests and what action (if any) to take with respect to the requests.

Perform the following steps:

1. Select the **Distribution Requests** link from the **OM GUI**.
2. Respond to questions concerning distribution requests as displayed on the **Distribution Requests** page.
3. Change the priority of a distribution request (if applicable).
4. Suspend, resume, cancel, or resubmit a distribution request (if applicable).
5. View open intervention information (if applicable).
6. Edit ftp push parameters (if applicable).
7. View operator alerts (if applicable).
8. View to staging requests (if applicable).
9. View ftp push distribution requests (if applicable).

Changing the Priority of a Distribution Request Using the OM GUI

The exercise involves changing the priority of a distribution request using the OM GUI. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for changing the priority of a distribution request using the OM GUI. The requirements include which distribution request to modify. The student changes the priority of a specified distribution request using the OM GUI.

Perform the following steps:

1. Select the priority from the option button in the **Priority** column of the row associated with the specified request.
2. Apply the selected priority.

Suspending, Resuming, Canceling, or Resubmitting a Distribution Request Using the OM GUI

The exercise involves suspending, resuming, canceling, or resubmitting distribution requests using the OM GUI. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for suspending, resuming, canceling, or resubmitting distribution requests using the OM GUI. The requirements include which distribution requests to modify. The student suspends, resumes, cancels, or resubmits specified distribution requests using the OM GUI.

Perform the following steps:

1. Select the appropriate button in the **Action** column of the row associated with the request.
2. Respond to the applicable dialogue box(es).
3. If resubmitting a request, initiate an intervention to resubmit the specified request.

4. If resubmitting a request, specify the appropriate attributes of the intervention as specified in the requirements.
5. If resubmitting a request, confirm the disposition of the intervention.
6. Repeat the preceding steps as necessary to suspend, resume, cancel, or resubmit (as applicable) the remaining distribution requests.

Editing FtpPush Parameters

The exercise involves editing ftp push parameters. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for editing ftp push parameters. The requirements include which distribution requests needs to have the ftp push parameters edited. The student edits the ftp push parameters for the specified distribution request.

Perform the following steps:

1. Select the applicable Request ID in the **Distribution Requests** table (if necessary).
2. Select the **Edit FtpPush Parameters** button on the **Distribution Request Detail** page (if necessary).
3. Enter appropriate values in the text boxes (as necessary).
4. Select the applicable change button.

Viewing Operator Alerts on the OM GUI

The exercise involves viewing operator alerts on the OM GUI. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for viewing operator alerts on the OM GUI. The student views operator alerts on the OM GUI responds to questions concerning the nature of the alerts and what actions (if any) to take with respect to the alerts.

Perform the following steps:

1. Select the **Operator Alerts** link.
2. Respond to questions concerning specific alerts as displayed on the **Operator Alerts** page.
3. Select the corresponding details link in the **Alert Info** column.
4. Respond to questions concerning alert details as displayed on the detail page.

Viewing a Completed Intervention

The exercise involves viewing a completed intervention using the OM GUI. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for viewing a completed intervention using the OM GUI. The requirements include which open intervention to access. The student views the completed

intervention using the OM GUI and responds to questions concerning a specified completed intervention.

Perform the following steps:

1. Select the **Request Management** link.
2. Select the **Completed Interventions** link.
3. Respond to questions concerning a specified completed intervention as displayed on the **Completed Interventions** page.

Viewing and Responding to Suspended Ftp Push Distribution Destinations

The exercise involves viewing and responding to suspended ftp push distribution destinations. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for viewing and responding to suspended ftp push distribution destinations. The student views and responds to suspended ftp push distribution destinations and responds to questions concerning a specified suspended ftp push distribution destination.

Perform the following steps:

1. Select the **FtpPush Monitor** link.
2. Select the **Suspended Destinations** link.
3. Respond to questions concerning the information displayed on the **Suspended Destinations** page.
4. Select the **Resume** button to resume a suspended destination.
5. Either enter the destination name (for a destination to be suspended) in the **Destination Name** text box or type the host name in the **FTP Node** text box.
6. Select the **Suspend** button to suspend an active destination.
7. Select the **Completed Interventions** link.

Checking/Modifying OM Queue Status

The exercise involves checking and modifying OM queue status using the OM GUI. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for checking/modifying OM queue status using the OM GUI. The student brings up the **OM Queue Status** page using the OM GUI and responds to questions concerning OM queue status and modifies OM queue status as directed.

Perform the following steps:

1. Select the **OM Status Pages** link.
2. Select the **OM Queue Status** link.
3. Respond to questions concerning OM queue status.
4. Select the appropriate state from the correct **Change State** option button as directed.
5. Apply the state change(s).

Checking Staging Status

The exercise involves checking staging status. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for checking staging status. The student brings up the appropriate staging status pages using the OM GUI and responds to questions concerning staging status.

Perform the following steps:

1. Select the **OM Status Pages** link.
2. Select the **Media Type** link or **FTP Push Destination** link as directed.
3. Respond to questions concerning staging status as displayed on the staging status pages.
4. Repeat Steps 2 and 3 as directed.

Checking/Modifying OM Configuration Parameters

The exercise involves checking and modifying configuration parameters. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for checking and modifying configuration parameters. The student responds to questions concerning configuration parameters modifies configuration parameters as directed.

Perform the following steps:

1. Select the **OM Configuration** link.
2. Select the **Aging Parameters**, **Server/Database**, **Media** or **FTP Push Policy** link as directed.
3. Respond to questions concerning configuration parameters as displayed on the configuration parameters pages.
4. Enter the new value(s) in the text entry box(es) for the relevant parameter(s).
5. Apply the new value(s).
6. Repeat Steps 2 through 5 as directed.

Adding a Destination to the Frequently Used Destinations List

The exercise involves adding a destination to the frequently used destinations list. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for adding a destination to the frequently used destinations list. The student adds a destination to the frequently used destinations list as directed.

Perform the following steps:

1. Select the **OM Configuration** link.
2. Select the **FTP Push Policy** link.
3. Select the **Add a Destination** button.
4. Enter value(s) in the text entry box(es) for the relevant attribute(s)/parameter(s) as directed.
5. Select the retry mode from the option button as directed.
6. Enter the applicable text in the **Notes** text box as directed.
7. Apply the values entered for the new destination.
8. Confirm the new destination.

Viewing the OM GUI Log

The exercise involves viewing the OM GUI log. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for viewing the OM GUI log. The student views the OM GUI log and responds to questions concerning entries in the log.

Perform the following steps:

1. Select the **Logs** link.
2. Select the **OM GUI Log Viewer** link.
3. Enter the appropriate number of lines to be displayed (as directed).
4. Initiate viewing of the log.
5. Respond to questions concerning entries in the OM GUI log.

Preparing an Input File for Use with the OMS CI

The exercise involves preparing an input file for use with the OMS CI. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for preparing an input file for use with the OMS CI. The student prepares an input file (as directed) for use with the OMS CI.

Perform the following steps:

1. Access a terminal window logged in to the Data Pool Server host.
2. Enter the path to the “OMS/cgi-bin” directory.
3. Use text editor commands to create a file that specifies the relevant values (as directed) to be sent to the OMS.

Processing an Input File Specified for Synergy III Exceptions

The exercise involves processing an input file for Synergy III exceptions. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for processing an input file for Synergy III exceptions. The student processes an input file for Synergy III exceptions as directed.

Perform the following steps:

1. Access a terminal window logged in to the Data Pool Server host.
2. Enter the path to the “OMS/cgi-bin” directory.
3. Enter the command to start the OMS CI in the specified mode with the appropriate options for the specified exceptions.
4. Respond appropriately to menu prompts.

Configuring How Long Order-Tracking Information is Kept in the OMS Database

The exercise involves configuring how long order-tracking information is kept in the OMS database. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for configuring how long order-tracking information is kept in the OMS database. The student configures (as directed) how long order-tracking information is kept in the OMS database.

Perform the following steps:

1. Access a terminal window logged in to the Data Pool Server host.
2. Enter the path to the “OMS/cgi-bin” directory.
3. Enter the command to start the OMS CI in the specified mode with the appropriate options for order-tracking information retention.
4. Respond appropriately to menu prompts.

Switching between Synergy IV and Synergy III Operations

The exercise involves switching between Synergy IV and Synergy III operations. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for switching between Synergy IV and Synergy III operations. The

student demonstrates how to get access to the menu for switching between Synergy IV and Synergy III operations and describes how to complete the switching operation.

Perform the following steps:

1. Access a terminal window logged in to the Data Pool Server host.
2. Enter the path to the “OMS/cgi-bin” directory.
3. Enter the command to start the OMS CI in the specified mode with the appropriate options for switching between Synergy IV and Synergy III operations.
4. Respond appropriately to menu prompts (but do not actually switch between Synergy IV and Synergy III).
5. Describe how to complete the switch between Synergy IV and Synergy III operations.

Modifying System Parameters

The exercise involves modifying system parameters in database tables. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/ requirements for modifying system parameters in database tables. The student modifies a system parameter in a database table as specified in the requirements.

Perform the following steps:

1. Log in to the appropriate host using secure shell.
2. Use the appropriate GUI, script, or isql commands to modify the value assigned to the parameter.

Troubleshooting DDIST Problems

The exercise involves troubleshooting data distribution (DDIST) problems. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary trouble symptom information and requirements for troubleshooting the problem(s). The student reviews the specified trouble symptoms, takes action to correct the problem(s), and responds to questions concerning the possible cause(s).

Perform the following steps:

1. Review the trouble symptoms.
2. Respond to requests that exceed the distribution request threshold if applicable.
3. Check for an acquire failure.
4. Check appropriate log files as necessary.
5. Take action to correct the problem(s).
6. Verify that distribution request processing has resumed.
7. Respond to questions concerning the possible cause(s) without error.

Troubleshooting OM GUI Problems

The exercise involves troubleshooting OM GUI problems. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary trouble symptom information and requirements for troubleshooting the problem(s). The student reviews the specified trouble symptoms, takes action to correct the problem(s), and responds to questions concerning the possible cause(s).

Perform the following steps:

1. Review the trouble symptoms.
2. Respond to Order Manager GUI user messages as necessary.
3. Check the OM GUI log as necessary.
4. Take action to correct the problem(s).
5. Verify that the problem(s) has (have) been corrected.
6. Respond to questions concerning the possible cause(s) without error.

Starting Up PDS

The exercise involves starting up PDS operator interfaces. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for starting up PDS operator interfaces. The student starts up PDS operator interfaces as specified in the requirements.

Perform the following steps:

1. Log in to the PDS Server host.
2. Start the PDS Operator Interface (PDSOI).
3. Start the PDSIS Operator Interface (PDSIS OI).
4. Start the PDS Job Monitor.
5. Log on to the Rimage compact disk (CD) production system personal computer (PC).
6. Start the Rimage CD Production Software.
7. Start the PDS Quality Check GUI.
8. Start the PDS Maintenance Module.
9. Start the PDSIS Maintenance Module.

Shutting Down PDS

The exercise involves shutting down PDS. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for shutting down PDS. The student shuts down PDS as specified in the requirements.

Perform the following steps:

1. Exit from the PDS Maintenance Module.
2. Exit from the PDS Job Monitor.
3. Exit from the PDS Operator Interface (PDSOI).
4. Exit from the Rimage CD Production Software (after all executing PDS jobs are completed or at a logical stopping point).
5. Exit from the PDS Quality Check GUI.
6. Exit from the PDSIS Maintenance Module.
7. Exit from the PDSIS Operator Interface (PDSIS OI).

Monitoring/Controlling Product Processing Using PDS

The exercise involves monitoring/controlling product processing using PDS. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for monitoring/controlling product processing. The student monitors/controls product processing as specified in the requirements.

Perform the following steps:

1. Determine the status of jobs using the PDSOI Main Screen.
2. Respond to questions (without error) concerning the status of jobs.
3. Determine the status of units associated with a particular job using the PDSOI Detail Screen.
4. Respond to questions (without error) concerning the status of units.
5. Activate jobs.
6. Respond to a status of QC-Hold (perform a QC check or verification).
7. Mark jobs "Complete" in PDSSA.
8. Generate PDS production reports.

Monitoring/Controlling Order Processing Using the PDSIS OI

The exercise involves monitoring/controlling order processing using the PDSIS OI. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for monitoring/controlling order processing. The student monitors/controls order processing as specified in the requirements.

Perform the following steps:

1. Determine the status of orders using the PDSIS OI Main Screen.
2. Respond to questions (without error) concerning the status of orders.

3. Determine the status of units associated with a particular order using the PDSIS OI Detail Screen.
4. Respond to questions (without error) concerning the status of units.
5. Clear specified errors in PDSIS.
6. Mark jobs "Shipped" in PDSIS.
7. Reject a specified unit or order in PDSIS.

Troubleshooting PDS Problems

The exercise involves troubleshooting and correcting PDS problems. The exercise begins with a student acting in the role of Distribution Technician receiving the necessary information/requirements for troubleshooting and correcting PDS problems. The student troubleshoots and corrects PDS problems as specified in the requirements.

Perform the following steps:

1. Review the trouble symptoms.
2. Check the status of relevant hosts/servers (as necessary)
3. Check appropriate log files as necessary.
4. Take action to correct the problem(s).
5. Respond to questions (without error) concerning the possible cause(s).

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Slide Presentation

Slide Presentation Description

The following slide presentation represents the slides used by the instructor during the conduct of this lesson.

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