

Tekelec EAGLE® 5

Integrated Signaling System

Release 41.0

Database Administration Manual - System Management

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Patents

This product is covered by one or more of the following U.S. and foreign patents:

U.S. Patent Numbers:

5,732,213; 5,953,404; 6,115,746; 6,167,129; 6,324,183; 6,327,350; 6,456,845; 6,606,379; 6,639,981; 6,647,113; 6,662,017; 6,735,441; 6,745,041; 6,765,990; 6,795,546; 6,819,932; 6,836,477; 6,839,423; 6,885,872; 6,901,262; 6,914,973; 6,940,866; 6,944,184; 6,954,526; 6,954,794; 6,959,076; 6,965,592; 6,967,956; 6,968,048; 6,970,542; 6,987,781; 6,987,849; 6,990,089; 6,990,347; 6,993,038; 7,002,988; 7,020,707; 7,031,340; 7,035,239; 7,035,387; 7,043,000; 7,043,001; 7,043,002; 7,046,667; 7,050,456; 7,050,562; 7,054,422; 7,068,773; 7,072,678; 7,075,331; 7,079,524; 7,088,728; 7,092,505; 7,108,468; 7,110,780; 7,113,581; 7,113,781; 7,117,411; 7,123,710; 7,127,057; 7,133,420; 7,136,477; 7,139,388; 7,145,875; 7,146,181; 7,155,206; 7,155,243; 7,155,505; 7,155,512; 7,181,194; 7,190,702; 7,190,772; 7,190,959; 7,197,036; 7,206,394; 7,215,748; 7,219,264; 7,222,192; 7,227,927; 7,231,024; 7,242,695; 7,254,391; 7,260,086; 7,260,207; 7,283,969; 7,286,516; 7,286,647; 7,286,839; 7,295,579; 7,299,050; 7,301,910; 7,304,957; 7,318,091; 7,319,857; 7,327,670

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EP1062792; EP1308054; EP1247378; EP1303994; EP1252788; EP1161819; EP1177660; EP1169829; EP1135905; EP1364520; EP1192758; EP1240772; EP1173969; CA2352246

Ordering Information

Your Tekelec Sales Representative can provide you with information about how to order additional discs.

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Chapter 1

Introduction

Topics:

- *Overview.....2*
- *Scope and Audience.....2*
- *Manual Organization.....2*
- *Documentation Admonishments.....3*
- *Customer Care Center.....4*
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Chapter 1, Introduction, contains general information about the database and the organization of this manual.

Overview

The *Database Administration Manual – System Management* describes the procedures used to manage and configure these items.

- EAGLE 5 ISS's database and GPLs
- The date and time
- User IDs and passwords
- Terminal configuration
- Shelves
- SS7 LIMs
- Security Log
- Unauthorized Use Warning Message
- UIM Thresholds
- MCPMs, IP links, and FTP servers for the Measurements Platform
- IPSMs for the IP User Interface (Telnet) feature
- Configuring the Network Security Options
- Configuring the Restore Device State Option
- Configuring the Frame Power Alarm Threshold
- SEAS over IP Configuration
- Using PuTTY or OpenSSH to set up a secure telnet connection to the EAGLE 5 ISS.

Note: Database administration privileges are password restricted. Only those persons with access to the command class "Database Administration" can execute the administrative functions. Other command classes and the commands allowed by those classes are listed in the *Commands Manual*.

Scope and Audience

This manual is intended for database administration personnel or translations personnel responsible for managing the items shown in the [Overview](#) on page 2 section.

Manual Organization

Throughout this document, the terms database and system software are used. Database refers to all data that can be administered by the user, including shelves, cards, links, routes, global title translation tables, and gateway screening tables. System software refers to data that cannot be administered by the user, including generic program loads (GPLs).

This document is organized into these sections:

[Introduction](#) on page 1 contains general information about the database and the organization of this manual.

[Database Management Procedures](#) on page 15 describes the different options for managing the database, such as backing up data and copying database tables from one disk to another, and provides procedures for tasks associated with database applications.

[GPL Management Procedures](#) on page 117 describes the procedures used for managing the system data (GPLs) on the EAGLE 5 ISS.

[System Administration Procedures](#) on page 385 describes the procedures used to administer the items shown in the [Introduction](#) on page 387.

[SEAS Over IP Configuration Procedures](#) on page 565 describes the procedures used to configure the EAGLE 5 ISS to support the SEAS over IP feature.

[Controlled Feature Activation Procedures](#) on page 605 describes the procedures necessary to activate and deactivate the controlled features (features that require a feature access key to be activated) contained in this manual.

[Setting Up a Secure Telnet Connection to the EAGLE 5 ISS using PuTTY](#) on page 643 describes the steps to set up a secure telnet connection to the EAGLE 5 ISS using the PuTTY client program.

[Setting Up a Secure Telnet Connection to the EAGLE 5 ISS using OpenSSH](#) on page 651 describes the steps to set up a secure telnet connection to the EAGLE 5 ISS using OpenSSH.

[Remote Database Backup and Restore Procedures](#) on page 657 describes the procedures for backing up the database to the DB FTP server and restoring the database from the DB FTP server.

Documentation Admonishments

Admonishments are icons and text throughout this manual that alert the reader to assure personal safety, to minimize possible service interruptions, and to warn of the potential for equipment damage.

Table 1: Admonishments

	DANGER: (This icon and text indicate the possibility of <i>personal injury</i> .)
	WARNING: (This icon and text indicate the possibility of <i>equipment damage</i> .)
	CAUTION: (This icon and text indicate the possibility of <i>service interruption</i> .)

Customer Care Center

The Tekelec Customer Care Center is your initial point of contact for all product support needs. A representative takes your call or email, creates a Customer Service Request (CSR) and directs your requests to the Tekelec Technical Assistance Center (TAC). Each CSR includes an individual tracking number. Together with TAC Engineers, the representative will help you resolve your request.

The Customer Care Center is available 24 hours a day, 7 days a week, 365 days a year, and is linked to TAC Engineers around the globe.

Tekelec TAC Engineers are available to provide solutions to your technical questions and issues 7 days a week, 24 hours a day. After a CSR is issued, the TAC Engineer determines the classification of the trouble. If a critical problem exists, emergency procedures are initiated. If the problem is not critical, normal support procedures apply. A primary Technical Engineer is assigned to work on the CSR and provide a solution to the problem. The CSR is closed when the problem is resolved.

Tekelec Technical Assistance Centers are located around the globe in the following locations:

Tekelec - Global

Email (All Regions): support@tekelec.com

- **USA and Canada**

Phone:

1-888-FOR-TKLC or 1-888-367-8552 (toll-free, within continental USA and Canada)

1-919-460-2150 (outside continental USA and Canada)

TAC Regional Support Office Hours:

8:00 a.m. through 5:00 p.m. (GMT minus 5 hours), Monday through Friday, excluding holidays

- **Central and Latin America (CALA)**

Phone:

USA access code +1-800-658-5454, then 1-888-FOR-TKLC or 1-888-367-8552 (toll-free)

TAC Regional Support Office Hours (except Brazil):

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- **Argentina**

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- **Columbia**

Phone:

01-800-912-0537

- **Dominican Republic**

Phone:

1-888-367-8552

- **Mexico**

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001-888-367-8552

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0800-53-087

- **Puerto Rico**

Phone:

1-888-367-8552 (1-888-FOR-TKLC)

- **Venezuela**

Phone:

0800-176-6497

- **Europe, Middle East, and Africa**

- **Signaling**

Phone:

+44 1784 467 804 (within UK)

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- **Software Solutions**

Phone:

+33 3 89 33 54 00

TAC Regional Support Office Hours:

8:00 a.m. through 7:00 p.m. (GMT), Monday through Friday, excluding holidays

- **Asia**

- **India**

Phone:

+91 124 436 8552 or +91 124 436 8553

TAC Regional Support Office Hours:

10:00 a.m. through 7:00 p.m. (GMT plus 5 1/2 hours), Monday through Saturday, excluding holidays

- **Singapore**

Phone:

+65 6796 2288

TAC Regional Support Office Hours:

9:00 a.m. through 6:00 p.m. (GMT plus 8 hours), Monday through Friday, excluding holidays

Emergency Response

In the event of a critical service situation, emergency response is offered by the Tekelec Customer Care Center 24 hours a day, 7 days a week. The emergency response provides immediate coverage, automatic escalation, and other features to ensure that the critical situation is resolved as rapidly as possible.

A critical situation is defined as a problem with an EAGLE 5 ISS that severely affects service, traffic, or maintenance capabilities, and requires immediate corrective action. Critical problems affect service and/or system operation resulting in:

- A total system failure that results in loss of all transaction processing capability
- Significant reduction in system capacity or traffic handling capability
- Loss of the system's ability to perform automatic system reconfiguration
- Inability to restart a processor or the system
- Corruption of system databases that requires service affecting corrective actions
- Loss of access for maintenance or recovery operations
- Loss of the system ability to provide any required critical or major trouble notification

Any other problem severely affecting service, capacity /traffic, billing, and maintenance capabilities may be defined as critical by prior discussion and agreement with the Tekelec Customer Care Center.

Related Publications

For information about additional publications that are related to this document, refer to the *Related Publications* document. The *Related Publications* document is published as a part of the *Release*

Documentation and is also published as a separate document on the Tekelec Customer Support Site.

Documentation Availability, Packaging, and Updates

Tekelec provides documentation with each system and in accordance with contractual agreements. For General Availability (GA) releases, Tekelec publishes a complete EAGLE 5 ISS documentation set. For Limited Availability (LA) releases, Tekelec may publish a documentation subset tailored to specific feature content or hardware requirements. Documentation Bulletins announce a new or updated release.

The Tekelec EAGLE 5 ISS documentation set is released on an optical disc. This format allows for easy searches through all parts of the documentation set.

The electronic file of each manual is also available from the Tekelec Customer Support site (support.tekelec.com). This site allows for 24-hour access to the most up-to-date documentation, including the latest versions of Feature Notices.

Printed documentation is available for GA releases on request only and with a lead time of six weeks. The printed documentation set includes pocket guides for commands and alarms. Pocket guides may also be ordered separately. Exceptions to printed documentation are:

- Hardware or Installation manuals are printed without the linked attachments found in the electronic version of the manuals.
- The Release Notice is available only on the Customer Support site.

Note: Customers may print a reasonable number of each manual for their own use.

Documentation is updated when significant changes are made that affect system operation. Updates resulting from Severity 1 and 2 PRs are made to existing manuals. Other changes are included in the documentation for the next scheduled release. Updates are made by re-issuing an electronic file to the customer support site. Customers with printed documentation should contact their Sales Representative for an addendum. Occasionally, changes are communicated first with a Documentation Bulletin to provide customers with an advanced notice of the issue until officially released in the documentation. Documentation Bulletins are posted on the Customer Support site and can be viewed per product and release.

Maintenance and Administration Subsystem

The Maintenance and Administration Subsystem (MAS) is the central management point for the EAGLE 5 ISS. The MAS provides user interface, maintenance communication, peripheral services, alarm processing, system disk interface, and measurements. Management and redundancy are provided by use of two separate subsystem processors.

The MAS resides on two separate sets of Maintenance and Administration Subsystem Processor (MASP) cards and a Maintenance Disk and Alarm card (collectively referred to as control cards). The control cards are located in slots 1113 through 1118 of the EAGLE 5 ISS control shelf. The control cards can be either E5-based cards or legacy cards.

Note: In normal operation, the E5-based control cards and the legacy control cards cannot be mixed in one EAGLE 5 ISS control shelf.

Legacy Control Cards

The legacy set of EAGLE 5 ISS control cards consists of the following cards:

- Two MASP card sets; each set contains the following two cards:
 - A General Purpose Service Module II (GPSM-II) card
 - A Terminal Disk Module (TDM) card
- One Maintenance Disk and Alarm (MDAL) card

General Purpose Service Module II (GPSM-II) Card

Each GPSM-II card contains the Communications Processor and the Applications Processor and provides connections to the IMT bus. The card controls the maintenance and database administration activity and performs both application and communication processing. GPSM-II cards are located in slots 1113 and 1115 of the control shelf.

Terminal Disk Module (TDM) Card

Each TDM card provides the Terminal Processor for the 16 I/O ports, and interfaces to the Maintenance Disk and Alarm (MDAL) card. The TDM card also distributes Composite Clocks and High Speed Master clocks throughout the EAGLE 5 ISS, and distributes Shelf ID to the EAGLE 5 ISS. Each TDM card contains one fixed disk drive that is used to store primary and backup system databases, measurements, and Generic Program Loads (GPLs). The TDM cards are located in slots 1114 and 1116 of the control shelf.

Maintenance Disk and Alarm (MDAL) Card

The MDAL card processes alarm requests and provides fan control. There is only one MDAL card in a control card set. Critical, major, and minor system alarms are provided for up to 6 individual frames. In addition to the 3 system alarms, the MDAL card provides the system audible alarm. The MDAL card provides control of fans on a per-frame basis and allows for each fan relay to be set individually. The MDAL card contains a removable cartridge drive; the removable cartridge is used for installing new software; backing up the system software, the application software, and the database; and for downloading data for off-line processing. The MDAL card is located in slots 1117 and 1118 of the control shelf.

E5-based Control Cards

The E5-based set of EAGLE 5 ISS control cards consists of the following cards:

- Two Maintenance and Administration Subsystem Processor cards (E5-MASP) cards. Each dual-slot E5-MASP card is made up of the following two modules:
 - Maintenance Communication Application Processor (E5-MCAP) card
 - Terminal Disk Module (E5-TDM) card
- One Maintenance Disk and Alarm card (E5-MDAL card)

Maintenance Communication Application Processor (E5-MCAP) Card

The E5-MCAP card contains the Communications Processor and Applications Processor and provides connections to the IMT bus. The card controls the maintenance and database

administration activity and performs both application and communication processing. E5-MCAP cards are located in slots 1113 and 1115 of the control shelf.

Each E5-MCAP card contains two USB ports. One latched USB port is used with removable flash media ("thumb drives"), and one flush-mounted USB port is used with a plug-in "credit card" flash drive. The removable media drive is used to install and back up customer data. The credit card drive is used for upgrade and could be used for disaster recovery.

Terminal Disk Module (E5-TDM) Card

The E5-TDM card provides the Terminal Processor for the 16 I/O ports, and interfaces to the Maintenance Disk and Alarm (E5-MDAL) card and fixed disk storage. The E5-TDM card also distributes Composite Clocks and High Speed Master clocks throughout the EAGLE 5 ISS, and distributes Shelf ID to the EAGLE 5 ISS. Each E5-TDM card contains one fixed SATA drive that is used to store primary and backup system databases, measurements, and Generic Program Loads (GPLs). E5-TDM cards are located in slots 1114 and 1116 of the control shelf.

Maintenance Disk and Alarm (E5-MDAL) Card

The E5-MDAL card processes alarm requests and provides fan control. There is only one E5-MDAL card in a control card set. Critical, major, and minor system alarms are provided for up to 6 individual frames. In addition to the 3 system alarms, the E5-MDAL card provides the system audible alarm. The E5-MDAL card provides control of fans on a per-frame basis, and allows for each fan relay to be set individually. The E5-MDAL card does not contain a removable cartridge drive; drives for removable media are located on the E5-MCAP card. The E5-MDAL card is located in slots 1117 and 1118 of the control shelf.

EAGLE 5 ISS Database Partitions

The data that the EAGLE 5 ISS uses to perform its functions are stored in two separate areas: the fixed disk drives, and the removable cartridge. The following sections describe these areas and data that is stored on them. These areas and their partitions are shown in [Figure 1: EAGLE 5 ISS Database Partitions \(Legacy Control Cards\)](#) on page 9 and [Figure 2: EAGLE 5 ISS Database Partitions \(E5-Based Control Cards\)](#) on page 10.

Figure 1: EAGLE 5 ISS Database Partitions (Legacy Control Cards)

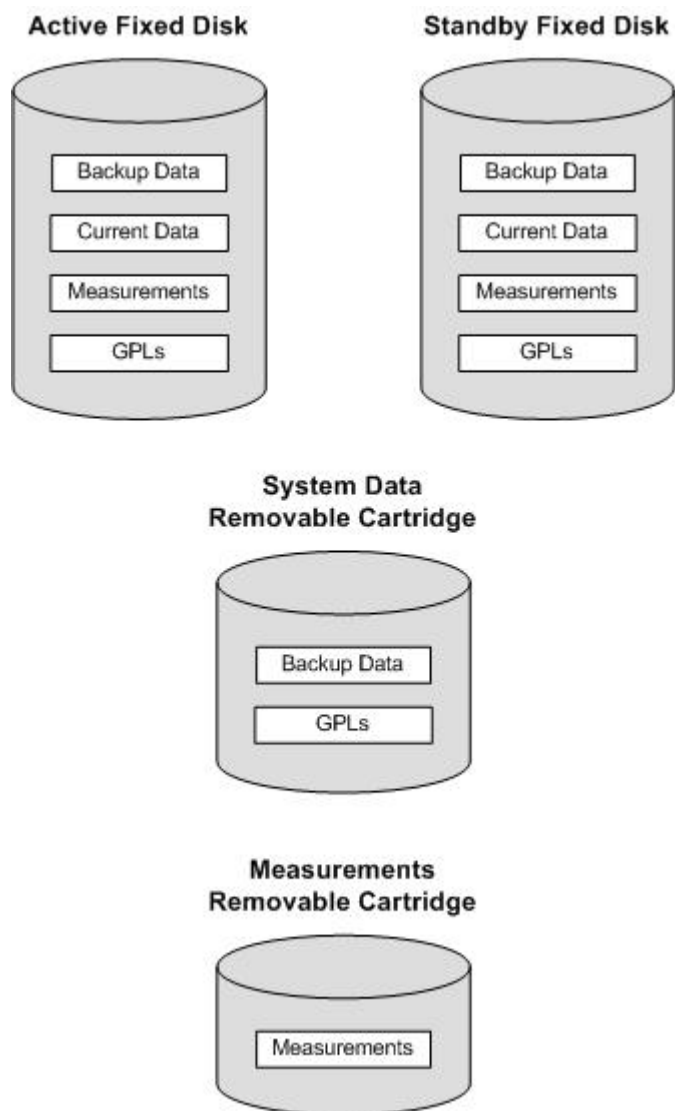
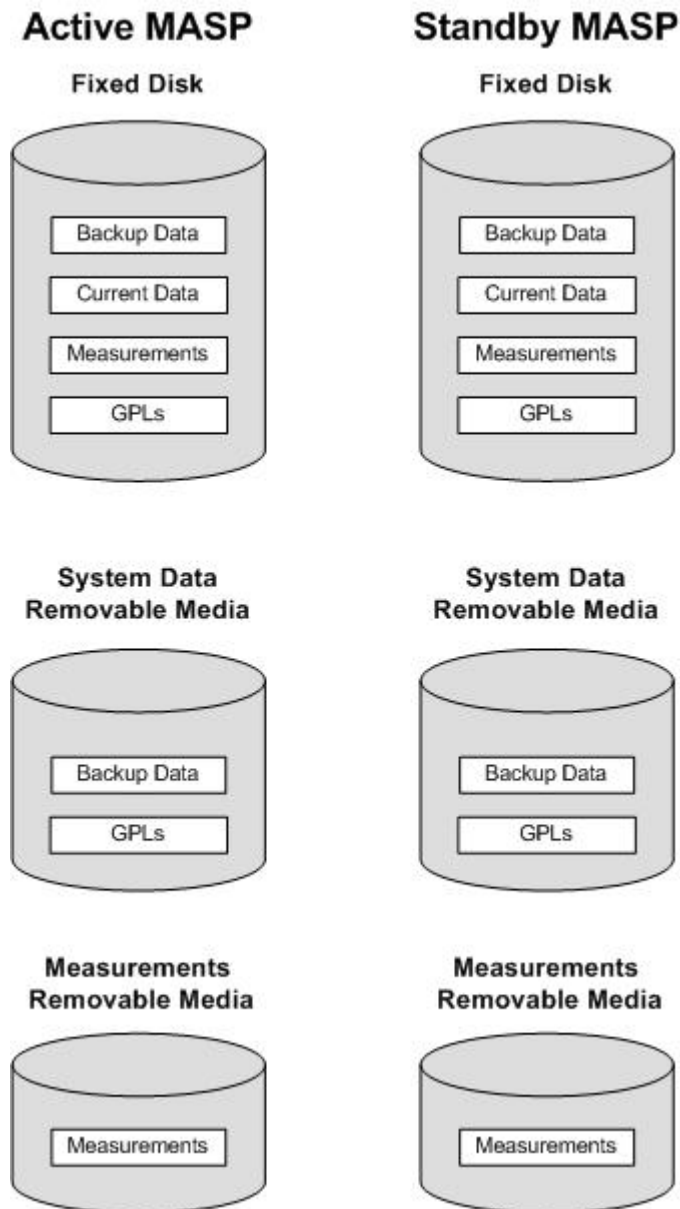


Figure 2: EAGLE 5 ISS Database Partitions (E5-Based Control Cards)



Fixed Disk Drive

There are two fixed disk drives on the EAGLE 5 ISS. The fixed disk drives contain the “master” set of data and programs for the EAGLE 5 ISS. The two fixed disk drives are located on the terminal disk modules (TDMs). Both disks have the same files. The data stored on the fixed disks is partially replicated on the various cards in the EAGLE 5 ISS. Changes made during database administration sessions are sent to the appropriate cards.

The data on the fixed disks can be viewed as four partitions.

- Current partition
- Backup partition

- Measurements partition
- Generic program loads (GPLs) partition

The data which can be administered by users is stored in two partitions on the fixed disk, a current database partition which has the tables which are changed by on-line administration, and a backup database partition which is a user-controlled copy of the current partition.

All of the on-line data administration commands effect the data in the current partition. The purpose of the backup partition is to provide the users with a means of rapidly restoring the database to a known good state if there has been a problem while changing the current partition.

A full set of GPLs is stored on the fixed disk, in the GPL partition. There is an approved GPL and a trial GPL for each type of GPL in this set and a utility GPL, which has only an approved version. Copies of these GPLs are downloaded to the EAGLE 5 ISS cards. The GPL provides each card with its functionality. For example, the `ss7ansi` GPL provides MTP functionality for link interface modules (LIMs).

Measurement tables are organized as a single partition on the fixed disk. These tables are used as holding areas for the measurement counts.

Removable Cartridge or Removable Media

The removable cartridge is used with the legacy MDAL control card in card location 1117. The removable media is used with the E5-MCAP card portion of the E5-MASP in card locations 1113 and 1115.

The removable cartridge or removable media is used for two purposes.

- To hold an off-line backup copy of the administered data and system GPLs
- To hold a copy of the measurement tables

Because of the size of the data stored on the fixed disk drives on the TDMs, a single removable cartridge or removable media cannot store all of the data in the database, GPL and measurements partitions.

To use a removable cartridge or removable media to hold the system data, it must be formatted for system data. To use a removable cartridge or removable media to hold measurements data, it must be formatted for measurements data. The EAGLE 5 ISS provides the user the ability to format a removable cartridge or removable media for either of these purposes. A removable cartridge or removable media can be formatted on the EAGLE 5 ISS by using the `format-disk` command. More information on the `format-disk` command can be found in the *Commands Manual*. More information on the removable cartridge or removable media drives can be found in the *Hardware Manual - EAGLE 5 ISS*.

Additional and preformatted removable cartridges or removable media are available from the [Customer Care Center](#) on page 4.

Locate Product Documentation on the Customer Support Site

Access to Tekelec's Customer Support site is restricted to current Tekelec customers only. This section describes how to log into the Tekelec Customer Support site and locate a document.

Viewing the document requires Adobe Acrobat Reader, which can be downloaded at www.adobe.com.

1. Log into the Tekelec **new** Customer Support site at support.tekelec.com.

Note: If you have not registered for this new site, click the **Register Here** link. Have your customer number available. The response time for registration requests is 24 to 48 hours.

2. Click the **Product Support** tab.
3. Use the Search field to locate a document by its part number, release number, document name, or document type. The Search field accepts both full and partial entries.
4. Click a subject folder to browse through a list of related files.
5. To download a file to your location, right-click the file name and select **Save Target As**.

Chapter 2

Database Management Procedures

Topics:

- *Introduction.....16*
- *MO Removable Cartridge Description.....17*
- *MO Cartridge Removal Procedure.....19*
- *Removable USB Drive.....20*
- *Verifying the Database.....22*
- *Backing Up the Database Locally 25*
- *Restoring the Database Locally 37*
- *Repairing the Database.....51*
- *Copying the Database from the Active to the Standby Fixed Disk.....58*
- *Backing Up System Data to the Removable Cartridge or Removable Media 69*
- *Restoring System Data from a Removable Cartridge or Removable Media 75*
- *Formatting a Removable Cartridge.....86*
- *Formatting the Fixed Disk of the Standby TDM.....96*
- *Formatting Removable Media or the USB Credit Card Flash Media.....105*

Chapter 2, Database Management Procedures, describes the different options for managing the database, such as backing up data and copying database tables from one disk to another, and provides procedures for tasks associated with database applications.

Introduction

This chapter contains procedures for creating database backups or backups of the system data, and restoring the database or system data. The term “database” refers to all data that can be administered by the user including shelves, cards, links, routes, global title translation tables, and gateway screening tables. The term “system data” refers to data that cannot be administered by the user including maintenance software and generic program loads (GPLs).

These procedures are to be used as they are presented in this chapter. If these procedures are not followed, and a database backup or restore is attempted, a system failure could result.

The procedures shown in this chapter use a variety of commands. If more information on these commands is needed, go to the *Commands Manual* to find the necessary information.

The database management procedures are used to perform these functions:

- Verifying the database
- Backing up the database
 - on the fixed disk
 - to the removable cartridge, if legacy control cards are installed in the EAGLE 5 ISS.
 - to the removable media, if E5-based control cards are installed in the EAGLE 5 ISS.
 - to the USB credit card flash drive, if E5-based control cards are installed in the EAGLE 5 ISS.
 - to the FTP server
- Restoring the database
 - from the backup partition of the fixed disk
 - from the removable cartridge, if legacy control cards are installed in the EAGLE 5 ISS.
 - from the removable media, if E5-based control cards are installed in the EAGLE 5 ISS.
 - from the USB credit card flash drive, if E5-based control cards are installed in the EAGLE 5 ISS.
 - from the FTP server
- Repairing the database
- Copying the database from the active to the standby fixed disk
- Backing up system data to the removable cartridge or removable media
- Restoring system data from a removable cartridge or removable media
- Formatting a removable cartridge
- Formatting the fixed disk of the standby TDM
- Formatting the removable media and the USB credit card flash drive.

The procedures for performing database backups to the FTP server and restoring the database from the FTP server are in [Remote Database Backup and Restore Procedures](#) on page 657.

The procedures in this chapter refer to the Maintenance and Administration Subsystem Processor (MASP), Terminal Disk Module (TDM) and the Maintenance Disk and Alarm Card (MDAL), and E5-MCAP cards.

The TDM is associated with a specific GPSM-II card, or E5-MCAP card. For example, the TDM in location 1114 is associated with the GPSM-II card, or E5-MCAP card in location 1113 and the

combination of these two cards is designated as MASP A. The TDM in location 1116 is associated with the GPSM-II card, or E5-MCAP card in location 1115 and the combination of these two cards designated as MASP B. When MASP A is active, the GPSM-II card, or E5-MCAP card in location 1113 and TDM in location 1114 are active. When MASP A is standby, the GPSM-II card, or E5-MCAP card in location 1113 and TDM in location 1114 are standby. One MASP is always active and the other MASP is always standby.

To determine which MASP is active, enter the `rept - stat - db` command, the `rept - stat - card` command.

The output of the `rept - stat - db` command shows which MASP is active with the indicator (`ACTV`) following the TDM card location. The indicator (`STDBY`) following the TDM card location shows which MASP is standby.

The output of the `rept - stat - card` command shows which MASP is active with the entry `ACTIVE` in the `SST` field for the GPSM-II card, or E5-MCAP card. The entry `STANDBY` in the `SST` field for the GPSM-II card, or E5-MCAP card shows which MASP is standby.

The database commands, such as `rept - stat - db`, refer to the TDM because the TDM contains the fixed disk drive for the MASP. The MDAL, if legacy control cards are installed in the EAGLE 5 ISS, is only referred to when inserting or removing the removable cartridge because the removable cartridge drive resides on the MDAL.

Refer to [Maintenance and Administration Subsystem](#) on page 7 for more information about the Maintenance and Administration Subsystem.

Refer to the *Hardware - Signaling Products* manual for more information about the cards that make up the Maintenance and Administration Subsystem.

MO Removable Cartridge Description

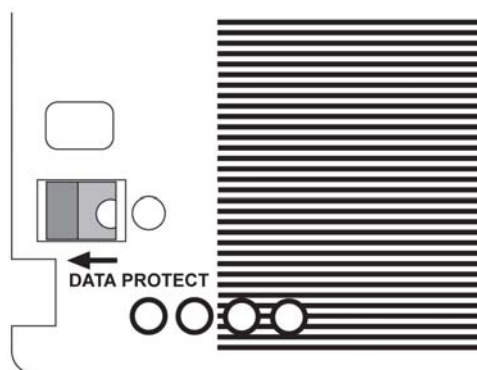
The MO removable cartridge drive is located on the Maintenance Disk and Alarm Card (MDAL) in card location 1117.

The EAGLE 5 ISS uses a 2.3, 4.1, or 5.2 Gbyte magneto-optical (MO) removable cartridge. When the cartridge is write protected, no data can be written to the cartridge, nor can the cartridge be erased or formatted. Data can only be read from the cartridge. When the cartridge is write enabled, data can be written to the cartridge, data can be read from the cartridge, and the cartridge can be erased and formatted.

The LEDs on the front faceplate indicate critical, major, and minor alarms and card activity.

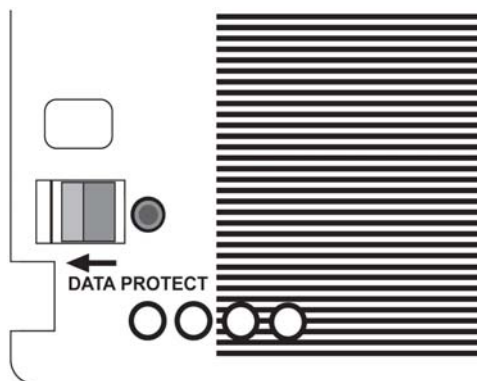
The write protecting mechanism of the MO removable cartridge is a red tab located in the lower left corner of the cartridge. Under the red tab is an arrow pointing toward the left edge of the cartridge; the words "DATA PROTECT" are under the arrow. To write-protect the MO removable cartridge, slide the red tab to the left (the direction of the arrow) until it snaps into place. The hole to the right of the tab should be clear and open. See [Figure 3: Gbyte Write Protected Removable Cartridge](#) on page 17.

Figure 3: Gbyte Write Protected Removable Cartridge



To write-enable the MO removable cartridge, slide the red tab to the right, the opposite direction of the arrow, until it snaps into place. The hole to the right of the tab should be filled with a red dot. See [Figure 4: Gbyte Write Enabled Removable Cartridge](#) on page 18.

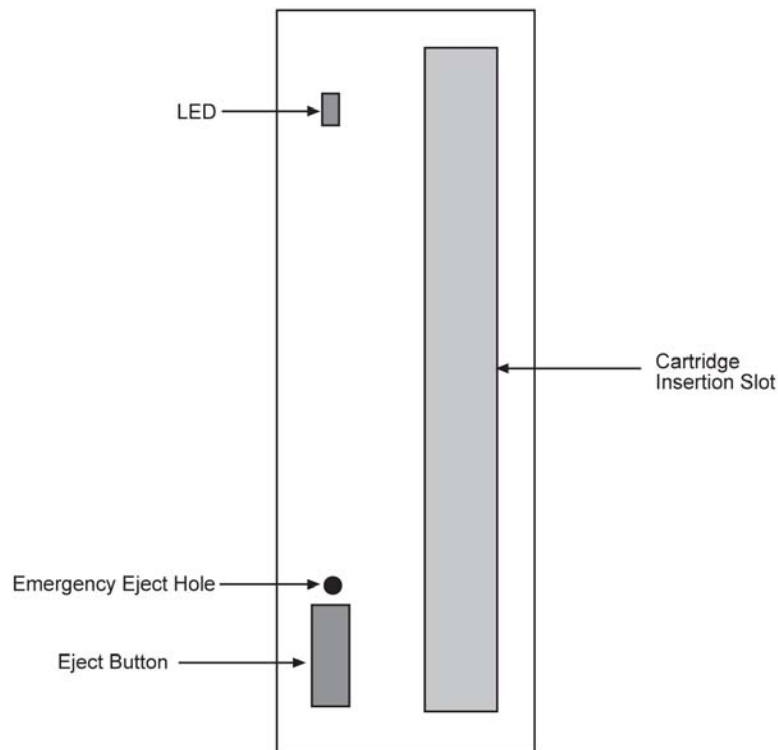
Figure 4: Gbyte Write Enabled Removable Cartridge



The MO removable cartridge is a two-sided cartridge, with sides designated as side A and side B. The MO removable cartridge drive can only access one side of the cartridge at a time; which side is accessed depends on how the cartridge is inserted into the removable cartridge drive. The side indicator is located on the shutter on each side of the removable cartridge.

[Figure 5: Gbyte Removable Cartridge Drive Layout](#) on page 18 shows the layout of the removable cartridge drive.

Figure 5: Gbyte Removable Cartridge Drive Layout



MO Cartridge Removal Procedure

Purpose

This section is referenced in this manual by many procedures requiring the use of the removable cartridge and the removable cartridge drive. The procedures found in this section are recommended procedures for handling the removable cartridges.

Note:

Removable cartridges should never be left unattended in the MDAL.

Requirements

None

1. To insert the removable cartridge to access side A, insert the removable cartridge into the cartridge insertion slot of the drive with the indicator for side A on the shutter facing to the right side of the drive and away from the side with the LED and the eject button.
 2. To insert the removable cartridge to access side B, insert the removable cartridge into the cartridge insertion slot of the drive with the indicator for side A on the shutter facing to the left side of the drive and toward the side with the LED and the eject button.
 3. When the removable cartridge is inserted into the removable cartridge drive, the LED is yellow. When the cartridge is ready to use, the LED is green.
1. Verify that the LED on the removable cartridge drive is green.

If the LED is yellow, the drive is being accessed by the Eagle and the cartridge cannot be removed from the drive. Wait until the LED is green before attempting to remove the cartridge from the drive.

2. When the LED is green, push the eject button on the removable cartridge drive.
While the cartridge is being ejected from the drive, the LED is yellow.
3. The LED is off when the cartridge is fully ejected from the drive.
The cartridge can now be removed from the drive.

Removable USB Drive

Purpose

This section is referenced in this manual by many procedures requiring the use of the removable USB thumb disk in the E5-MASP card. The procedures found in this section are recommended procedures for handling the removable USB drive in the E5-MASP card.

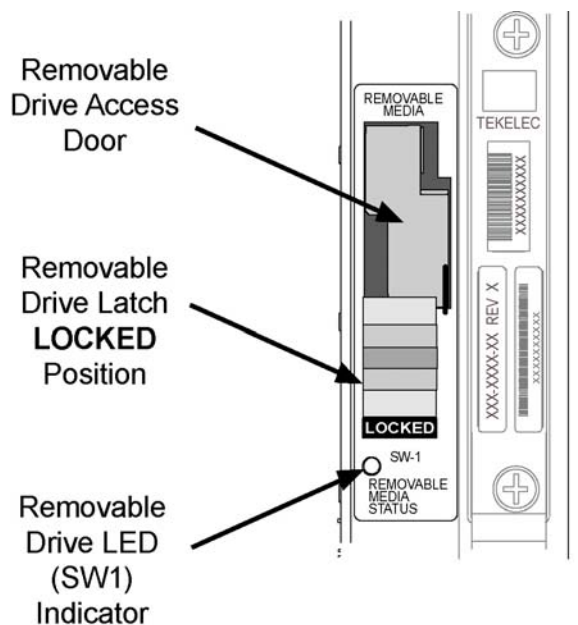
Requirements

None

1. Verify that the removable USB drive is locked in position and in use.

The removable drive latch (SW1) is in the LOCKED position and the Removable Media Status LED on the E5-MASP is Off. Refer to [Figure 6: Removable USB Drive LOCKED](#) on page 20.

Figure 6: Removable USB Drive LOCKED



2. Move SW1 from the LOCKED to the unlocked position and wait for the LED to indicate a steady blue state. See [Figure 7: Removable USB Drive UNLOCKED](#) on page 21.

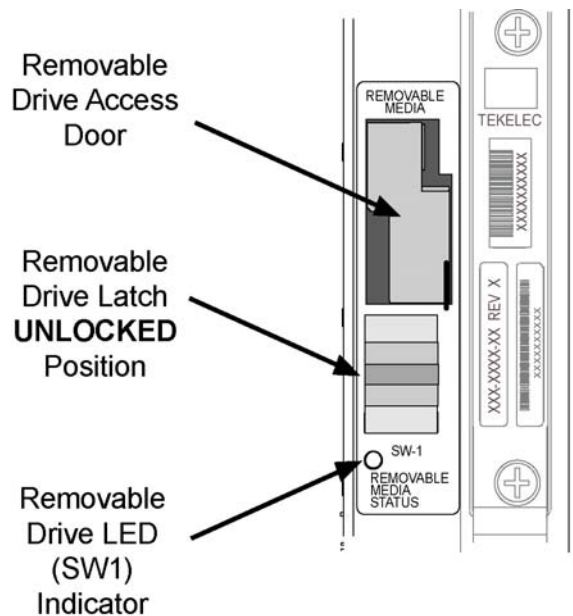
When SW1 is transitioned from locked to unlocked, the LED will flash blue to indicate the drive is unlocked and in process of shutting down.



CAUTION

CAUTION: Removal of the drive prior to the LED indicating steady blue could result in drive corruption.

Figure 7: Removable USB Drive UNLOCKED



3. When the LED indicates a steady blue state, the removable USB drive can be safely removed. The LED is off when the cartridge is fully ejected from the drive. The cartridge can now be removed from the drive.
4. Lift the access door up, swing it past the detent position so that the door remains open on its own.
5. Grasp the pull tab of the slide and pull the slide out slowly until it stops (it travels about a half inch).



CAUTION

CAUTION: The full travel of the slide is less than an inch, do not try to pull the assembly to expose the full length of the thumb drive as this is beyond the slide's designed travel.

6. The USB drive is disengaged and can be taken from the inject eject assembly.
7. Insert a USB drive into the inject-eject assembly.
8. Grasp the pull tab of the slide and push the slide in slowly until you feel the USB drive is seated in its slot (it travels about a half inch).
9. Close the access door.
10. Move SW1 from the unlocked to the LOCKED position.

When SW1 is transitioned from unlocked to locked, the LED will flash blue to indicate the drive is locked and in process of coming online.

11. When the LED turns Off, the removable USB drive is ready for use.

Verifying the Database

Verifying the database means to check the operational status of the database. The `rept-stat-db` command is used to check the operational status of the database. The `rept-stat-db` command has three optional parameters that can be used with it, `display`, `loc`, and `db`.

The `display` parameter can use four values: `brief` (the default value), `except`, `all`, and `version`. The value for the `loc` parameter is the card location of the card, based on the GPL assigned to the card, whose database you wish to verify. These card locations are shown in the *Hardware Manual - EAGLE 5 ISS*. The `db` parameter specifies which database to display: `stp` (the EAGLE 5 ISS databases), `mps` (the MPS databases) and `all` (both STP and MPS databases).

The operational status of the database is shown by the indicator **C**. This indicator shows whether the database is coherent. Coherency is an indication of whether the update to the database was successful. Each database has a coherency indicator. When an update is attempted, the coherency indicator is set to “incoherent” before the actual update is executed. When the update has been successfully completed, the coherency indicator is changed to coherent. If the update is not successful, the coherency indicator is not changed. If the coherency indicator is incoherent, this could be an indication of possible internal coherency problems when a restart is executed (for example, an index table was updated, but the corresponding data storage table was not modified).

For more information about the `rept-stat-db` command, refer to the `rept-stat-db` command description in the *Commands Manual*.

Checking the Status of the Database

To check the operational status of the database:

1. At the prompt, enter the `rept-stat-db` command.
2. The output of the `rept-stat-db` command shows the current operational status of the EAGLE 5 ISS's distributed databases.
3. If the database is coherent, the database has no problems. The procedure is completed.

If any MPS/ELAP/EPAP database is not coherent, find the conditions shown in the output of the `rept-stat-db` command. Then refer to either the *ELAP Administration Manual* or the *EPAP Administration Manual*, and perform the database recovery procedures described in the RTDB / Maintenance menus.

If any STP database is not coherent, find the conditions shown in the output of the `rept-stat-db` command in this list and execute the appropriate command.

- If the current partition of both fixed disks are coherent and the backup partition of the either fixed disk is not coherent, as shown in this output example, use the `chg-db:action=backup:dest=fixed` command. For more information, refer to [Making a Backup of the Database on the Fixed Disk](#) on page 25.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( STDBY)          TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
      - - - - -
```

```

FD BKUP  Y      35 DIFF LEVEL          N      45 INCOHERENT
FD CRNT   Y      106                    Y      106
          MDAL 1117
          - - - - -
RD BKUP   -      -      -      -

```

If the E5-MASP is being used , this is an example of the `rept-stat-db` output.

```

rlghncxa03w 09-03-01 16:07:48 GMT  EAGLE5 40.1.0
DATABASE STATUS: >> NOT OK <<
          TDM 1114 ( STDBY)          TDM 1116 ( ACTV )
          C  LEVEL    TIME LAST BACKUP  C  LEVEL    TIME LAST BACKUP
          - - - - -
FD BKUP  Y      36 DIFF LEVEL          N      45 INCOHERENT
FD CRNT   Y      106                    Y      106
          MCAP 1113                    MCAP 1115
          - - - - -
RD BKUP  Y      36 09-02-19 09:27:17 GMT Y      36 09-02-19 09:27:17 GMT
USB BKP   -      -      -      -      Y      3 09-02-07 01:11:22 GMT

```

The `chg-db:action=backup:dest=fixed` command is also used to backup the current database on both fixed disks to the backup partition of both fixed disks.

- If the current partition of the active fixed disk is coherent and the database on the removable cartridge is not coherent, as shown in this output example, use the `chg-db:action=backup:dest=remove` command. For more information, refer to [Making a Backup of the Database to the Removable Cartridge or Removable Media](#) on page 28.

```

rlghncxa03w 09-03-01 16:07:48 GMT  EAGLE5 40.1.0
DATABASE STATUS: >> NOT OK <<
          TDM 1114 ( STDBY)          TDM 1116 ( ACTV )
          C  LEVEL    TIME LAST BACKUP  C  LEVEL    TIME LAST BACKUP
          - - - - -
FD BKUP  Y      35 09-02-01 10:19:18 GMT Y      35 09-02-01 10:19:18 GMT
FD CRNT   Y      106                    Y      106
          MDAL 1117
          - - - - -
RD BKUP  N      106 INCOHERENT

```

If the E5-MASP is being used , this is an example of the `rept-stat-db` output.

```

rlghncxa03w 09-03-01 16:07:48 GMT  EAGLE5 40.1.0
DATABASE STATUS: >> NOT OK <<
          TDM 1114 ( STDBY)          TDM 1116 ( ACTV )
          C  LEVEL    TIME LAST BACKUP  C  LEVEL    TIME LAST BACKUP
          - - - - -
FD BKUP  Y      35 09-02-01 10:19:18 GMT Y      35 09-02-01 10:19:18 GMT
FD CRNT   Y      106                    Y      106
          MCAP 1113                    MCAP 1115
          - - - - -
RD BKUP  N      106 INCOHERENT          N      106 INCOHERENT
USB BKP   -      -      -      -      Y      3 09-02-01 01:11:22 GMT

```

The `chg-db:action=backup:dest=remove` command is also used to backup the current database on both fixed disks to the removable cartridge.

- If the backup partition of both fixed disks are coherent and the current partition of both fixed disks are not coherent, use the `chg-db:action=restore:src=fixed` command. For more information, refer to [Restoring the Database from the Backup Partition of the Fixed Disk](#) on page 38. This condition is shown in this example output of the `rept-stat-db` command.

```

rlghncxa03w 09-03-01 16:07:48 GMT  EAGLE5 40.1.0

```

```

DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( STDBY)          TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP  C  LEVEL      TIME LAST BACKUP
-----
FD BKUP  Y          35 09-02-01 10:19:18 GMT  Y          35 09-02-01 10:19:18 GMT
FD CRNT  Y          35 DIFF LEVEL             N          68 INCOHERENT
      MDAL 1117
-----
RD BKUP  -          -          -          -

```

If the E5-MASP is being used , this is an example of the rept -stat -db output.

```

rlghncxa03w 09-03-01 16:07:48 GMT  EAGLE5 40.1.0
DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( STDBY)          TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP  C  LEVEL      TIME LAST BACKUP
-----
FD BKUP  Y          35 09-02-01 10:19:18 GMT  Y          35 09-02-01 10:19:18 GMT
FD CRNT  Y          35 DIFF LEVEL             N          68 INCOHERENT
      MCAP 1113
-----
RD BKUP  Y          36 09-02-01 09:27:17 GMT  Y          36 09-02-01 09:27:17 GMT
USB BKP  -          -          -          Y          3 09-02-01 01:11:22 GMT

```

- If the database on the removable cartridge is coherent and the current partition of the both fixed disks are not coherent, use the `chg-db:action=restore:src=remove` command. For more information, refer to [Restoring the Database from the Removable Cartridge or Removable Media](#) on page 41. This condition is shown in this example output of the rept -stat -db command.

```

rlghncxa03w 09-03-01 16:07:48 GMT  EAGLE5 40.1.0
DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( STDBY)          TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP  C  LEVEL      TIME LAST BACKUP
-----
FD BKUP  Y          35 09-02-01 10:19:18 GMT  Y          35 09-02-01 10:19:18 GMT
FD CRNT  Y          106 DIFF LEVEL             N          93 INCOHERENT
      MDAL 1117
-----
RD BKUP  Y          106 09-01-31 14:29:03 GMT

```

If the E5-MASP is being used , this is an example of the rept -stat -db output.

```

rlghncxa03w 09-03-01 16:07:48 GMT  EAGLE5 40.1.0
DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( STDBY)          TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP  C  LEVEL      TIME LAST BACKUP
-----
FD BKUP  Y          35 09-02-01 10:19:18 GMT  Y          35 09-02-01 10:19:18 GMT
FD CRNT  Y          106 DIFF LEVEL             N          93 INCOHERENT
      MCAP 1113
-----
RD BKUP  Y          106 09-01-31 14:29:03 GMT  Y          106 09-01-31 14:29:03 GMT
USB BKP  -          -          -          Y          3 09-01-15 01:11:22 GMT

```

- If the backup and current partitions on the active fixed disks are coherent and the backup and current partitions on the standby fixed disks are not coherent, use the `chg-db:action=repair` command. For more information, refer to [Repairing the Database](#) on page 51. This condition is shown in this example output of the rept -stat -db command.

```

rlghncxa03w 09-03-01 16:07:48 GMT  EAGLE5 40.1.0

```

```

DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( STDBY)
      C  LEVEL      TIME LAST BACKUP
      -----
FD BKUP  N          35 INCOHERENT
FD CRNT  N          106 INCOHERENT
      MDAL 1117
      -----
RD BKUP  -          -          -          -

```

If the E5-MASP is being used , this is an example of the rept -stat -db output.

```

rlghncxa03w 09-03-01 16:07:48 GMT  EAGLE5 40.1.0
DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( STDBY)
      C  LEVEL      TIME LAST BACKUP
      -----
FD BKUP  N          35 INCOHERENT
FD CRNT  N          106 INCOHERENT
      MCAP 1113
      -----
RD BKUP  Y          106 09-01-31 14:29:03 GMT
USB BKP  -          -          -          -
      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP
      -----
Y          55 DIFF LEVEL
Y          55 DIFF LEVEL
      MCAP 1115
      -----
Y          106 09-01-31 14:29:03 GMT
Y          3  09-01-15 01:11:22 GMT

```

If, after executing the appropriate change database command, the database is still not coherent, contact the Customer Care Center. Refer to [Customer Care Center](#) on page 4 for the contact information.

Backing Up the Database Locally

The **backup** procedures should be performed according to the preventive maintenance procedures in Chapter 2, "Preventive Maintenance," of the *Maintenance Manual*. The procedures copy the current database to either the nonactive (backup) partition on the fixed disk or to the removable cartridge. To backup a database, the **chg -db** command uses these parameters.

:action=backup – the operation to perform on the database, a backup of the current database

:dest – the destination of the backup operation.

- **fixed** – the backup partition of the fixed disk.
- **remove** – the removable cartridge (if Legacy control cards are installed in the EAGLE 5 ISS) or removable media (If E5-based control cards are installed in the EAGLE 5 ISS).
- **usb** – the credit card USB flash drive. The **dest=usb** parameter can be specified only if E5-based control cards are installed in the EAGLE 5 ISS.

The database can also be backed up to the FTP server. Perform the procedure [Making a Backup of the Database to the FTP Server](#) on page 659 to backup the database to the FTP server.

Making a Backup of the Database on the Fixed Disk

This procedure is used to make a backup of the database on the fixed disk using the **chg -db** command with **action=backup** and **dest=fixed** parameters.

The databases in the current partitions of both MASPs (FD CRNT) must be coherent. For more information on verifying the database, refer to [Verifying the Database](#) on page 22 .

1. Verify that the databases in the current partitions of both MASPs (FD CRNT) are coherent using the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )
      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y          35 04-06-01 10:19:18 GMT
FD CRNT Y          106
      MDAL 1117
-----
RD BKUP Y          106 04-05-31 14:29:03 GMT
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )
      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y          35 09-02-19 10:19:18 GMT
FD CRNT Y          106
      MCAP 1113
-----
RD BKUP -          -          -          -
USB BKP -          -          -          -

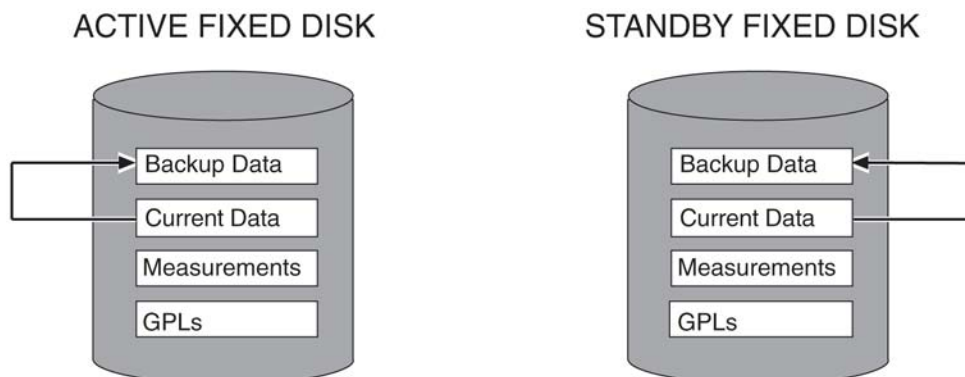
      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y          35 09-02-19 10:19:18 GMT
FD CRNT Y          106
      MCAP 1115
-----
RD BKUP Y          106 09-02-08 14:29:03 GMT
USB BKP Y           3 09-02-07 01:11:22 GMT
```

2. Enter the `chg-db:action=backup:dest=fixed` command.

This command can take up to 30 minutes to execute, depending on other system activity that is in progress when this command is entered. The action of this command is shown in [Figure 8: Backup Action on the Fixed Disk](#) on page 26.

Note: If this command takes more than 60 minutes to execute, contact the Customer Care Center for assistance. Refer to [Customer Care Center](#) on page 4 for the contact information.

Figure 8: Backup Action on the Fixed Disk



During command execution, these messages appear (the active MASP is displayed first):

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
```


BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.

3. Verify that the databases of both MASPs are coherent using the `rept-stat-db` command.

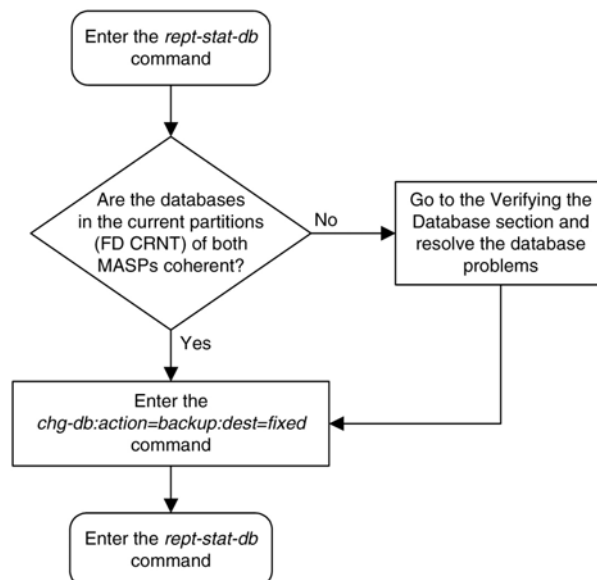
This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y      106 04-06-01 16:09:17 GMT Y      106 04-06-01 16:09:17 GMT
FD CRNT Y      106
      MDAL 1117
-----
RD BKUP Y      106 04-05-31 14:29:03 GMT
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y      106 09-03-01 16:09:18 GMT Y      106 09-03-01 16:09:18 GMT
FD CRNT Y      106
      MCAP 1113
-----
RD BKUP -      -      -      -      Y      106 09-02-08 14:29:03 GMT
USB BKP -      -      -      -      Y      3 09-02-07 01:11:22 GMT
```

Figure 9: Making a Backup of the Database to the Fixed Disk



Making a Backup of the Database to the Removable Cartridge or Removable Media

This procedure is used to make a backup of the database to the removable cartridge, removable media, or the USB credit card flash media using the `chg-db` command with the `action=backup` and `dest=remove` parameters.

The database in the current partition of the active MASP (FD CRNT) must be coherent. For more information on verifying the database, refer to [Verifying the Database](#) on page 22.

If legacy control cards are installed in the EAGLE 5 ISS, a formatted blank removable cartridge that is write enabled is required. If the removable cartridge is not formatted, perform [Formatting a Removable Cartridge](#) on page 86 and format the cartridge. To write enable a removable cartridge, refer to [MO Removable Cartridge Description](#) on page 17.

If E5-based control cards are installed in the EAGLE 5 ISS, formatted blank removable media is required. If the removable media is not formatted, perform [Formatting Removable Media or the USB Credit Card Flash Media](#) on page 105 to format the media.

1. Verify that the database in the current partition of the active MASP (FD CRNT) is coherent using the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y          35 04-06-01 10:19:18 GMT Y          35 04-06-01 10:19:18 GMT
FD CRNT Y          106
      MDAL 1117
-----
RD BKUP -          -          -          -
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y          35 09-02-19 10:19:18 GMT Y          35 09-02-19 10:19:18 GMT
FD CRNT Y          106
      MCAP 1113
-----
RD BKUP -          -          -          -
USB BKP -          -          -          -
```

If the database in the current partition of the active MASP is not coherent, refer to [Verifying the Database](#) on page 22 to resolve the database problem.

If the database in the current partition of the active MASP is coherent, or after the database problem has been resolved, continue the procedure by performing one of these steps.

- If legacy control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 2](#) on page 29.

- If E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 3](#) on page 29.
- 2. Check the removable cartridge drive for a removable cartridge.

If a removable cartridge is in the removable cartridge drive, remove the cartridge and insert a write enabled removable cartridge into the removable cartridge drive.

If a removable cartridge is not in the removable cartridge drive, insert a write enabled removable cartridge into the removable cartridge drive.

For more information on inserting and removing the removable cartridge in the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

Continue the procedure with [Step 4](#) on page 30.
- 3. The database can be backed up to the removable media in both MASP's (if the removable media in the both MASP's is present), the removable media in the active MASP (only if the removable media in the active MASP is present), or to the USB credit card flash drive.

Perform one of these substeps.

- a) If the database will be backed up to the removable media in both MASP's, check the removable media drives in both MASP's for removable media.

If removable media is present in both MASP's, continue the procedure by performing one of these steps.

- If the removable media will be used for the backup, continue the procedure with [Step 4](#) on page 30. When the backup is performed, the database in the current partition of each fixed disk is copied to the corresponding removable media on each MASP.
- If the removable media will not be used for the backup, remove the media that will not be used for the backup and insert the media that will be used for the backup. Refer to [Removable USB Drive](#) on page 20 for information about removing and inserting the removable media. After the media has been inserted into the removable media drives, continue the procedure with [Step 4](#) on page 30.

If the removable media drives in both MASP's are empty, insert the media that will be used for the backup. Refer to [Removable USB Drive](#) on page 20 for information about inserting the removable media. After the media has been inserted into the removable media drives, continue the procedure with [Step 4](#) on page 30.

If the removable media drive in only one MASP contains removable media, continue the procedure by performing one of these steps.

- If the removable media that is present will be used for the backup, insert the media that will be used for the backup into the empty removable media drive. Refer to [Removable USB Drive](#) on page 20 for information about inserting the removable media. After the media has been inserted into the removable media drive, continue the procedure with [Step 4](#) on page 30.
- If the removable media that is present will not be used for the backup, remove the media from that removable media drive and insert the media that will be used for the backup into both removable media drives. Refer to [Removable USB Drive](#) on page 20 for information about removing and inserting the removable media. After the media has been inserted into the removable media drives, continue the procedure with [Step 4](#) on page 30.

- b) If the database will be backed up to the removable media in only one MASP, the removable media must be inserted in the removable media drive on the active MASP. Check the removable media drives in both MASPs for removable media.

If removable media is inserted into the removable media drive on active MASP and no removable media is inserted into the removable media drive on the standby MASP, and this media will be used for the backup, continue the procedure with [Step 4](#) on page 30. When the backup is performed, the database in the current partition of the fixed disk on the active MASP is copied to the removable media on the active MASP.

If removable media is inserted into the removable media drive on active MASP and no removable media is inserted into the removable media drive on the standby MASP, and this media will not be used for the backup, remove the media from the removable media drive and insert the media that will be used for the backup into the removable media drive on the active MASP. After the media has been inserted, continue the procedure with [Step 4](#) on page 30.

If removable media is inserted into the removable media drive on standby MASP and no removable media is inserted into the removable media drive on the active MASP, remove the media from the removable media drive and insert the media that will be used for the backup into the removable media drive on the active MASP. After the media has been inserted, continue the procedure with [Step 4](#) on page 30.

If removable media drives in both MASPs are empty, insert the media that will be used for the backup into the removable media drive on the active MASP. After the media has been inserted, continue the procedure with [Step 4](#) on page 30.

- c) If the database will be backed up to the USB credit card flash media, the USB credit card flash media must be inserted in the USB credit card flash media on the active MASP. Check the USB credit card flash media drive on the active MASP for the USB credit card flash media.

If you wish to use this media for the backup, continue the procedure with [Step 4](#) on page 30.

If you do not wish to use this media for the backup, remove the USB credit card flash media from the USB credit card flash media drive on the active MASP and insert the USB credit card flash media into the USB credit card flash media drive on the active MASP that will be used for the backup. After the USB credit card flash media has been inserted, continue the procedure with [Step 4](#) on page 30.

4. Backup the data base by performing one of these substeps.

- a) If the database is being backup to a removable cartridge or removable media, enter this command.

```
chg-db:action=backup:dest=remove
```

During command execution, these messages should appear.

```
BACKUP (REMOVABLE) : MASP A - Backup starts on active MASP.  
BACKUP (REMOVABLE) : MASP A - Backup to removable device complete.
```

Note: This command can take up to 30 minutes to execute, depending on the size of the database and other system activity that is in progress when this command is entered. If this command takes more than 60 minutes to execute, contact the Customer Care Center for assistance. Refer to [Customer Care Center](#) on page 4 for the contact information.

After this command has completed, continue the procedure with [Step 5](#) on page 31.

- b) If the database is being backup to the USB credit card flash media, enter this command.

```
chg-db:action=backup:dest=usb
```

During command execution, these messages should appear.

```
BACKUP (USB) : MASP A - Backup starts on active MASP.
BACKUP (USB) : MASP A - Backup to usb device complete.
```

Note: This command can take up to 30 minutes to execute, depending on the size of the database and other system activity that is in progress when this command is entered. If this command takes more than 60 minutes to execute, contact the Customer Care Center for assistance. Refer to [Customer Care Center](#) on page 4 for the contact information.

After this command has completed, continue the procedure with [Step 5](#) on page 31.

5. Verify that the databases on the removable cartridge (RD BKUP), the removable media (RD BKUP on both MASPs or the active MASP if the backup was performed only to the removable media on the active MASP), or the USB credit card flash media (USB BKP), and the current partition of the active MASP (FD CRNT) are coherent using the `rept -stat -db` command.

If the database was backed up to the removable cartridge, this is an example of the possible output.

```
rlghncxa03w 06-10-01 16:11:34 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y          35 04-06-01 10:19:18 GMT Y          35 04-06-01 10:19:18 GMT
FD CRNT Y          106
      MDAL 1117
-----
RD BKUP Y          106 04-05-31 16:09:53 GMT
```

If the database was backed up to the removable media, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y          35 09-02-19 10:19:18 GMT Y          35 09-02-19 10:19:18 GMT
FD CRNT Y          106
      MCAP 1113
-----
RD BKUP Y          106 09-03-23 16:09:53 GMT Y          106 09-03-23 16:09:53 GMT
USB BKP -          -          -          -          -          -
```

Note: If the database was backed up to only the removable media on the active MASP, then only the RD BKUP entry for the active MASP (in this example, MCAP 1115) is displayed.

If the database was backed up to the USB credit card flash media, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
```

FD BKUP	Y		35	09-02-19	10:19:18	GMT	Y		35	09-02-19	10:19:18	GMT
FD CRNT	Y		106				Y		106			
		MCAP	1113						MCAP	1115		
RD BKUP	-	-	-	-	-	-	-	-	-	-	-	-
USB BKP	-	-	-	-	-	-	Y		106	09-03-23	16:09:53	GMT

- Remove the removable cartridge from the removable cartridge drive on the MDAL card. Perform one of these actions.

If the database was backed up to the removable cartridge, remove the removable cartridge from the removable cartridge drive on the MDAL card. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

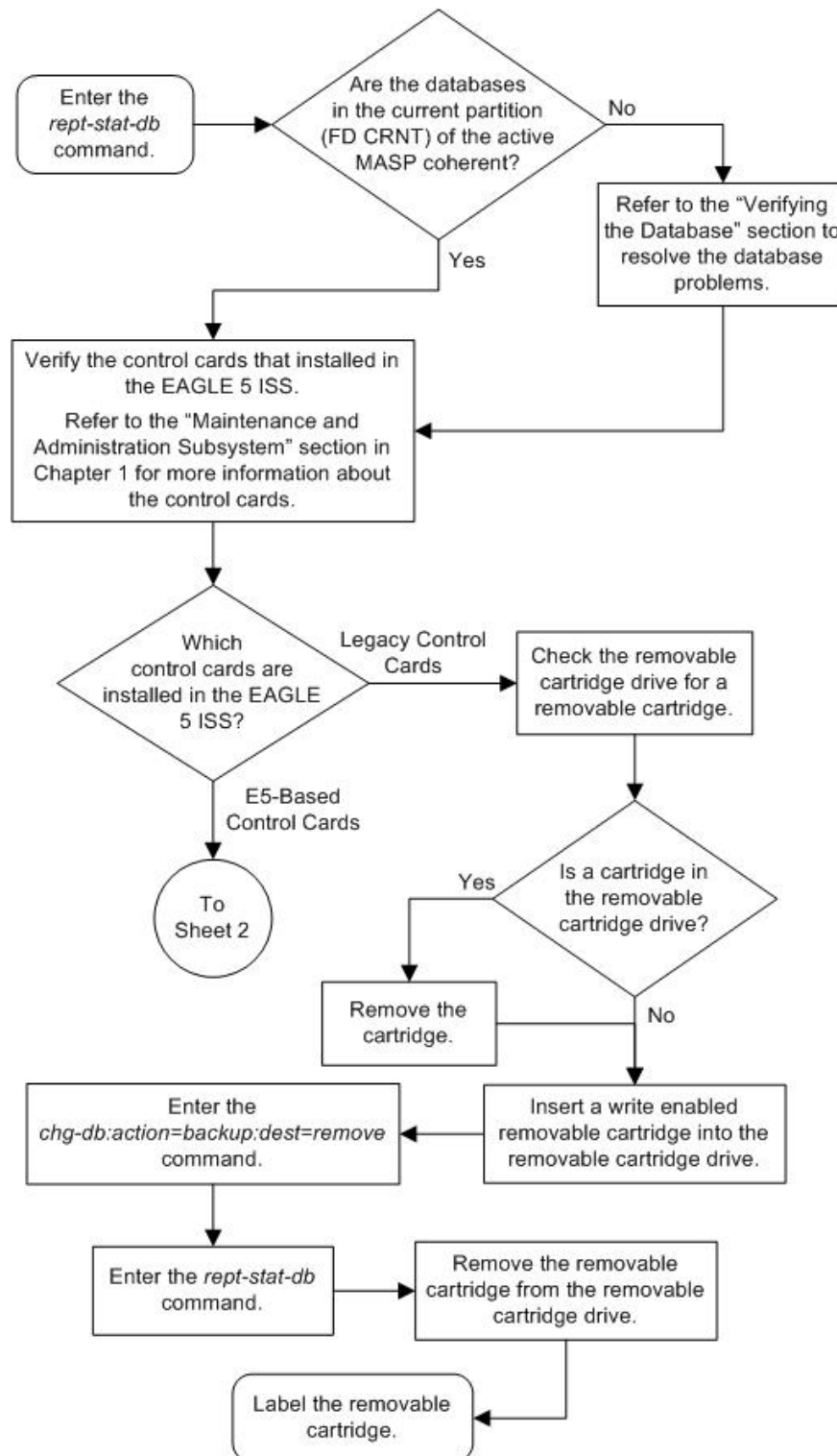
If the database was backed up to the removable media, remove the removable media from the removable media drives on the MASPs. For more information on removing the removable media from the removable media drives, refer to [Removable USB Drive](#) on page 20.

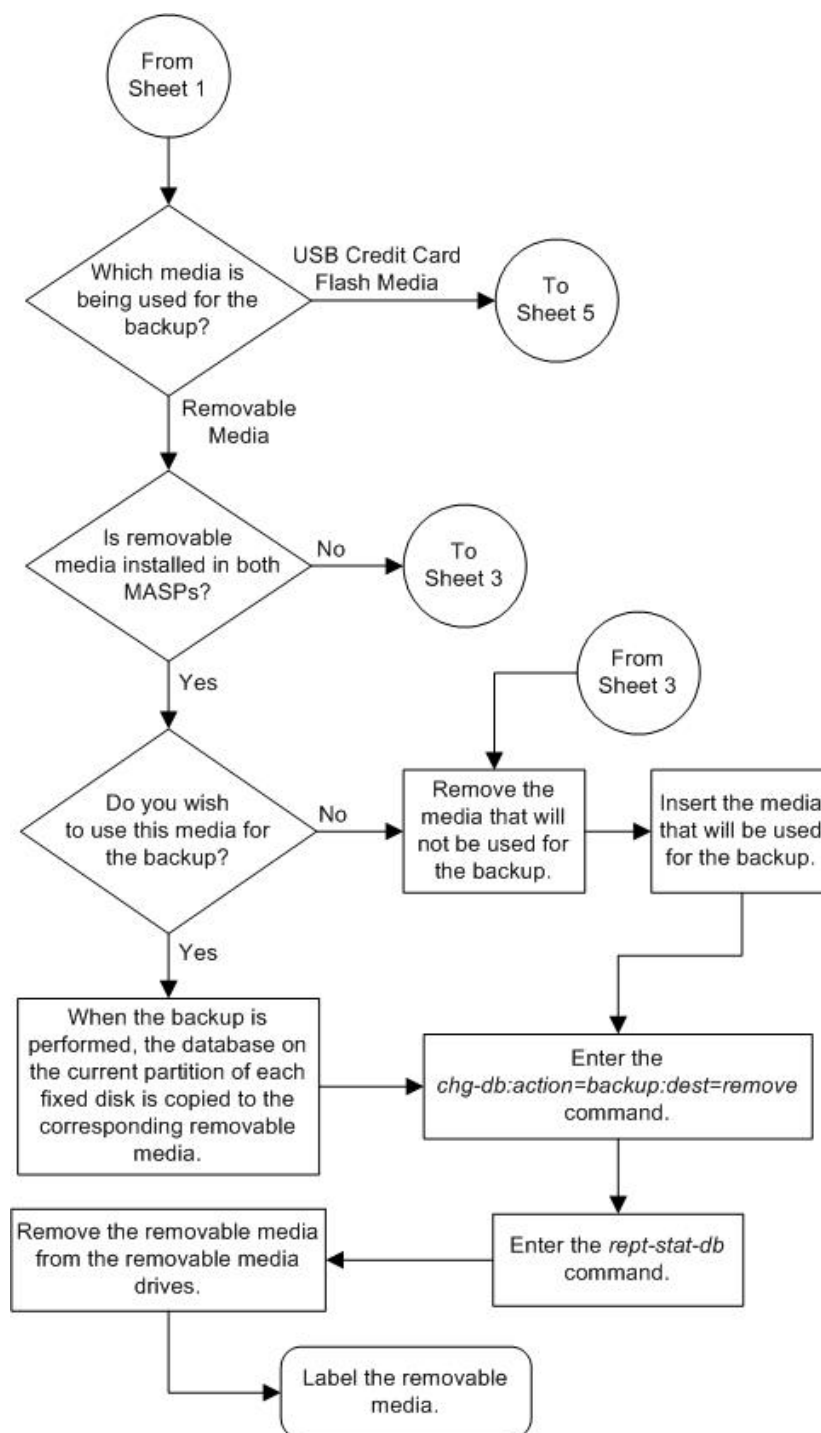
If the database was backed up to the USB credit card flash media, remove the USB credit card flash media from the USB credit card flash media drive on the active MASP.

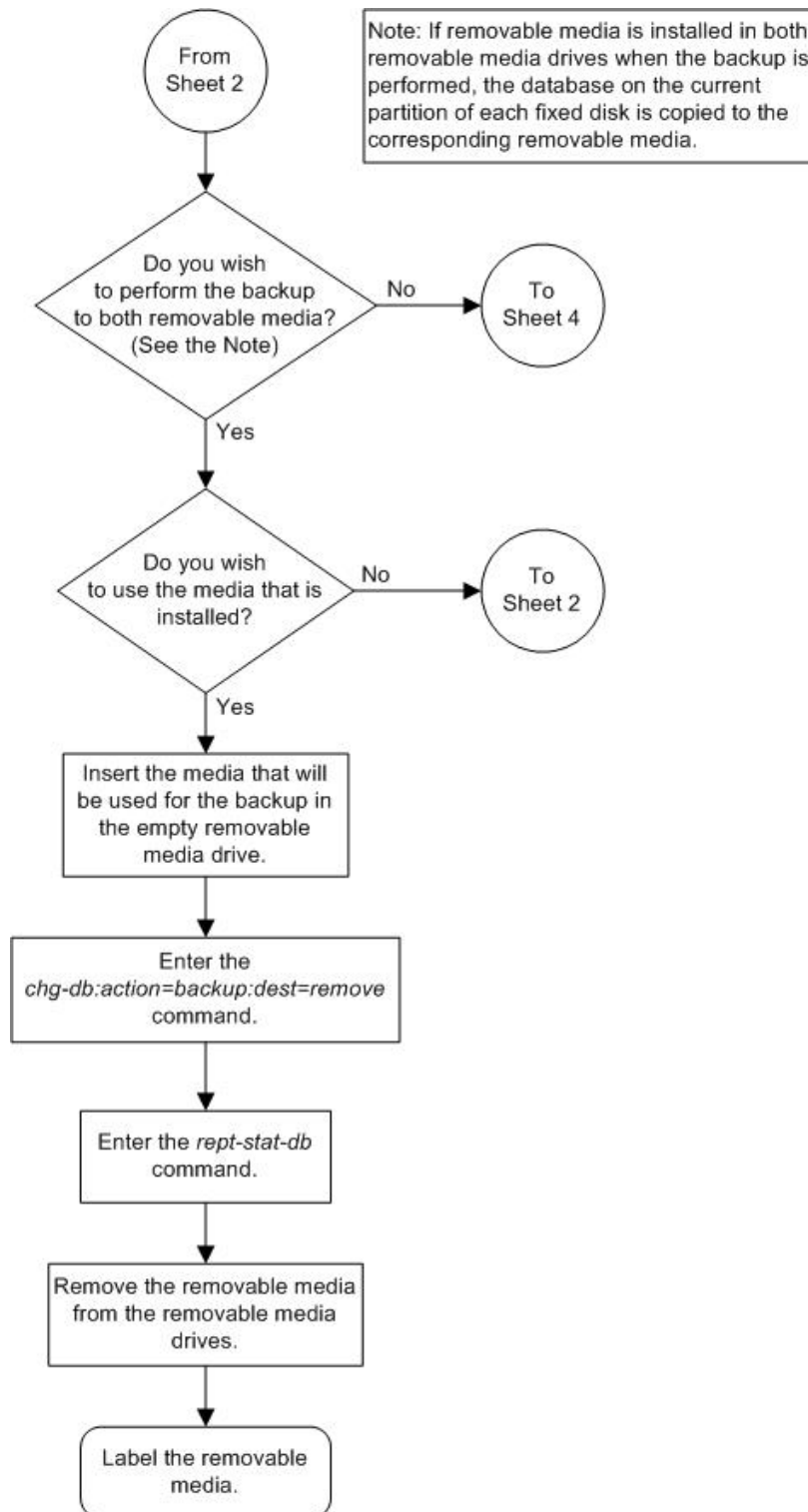
- Label the removable cartridge, removable media, or USB credit card flash media, 1 through 4 if the backup is performed weekly or monthly, A through D if the backup is performed quarterly.

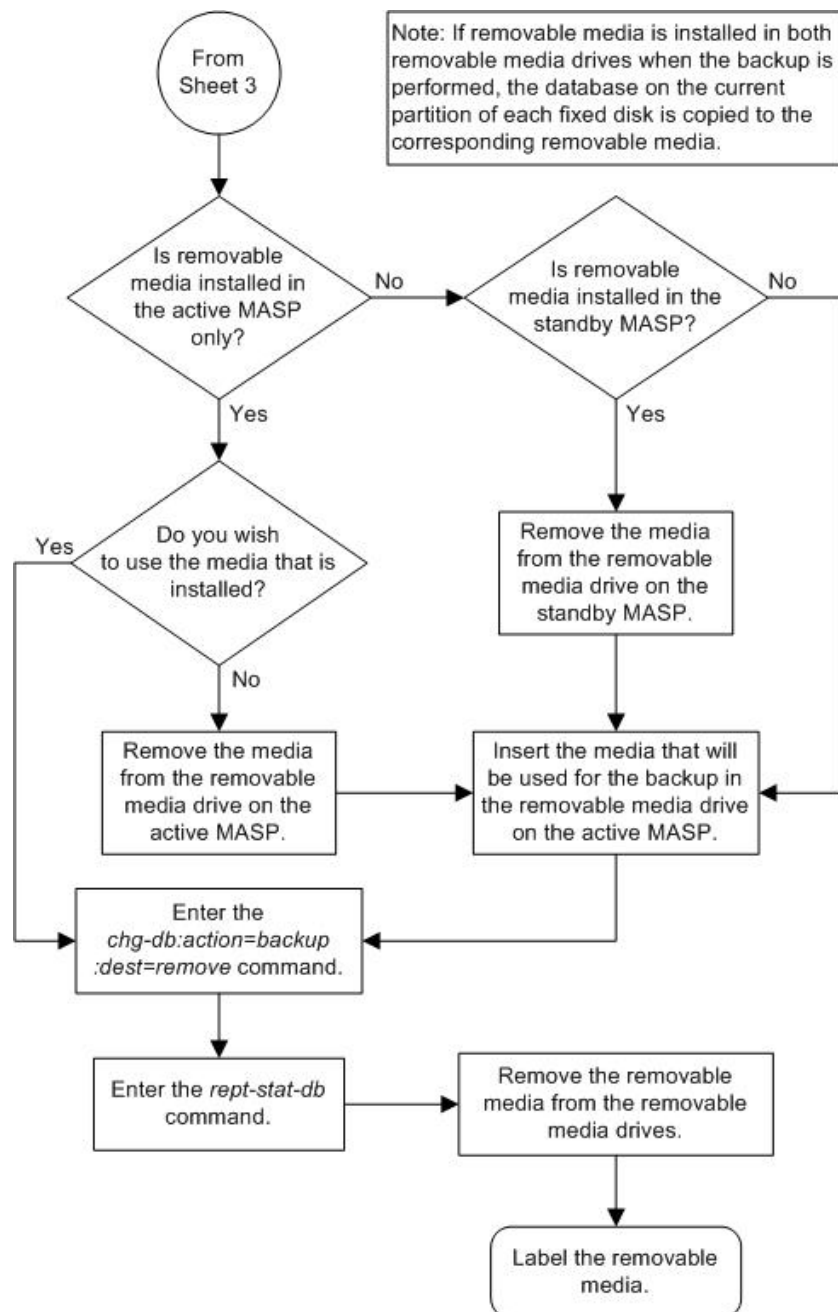
For more information on labeling the removable cartridge, removable media, or USB credit card flash media, see Chapter 2, "Preventive Maintenance," in the *Maintenance Manual*.

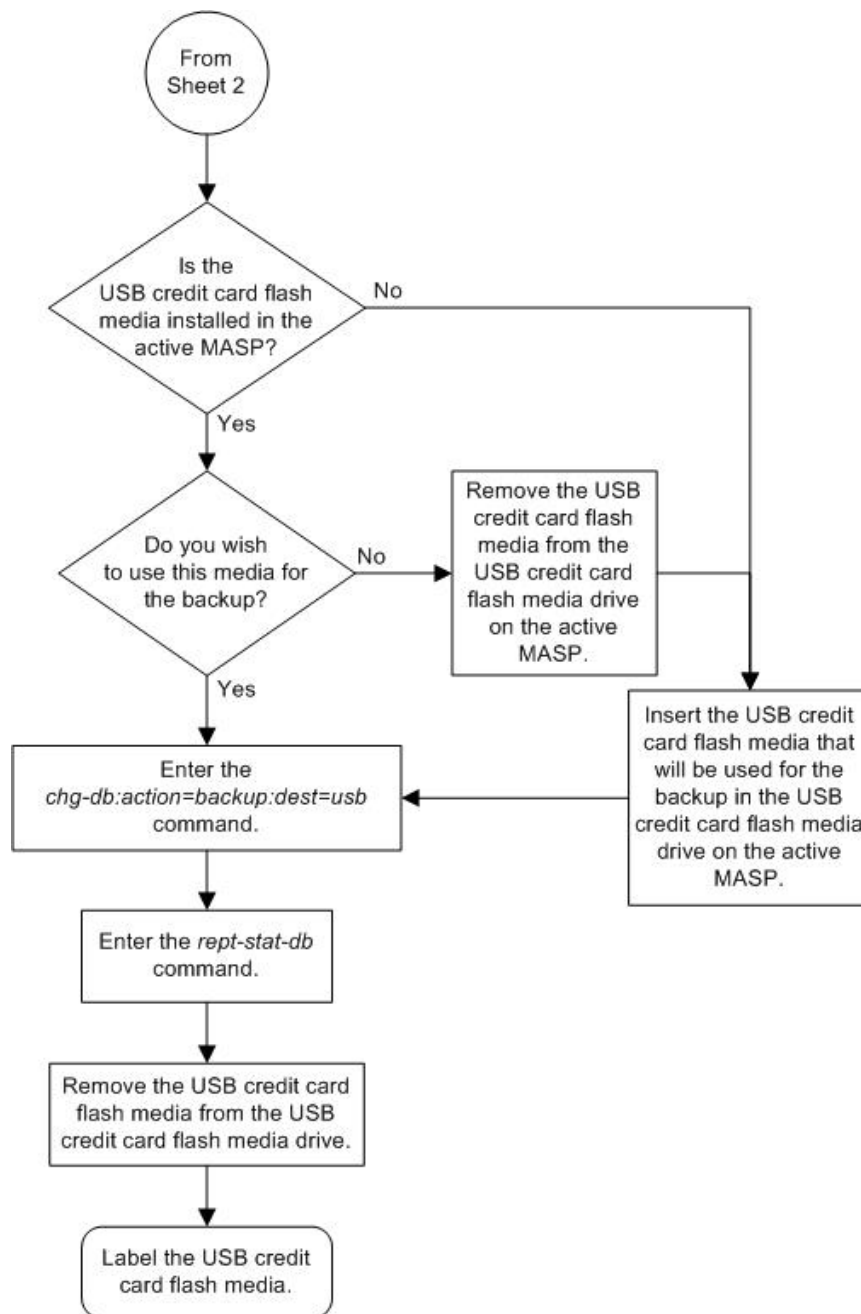
Figure 10: Making a Backup of the Database to the Removable Cartridge or Removable Media











Restoring the Database Locally

The **restore** procedures are used to bring a database from the backup partition of both MASPs and load the database onto the current partitions of both MASPs. It is also used to load a database from a removable cartridge onto the current partitions of both MASPs. To restore a database, the `chg - db` command uses these parameters.

:action=restore – the operation to perform on the database, restoring a previously backed up database

:src – the source of the database that is being restored.

- fixed – the backup partition of the fixed disk.
- remove – the removable cartridge (if Legacy control cards are installed in the EAGLE 5 ISS) or removable media (If E5-based control cards are installed in the EAGLE 5 ISS).
- usb – the credit card USB flash drive. The src=usb parameter can be specified only if E5-based control cards are installed in the EAGLE 5 ISS.

The database can also be restored from the FTP server. Perform the procedure [Restoring the Database from the FTP Server](#) on page 664, to restore the database from the FTP server.



CAUTION

CAUTION: If the restore device state option is on, shown by the ON value for the RSTRDEV field in the rtrv-stpopts command output, the state of the cards, SS7 signaling links, TCP/IP data links, and terminals before the chg-db:action=restore and init-sys commands are performed will not be maintained after these commands are performed. The persistent device state table becomes obsolete and is disabled. UIM 1257 is generated.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
1234.1257    SYSTEM          INFO  DB Restore has cleared and disabled PDS
```

Restoring the Database from the Backup Partition of the Fixed Disk

This procedure is used to restore the database from the backup partition of the fixed disk using the chg-db command with the action=restore and src=fixed parameters.

The databases in the backup partitions of both MASP's (RD BKUP) must be coherent. For more information on verifying the database, refer to [Verifying the Database](#) on page 22.



CAUTION

CAUTION: Using the action=restore parameter with the chg-db command is an emergency recovery procedure, and requires the init-sys command to download the restored database to all the cards in the EAGLE 5 ISS.

1. Verify that the databases in the backup partitions of both MASP's (FD BKUP) are coherent using the rept-stat-db command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP  Y          35 04-06-01 10:19:18 GMT  Y          35 04-06-01 10:19:18 GMT
FD CRNT  Y          106
MDAL 1117
-----
RD BKUP  -          -          -          -
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
```

```

DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )
      C  LEVEL      TIME LAST BACKUP
      -----
FD BKUP Y          35 09-02-19 10:19:18 GMT
FD CRNT Y          106
      MCAP 1113
      -----
RD BKUP -          -          -          -
USB BKP -          -          -          -

      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP
      -----
FD BKUP Y          35 09-02-19 10:19:18 GMT
FD CRNT Y          106
      MCAP 1115
      -----
RD BKUP -          -          -          -
USB BKP -          -          -          -

```

- Enter the `chg-db:action=restore:src=fixed` command.

This command can take up to 30 minutes to execute, depending on other system activity that is in progress when this command is entered.

Note: If this command takes more than 60 minutes to execute, contact the Customer Care Center for assistance. Refer to [Customer Care Center](#) on page 4 for the contact information.

During command execution, these messages appear (the active MASP is displayed first):

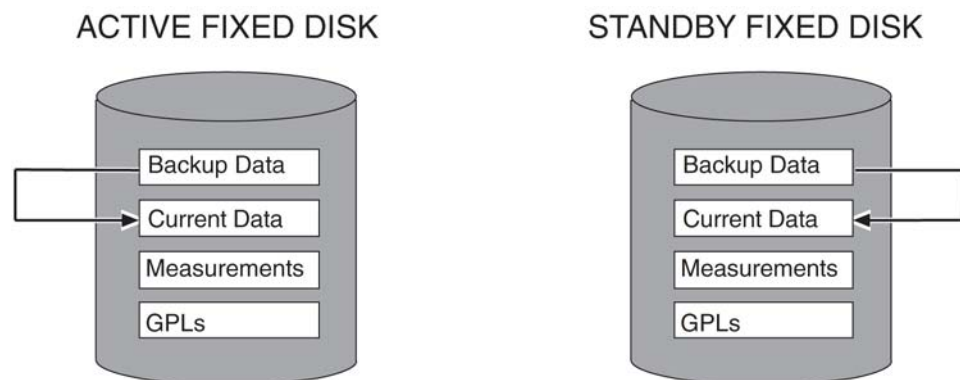
```

RESTORE (FIXED) : MASP A - Restore starts on active MASP.
RESTORE (FIXED) : MASP A - Restore from fixed disk on active MASP complete.
RESTORE (FIXED) : MASP A - Restore starts on standby MASP.
RESTORE (FIXED) : MASP A - MASP(s) will reboot to load data.
RESTORE (FIXED) : MASP A - Restore from fixed disk on stdby MASP complete.

```

The action of this command is shown in [Figure 11: Restore Action on the Fixed Disk](#) on page 39.

Figure 11: Restore Action on the Fixed Disk



- When the commands have successfully completed, re-initialize the EAGLE 5 ISS using the `init-sys` command.



CAUTION

CAUTION: The `init-sys` command causes a complete reload of the EAGLE 5 ISS, and should only be used during periods of low traffic. Using this command ensures that all cards are running the same database, but will interrupt service.

Note: The `init-sys` command must be entered twice within 30 seconds for the EAGLE 5 ISS to be re-initialized. If the `init-sys` command is not executed twice within 30 seconds, the attempt to re-initialize the EAGLE 5 ISS is aborted.

When the `init-sys` command is first entered, this message should appear.

```
rlghncxa03w 06-10-01 07:05:01 GMT EAGLE5 36.0.0
```

CAUTION: This command causes a complete system reload, and will result in traffic loss.
Re-enter command within 30 seconds to confirm.

When the `init-sys` command is re-entered within the 30 second time limit, this message should appear.

```
rlghncxa03w 06-10-01 07:05:17 GMT EAGLE5 36.0.0
Init System command issued at terminal #3
```

From the time that the `init-sys` command is accepted, you must wait approximately 2 minutes before you can perform step 4 (logging into the EAGLE 5 ISS). If the EAGLE 5 ISS terminal is in the VT-100/VT-320 mode, the terminal display will be refreshed with non-zero alarm counts. During this 2 minutes interval, an intermediate screen refresh caused by the MASP's role change from active to standby, and from standby to active. This screen refresh is typically a partial refresh and the alarm indicators are set to zero.

If you are logged into the EAGLE 5 ISS in the KSR mode, the only response you will receive that you are now able to log into the EAGLE 5 ISS is that you will receive UAM 0009, MASP became active. UAM 0009 could be issued twice due to possible transient MASP role change (switching from active to standby). Following the execution of the `init-sys` command, the MASP that was active before the `init-sys` command was entered will be the active MASP when the EAGLE 5 ISS has finished reinitializing.

4. Log into the EAGLE 5 ISS using the `login` or `act-user` command.

This is an example of the messages that appear when you have successfully logged onto the EAGLE 5 ISS.

```
NOTICE: This is a private computer system.
Unauthorized access or use may lead to prosecution.

0 LOGIN failures since last successful LOGIN
Last successful LOGIN was on port 4 on 04-06-01 @ 09:34:56
```

5. Verify that the databases of both MASPs are coherent using the `rept-stat-db` command.

This is an example of the possible output.

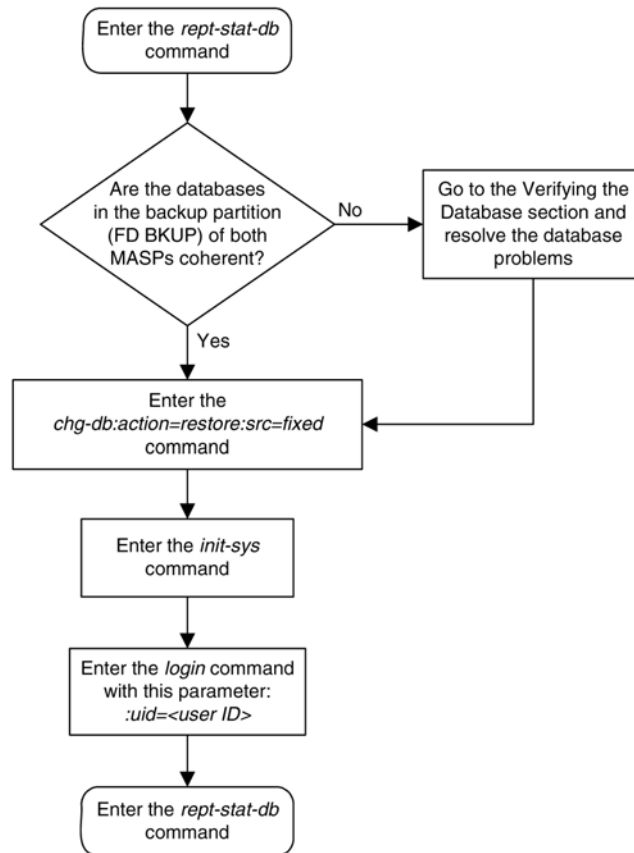
```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )          TDM 1116 ( ACTV )
      C  LEVEL    TIME LAST BACKUP  C  LEVEL    TIME LAST BACKUP
      - - - - -
FD BKUP Y         35 04-06-01 10:19:18 GMT Y         35 04-06-01 10:19:18 GMT
FD CRNT Y         35
      MDAL 1117
      - - - - -
RD BKUP -         -         -         -
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )          TDM 1116 ( ACTV )
      C  LEVEL    TIME LAST BACKUP  C  LEVEL    TIME LAST BACKUP
      - - - - -
FD BKUP Y         35 09-02-19 10:19:18 GMT Y         35 09-02-19 10:19:18 GMT
FD CRNT Y         35
```

	MCAP 1113				MCAP 1115			
	- - - - -				- - - - -			
RD BKUP	-	-	-	-	-	-	-	-
USB BKP	-	-	-	-	-	-	-	-

Figure 12: Restoring the Database from the Fixed Disk



Restoring the Database from the Removable Cartridge or Removable Media

This procedure is used to restore the database from the removable cartridge, removable media, or the USB credit card flash media using the *chg-db* command with the *action=restore* and *src=remove* parameters.

If the database is being restored from a removable cartridge, the database on the removable cartridge (RD BKUP) must be coherent. . If the database is being restored from removable media, removable media that contains the database being restored must be inserted into the removable media drives on both MASP's. The database on the removable media (RD BKUP) must be coherent and the database levels on both media must be the same. If the database is being restored from the USB credit card flash media, the USB credit card flash media that contains the database being restored must be inserted into the USB credit card flash media drive on the active MASP. The database on the USB credit card flash media (USB BKP) must be coherent. If the database on the removable cartridge, the removable media, or the USB credit card flash media is not coherent, or if the database levels on the removable media are not the same, contact the Customer Care Center for assistance. Refer to [Customer Care Center](#) on page 4 for the contact information.

If the database is being restored from a removable cartridge, the removable cartridge should be write protected. To write protect a removable cartridge, refer to [MO Removable Cartridge Description](#) on page 17.



CAUTION: Using the `action=restore` parameter with the `chg-db` command is an emergency recovery procedure, and requires the `init-sys` command to download the restored database to all the cards in the EAGLE 5 ISS.

1. Verify the control cards that are installed in the EAGLE 5 ISS.

Refer to [Maintenance and Administration Subsystem](#) on page 7 for information about the control cards.

If legacy control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 2](#) on page 42.

If E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 4](#) on page 42.

2. Check the removable cartridge drive on the MDAL card for a removable cartridge.

If there is a removable cartridge in the drive, remove it. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19. Continue the procedure with [Step 3](#) on page 42.

If there is no removable cartridge in the drive, continue the procedure with [Step 3](#) on page 42.

3. Insert the removable cartridge that contains the database configuration to be restored into the removable cartridge drive on the MDAL card.

For more information on inserting the removable cartridge in the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

Continue the procedure with [Step 5](#) on page 43.

4. The database can be restored from either the removable media or the USB credit card flash media.

Perform one of these substeps.

- a) If the database will be restored from removable media, removable media containing the database that is being restored must be inserted into the removable media drives on both MASP. Check the removable media drives in both MASPs for removable media.

If removable media is present in both MASPs, continue the procedure by performing one of these steps.

- If the removable media will be used to restore the database, continue the procedure with [Step 5](#) on page 43. When the database is restored, the database on the removable media in each MASP is copied to the in the current partition of the corresponding fixed disk on each MASP.
- If the removable media will not be used to restore that database, remove the media that will not be used to restore the database and insert the media that will be used to restore the database. Refer to [Removable USB Drive](#) on page 20 for information about removing and inserting the removable media. After the media has been inserted into the removable media drives, continue the procedure with [Step 5](#) on page 43.

If removable media drives in both MASPs are empty, insert the media that will be used to restore the database. Refer to [Removable USB Drive](#) on page 20 for information about inserting

the removable media. After the media has been inserted into the removable media drives, continue the procedure with [Step 5](#) on page 43.

If the removable media drive in only one MASP contains removable media, continue the procedure by performing one of these steps.

- If the removable media that is present will be used to restore the database, insert the media that will be used to restore the database into the empty removable media drive. Refer to [Removable USB Drive](#) on page 20 for information about inserting the removable media. After the media has been inserted into the removable media drive, continue the procedure with [Step 5](#) on page 43.
 - If the removable media that is present will not be used to restore the database, remove the media from that removable media drive and insert the media that will be used to restore the database into both removable media drives. Refer to [Removable USB Drive](#) on page 20 for information about removing and inserting the removable media. After the media has been inserted into the removable media drives, continue the procedure with [Step 5](#) on page 43.
- b) If the database will be restore from the USB credit card flash media, the USB credit card flash media that contains the database that is being restore must be inserted in the USB credit card flash media on the active MASP. Check the USB credit card flash media drive on the active MASP for the USB credit card flash media.

If you wish to use this media to restore the database, continue the procedure with [Step 5](#) on page 43.

If you do not wish to use this media to restore the database, remove the USB credit card flash media from the USB credit card flash media drive on the active MASP and insert the USB credit card flash media into the USB credit card flash media drive on the active MASP that will be used to restore the database. After the USB credit card flash media has been inserted, continue the procedure with [Step 5](#) on page 43.

5. Verify that the database on the removable cartridge (RD BKUP), the removable media (RD BKUP on both MASPs), or the USB credit card flash media (USB BKP), is coherent using the `rept-stat-db` command.

If the database is being restored from removable media, the database levels on the media must be the same.

If the database is being restored from a removable cartridge, this is an example of the possible output.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY)                TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP    C  LEVEL      TIME LAST BACKUP
-----
FD BKUP  Y          35 04-06-01 10:19:18 GMT  Y          35 04-06-01 10:19:18 GMT
FD CRNT  Y          95
MDAL 1117
-----
RD BKUP  Y          106 04-05-31 20:27:53 GMT
```

If the database is being restored from removable media, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
```

```

DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )
      C  LEVEL      TIME LAST BACKUP
      -  - - - - -
FD BKUP Y          35 09-02-19 10:19:18 GMT
FD CRNT Y          95
      MCAP 1113
      -  - - - - -
RD BKUP Y          106 09-03-23 16:09:53 GMT
USB BKP -          -      -      -      -

      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP
      -  - - - - -
Y          35 09-02-19 10:19:18 GMT
Y          95
      MCAP 1115
      -  - - - - -
Y          106 09-03-23 16:09:53 GMT
-          -      -      -      -

```

If the database is being restored from the USB credit card flash media, this is an example of the possible output.

```

rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )
      C  LEVEL      TIME LAST BACKUP
      -  - - - - -
FD BKUP Y          35 09-02-19 10:19:18 GMT
FD CRNT Y          95
      MCAP 1113
      -  - - - - -
RD BKUP -          -      -      -      -
USB BKP -          -      -      -      -

      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP
      -  - - - - -
Y          35 09-02-19 10:19:18 GMT
Y          95
      MCAP 1115
      -  - - - - -
-          -      -      -      -
Y          106 09-03-23 16:09:53 GMT

```

If the database on the removable cartridge, the removable media, or the USB credit card flash media is not coherent, or if the database levels on the removable media are not the same, contact the Customer Care Center for assistance. Refer to [Customer Care Center](#) on page 4 for the contact information.

6. Restore the database by performing one of these substeps.
 - a) If the database is being restored from a removable cartridge or removable media, enter this command.

```
chg-db:action=restore:src=remove
```

During command execution, these messages should appear.

```

RESTORE (REMOVABLE) : MASP A - Restore starts on active MASP.
RESTORE (REMOVABLE) : MASP A - Restore starts on standby MASP.
RESTORE (REMOVABLE) : MASP A - MASP(s) will reboot to load data.
RESTORE (REMOVABLE) : MASP A - Restore from removable drive complete.

```

Note: This command can take up to 30 minutes to execute, depending on the size of the database and other system activity that is in progress when this command is entered. If this command takes more than 60 minutes to execute, contact the Customer Care Center for assistance. Refer to [Customer Care Center](#) on page 4 for the contact information.

After this command has completed, continue the procedure with [Step 7](#) on page 45.

- b) If the database is being backup to the USB credit card flash media, enter this command.

```
chg-db:action=restore:src=usb
```

During command execution, these messages should appear.

```

RESTORE (USB) : MASP A - Restore starts on active MASP.
RESTORE (USB) : MASP A - Restore starts on standby MASP.

```

```
RESTORE (USB) : MASP A - MASP(s) will reboot to load data.  
RESTORE (USB) : MASP A - Restore from usb drive complete.
```

Note: This command can take up to 30 minutes to execute, depending on the size of the database and other system activity that is in progress when this command is entered. If this command takes more than 60 minutes to execute, contact the Customer Care Center for assistance. Refer to [Customer Care Center](#) on page 4 for the contact information.

After this command has completed, continue the procedure with [Step 7](#) on page 45.

Note: The `init-sys` command causes a complete reload of the EAGLE 5 ISS, and should only be used during periods of low traffic. Using this command ensures that all cards are running the same database, but will interrupt service.

7. When the commands have successfully completed, re-initialize the EAGLE 5 ISS using the `init-sys` command.

Note: The `init-sys` command must be entered twice within 30 seconds for the EAGLE 5 ISS to be re-initialized. If the `init-sys` command is not executed twice within 30 seconds, the attempt to re-initialize the EAGLE 5 ISS is aborted.

When the `init-sys` command is first entered, this message should appear.

```
rlghncxa03w 06-10-01 07:05:01 GMT EAGLE5 36.0.0  
CAUTION: This command causes a complete system reload, and  
will result in traffic loss.  
Re-enter command within 30 seconds to confirm.
```

When the `init-sys` command is re-entered within the 30 second time limit, this message should appear.

```
rlghncxa03w 06-10-01 07:05:17 GMT EAGLE5 36.0.0  
Init System command issued at terminal #3
```

From the time that the `init-sys` command is accepted, you must wait approximately 2 minutes before you can perform [Step 8](#) on page 45 (logging into the EAGLE 5 ISS). If the EAGLE 5 ISS terminal is in the VT-100/VT-320 mode, the terminal display will be refreshed with non-zero alarm counts. During this 2 minutes interval, an intermediate screen refresh caused by the MASPs role change from active to standby, and from standby to active. This screen refresh is typically a partial refresh and the alarm indicators are set to zero.

If you are logged into the EAGLE 5 ISS in the KSR mode, the only response you will receive that you are now able to log into the EAGLE 5 ISS is that you will receive UAM 0009, MASP became active. UAM 0009 could be issued twice due to possible transient MASP role change (switching from active to standby). Following the execution of the `init-sys` command, the MASP that was active before the `init-sys` command was entered will be the active MASP when the EAGLE 5 ISS has finished reinitializing.

8. Log into the EAGLE 5 ISS using the `login` or `act-user` command.

This is an example of the messages that appear when you have successfully logged into the EAGLE 5 ISS.

```
NOTICE: This is a private computer system.  
Unauthorized access or use may lead to prosecution.  
  
0 LOGIN failures since last successful LOGIN  
Last successful LOGIN was on port 4 on 04-06-01 @ 09:34:56
```

9. Verify that the databases on the removable cartridge (RD BKUP), the removable media (RD BKUP on both MASPs), or the USB credit card flash media (USB BKP), and the current partitions of both MASPs (FD CRNT) are coherent using the `rept -stat -db` command.

If the database was restored from the removable cartridge, this is an example of the possible output.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y          35 04-06-01 10:19:18 GMT Y          35 04-06-01 10:19:18 GMT
FD CRNT Y          106
      MDAL 1117
-----
RD BKUP Y          106 04-05-31 20:27:53 GMT
```

If the database was restored from removable media, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y          35 09-02-19 10:19:18 GMT Y          35 09-02-19 10:19:18 GMT
FD CRNT Y          106
      MCAP 1113
-----
RD BKUP Y          106 09-03-23 16:09:53 GMT Y          106 09-03-23 16:09:53 GMT
USB BKP -          -          -          -          -          -          -          -
```

If the database was restored from the USB credit card flash media, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y          35 09-02-19 10:19:18 GMT Y          35 09-02-19 10:19:18 GMT
FD CRNT Y          106
      MCAP 1113
-----
RD BKUP -          -          -          -          -          -          -          -
USB BKP -          -          -          -          Y          106 09-03-23 16:09:53 GMT
```

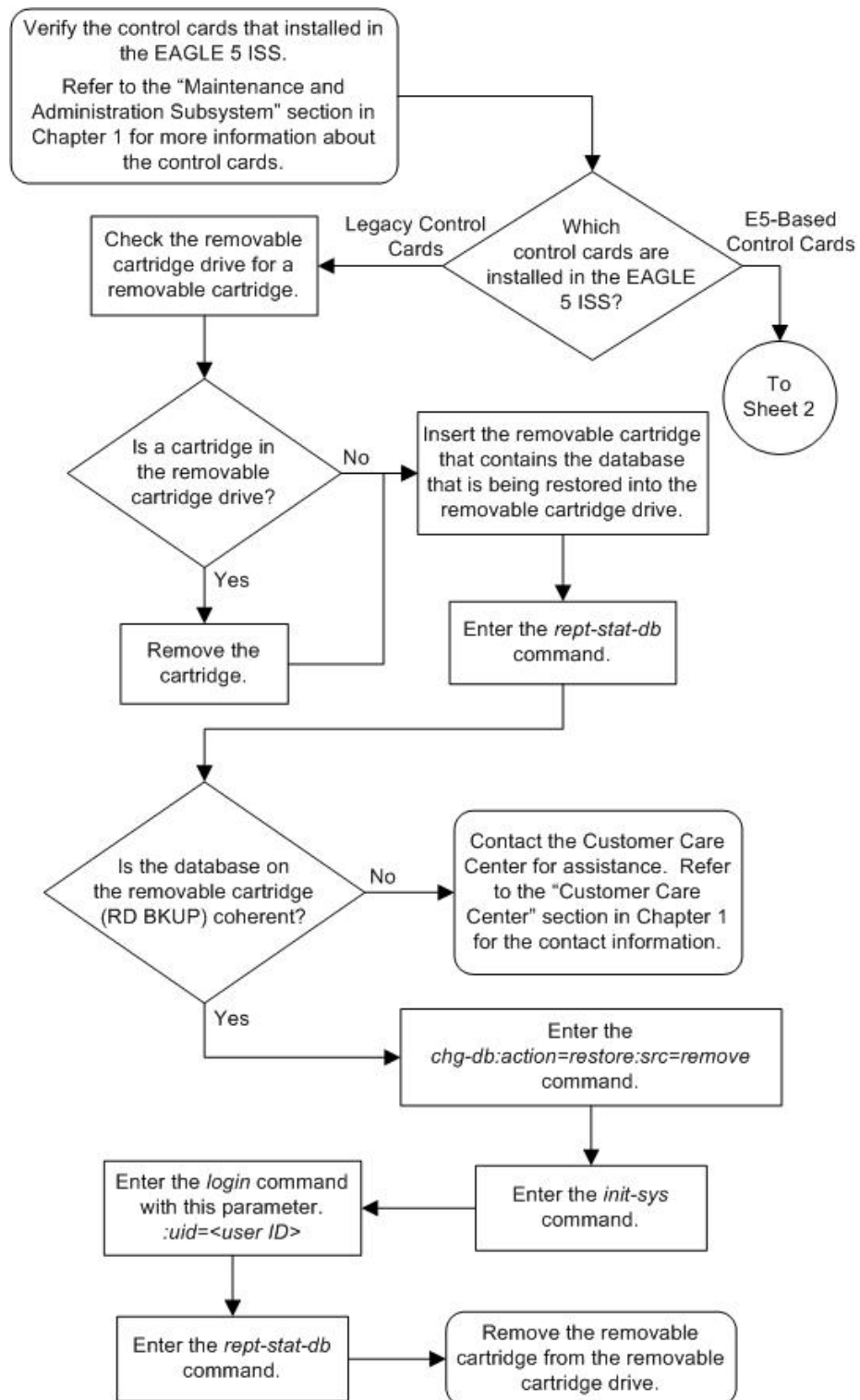
If the database was restored from either removable media or the USB credit card flash media, this procedure is finished.

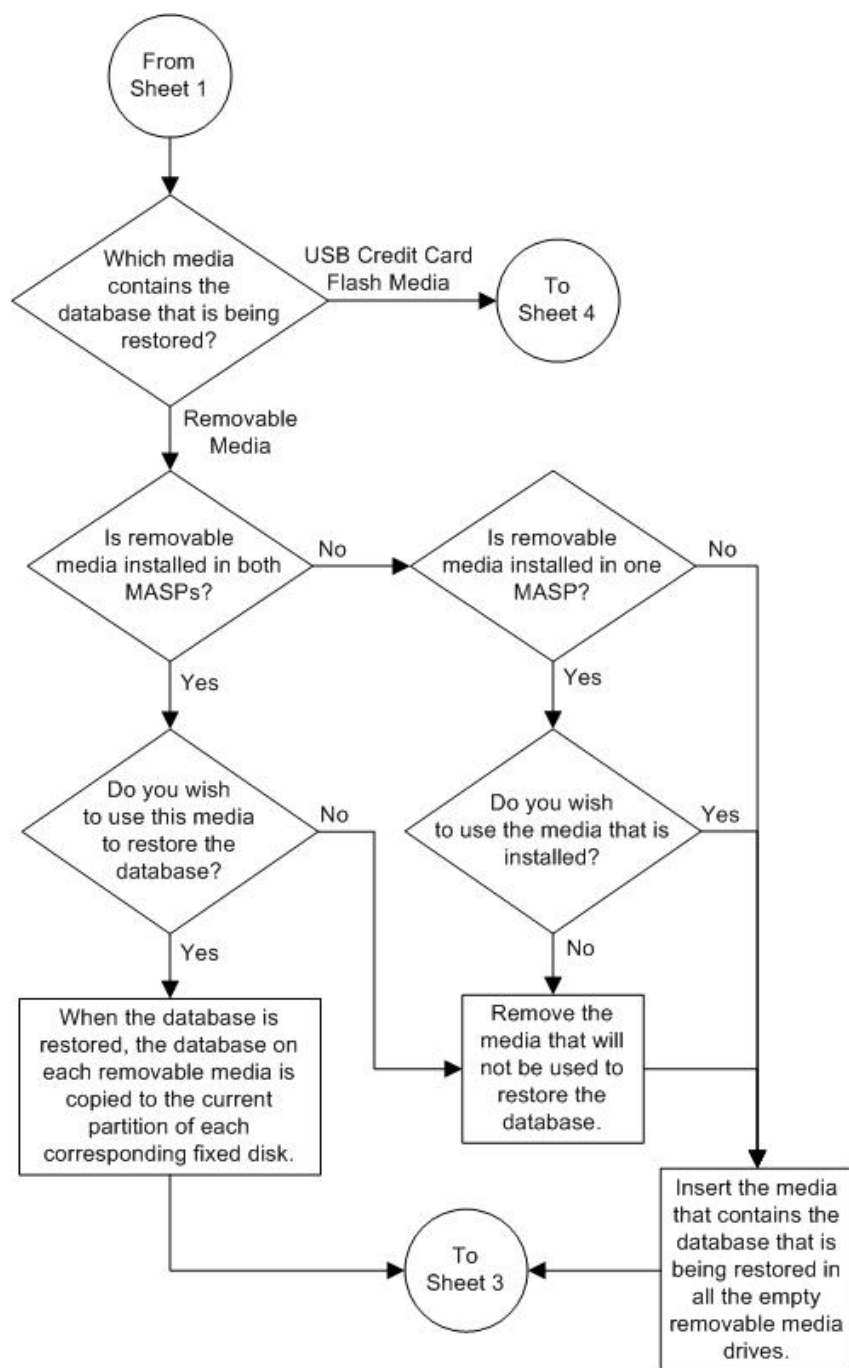
If the database was restored from the removable cartridge, continue the procedure with [Step 10](#) on page 46.

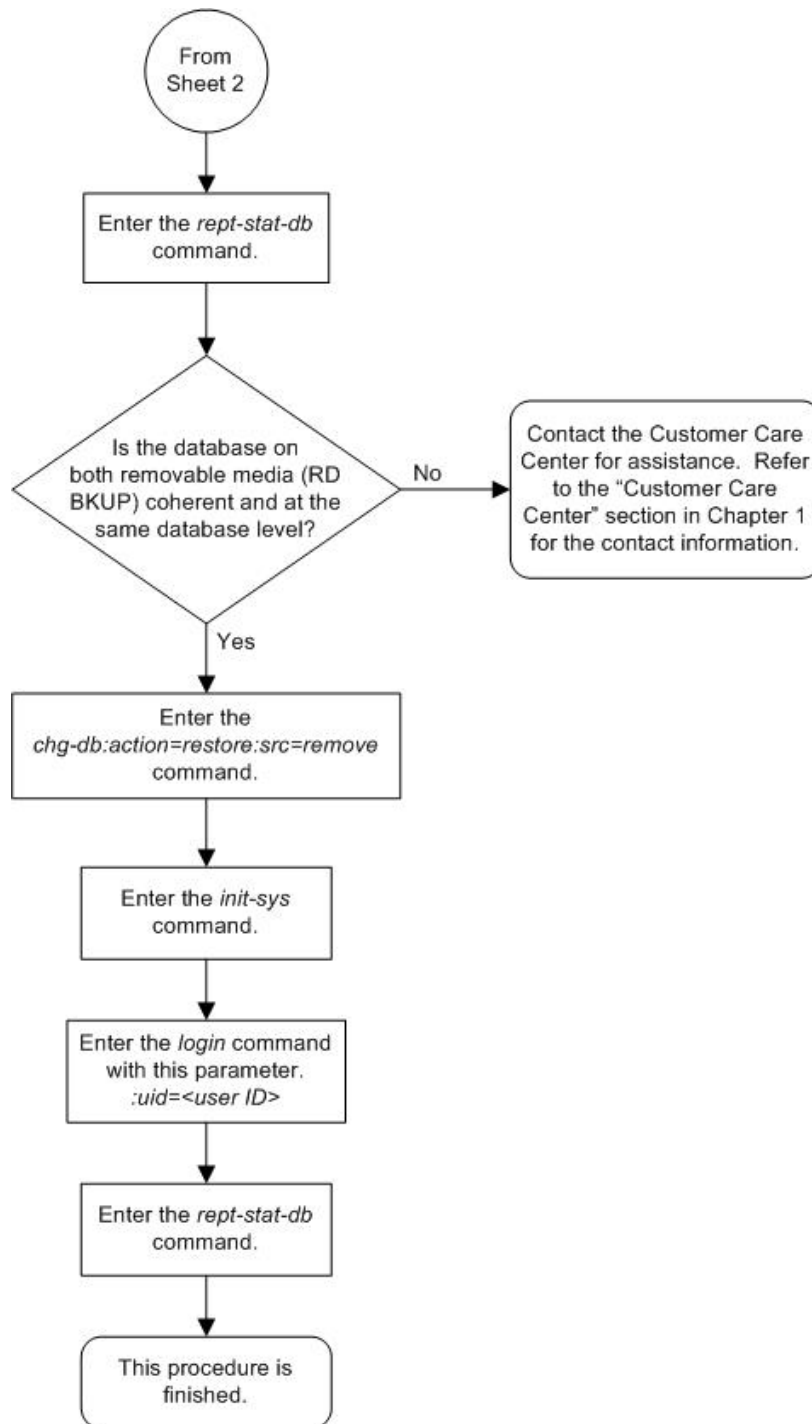
10. Remove the removable cartridge from the removable cartridge drive on the MDAL card.

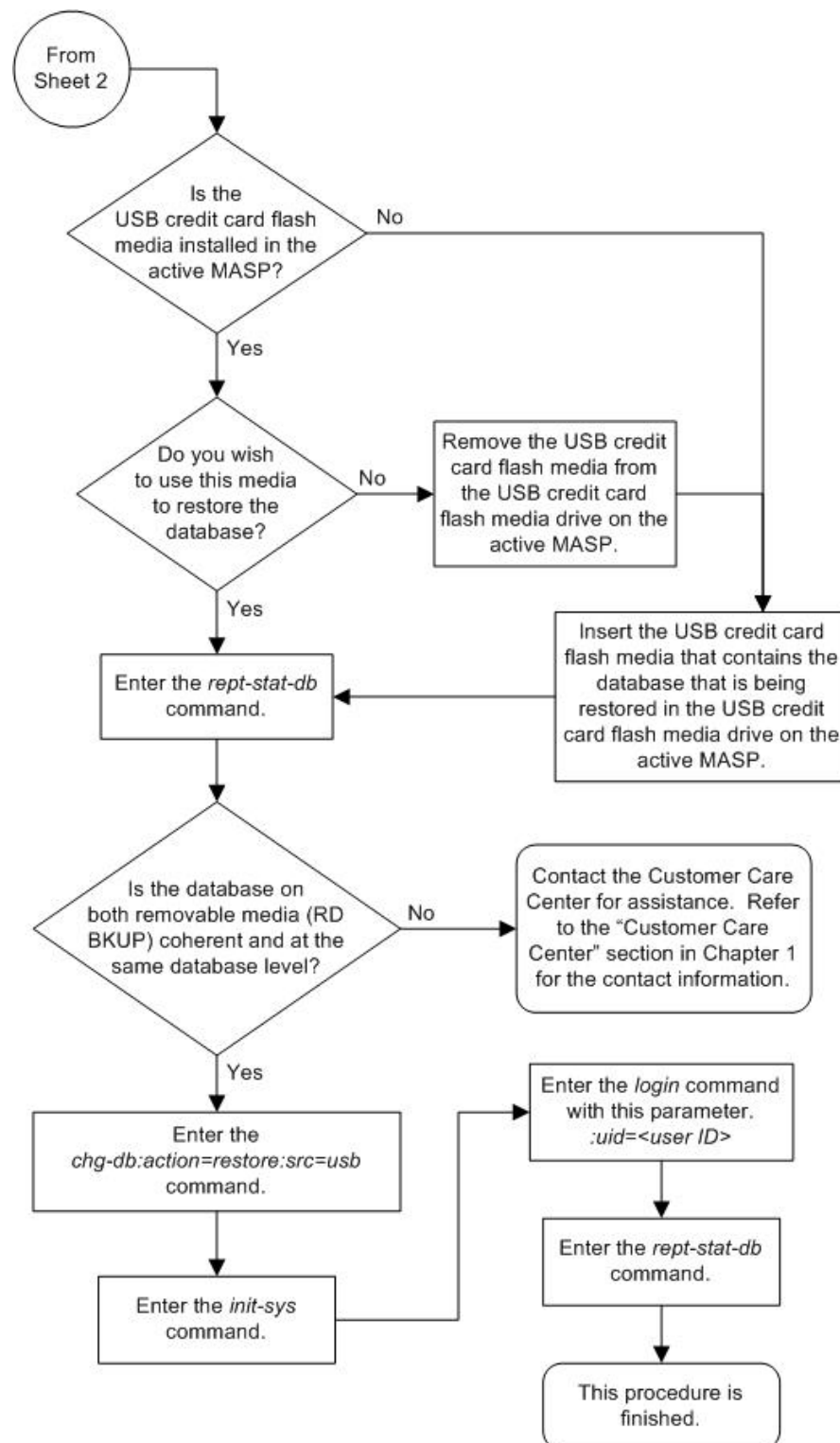
For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

Figure 13: Restoring the Database from the Removable Cartridge or Removable Media





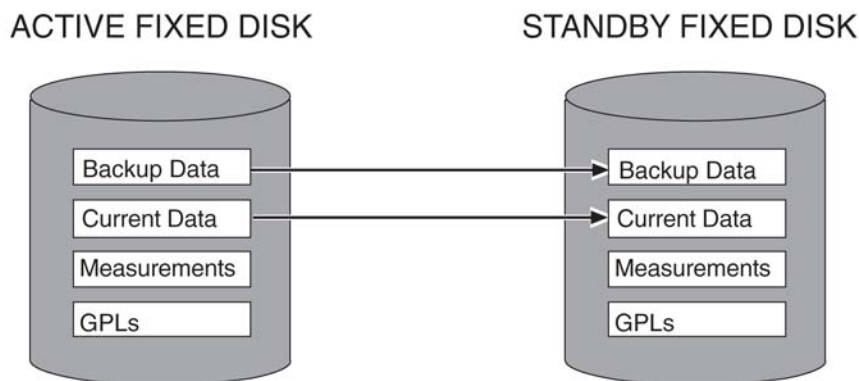




Repairing the Database

Perform the **repair** procedure whenever the two fixed disks have a different database image, such as after a MASP failure. This procedure copies the fixed disk image of the database associated with the active MASP to the fixed disk of the standby MASP. *Figure 14: Action of the Repair Procedure* on page 51 illustrates this action. To repair a database, The `chg-db` command uses only one parameter, `action=repair` – the operation to perform on the database, repairing a database

Figure 14: Action of the Repair Procedure



To repair the database, perform this procedure.

The databases in the current (FD CRNT) and the backup (FD BKUP) partitions of the active MASP must be coherent. For more information on verifying the database, refer to [Verifying the Database](#) on page 22 .



CAUTION

CAUTION: To prevent any potential database corruption when performing this procedure, the OAP and SEAS terminals must be placed out of service with the `rmv-trm` command before executing the `chg-db:action=repair` command.

1. Verify that the databases in the current (FD CRNT) and the backup (FD BKUP) partitions of the active MASP are coherent using the `rept-stat-dbcommand`.

This is an example of the possible output.

```

r1ghncxa03w 06-10-01 16:07:48 GMT  EAGLE5 36.0.0
DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( STDBY)
      C  LEVEL      TIME LAST BACKUP
      -----
FD BKUP  N          35 INCOHERENT
FD CRNT  N          106 INCOHERENT
      MDAL 1117
      - - - - -
RD BKUP  -          -      -      -

```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT  EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
```

TDM 1114 (STDBY)				TDM 1116 (ACTV)			
	C	LEVEL	TIME LAST BACKUP		C	LEVEL	TIME LAST BACKUP
-----				-----			
FD BKUP	N	35	INCOHERENT	Y	55	DIFF	LEVEL
FD CRNT	N	106	INCOHERENT	Y	55		
MCAP 1113				MCAP 1115			
-----				-----			
RD BKUP	-	-	-	-	-	-	- GMT
USB BKP	-	-	-	-	-	-	- GMT

2. Display the terminal configuration in the database with the `rtrv-trm` command.

The OAP terminals are shown in the output with the entry OAP in the TYPE field. The SEAS terminals are shown in the output with the entry SEAS in the TYPE field. This is an example of the possible output. In this example, the OAP terminals are terminals 6 and 9, and the SEAS terminals are terminals 18 and 27. If no OAP and SEAS terminals are shown in the `rtrv-trm` command output, go to step 5.

```
rlghncxa03w 09-03-01 16:02:08 GMT EAGLE5 40.1.0
TRM  TYPE      COMM      FC      TMOUT  MXINV  DURAL
1    VT320      9600-7-E-1  SW      30      5      99:59:59
2    KSR        9600-7-E-1  HW      30      5      INDEF
3    PRINTER    4800-7-E-1  HW      30      0      00:00:00
4    VT320      2400-7-E-1  BOTH    30      5      00:30:00
5    VT320      9600-7-0-1  NONE    30      5      00:00:30
6    OAP        19200-7-E-1 SW      0      5      INDEF
7    PRINTER    9600-7-N-2  HW      30      5      00:30:00
8    KSR        19200-7-E-2 BOTH    30      5      00:30:00
9    OAP        19200-7-E-1 SW      0      5      INDEF
10   VT320      9600-7-E-1  HW      30      5      00:30:00
11   VT320      4800-7-E-1  HW      30      5      00:30:00
12   PRINTER    9600-7-E-1  HW      30      4      00:30:00
13   VT320      9600-7-0-1  NONE    30      5      00:30:00
14   VT320      9600-7-E-2  SW      30      8      00:30:00
15   VT320      9600-7-N-2  HW      30      5      00:30:00
16   VT320      9600-7-E-2  BOTH    30      3      00:30:00

TRM  TYPE      LOC      TMOUT  MXINV  DURAL      SECURE
17   TELNET    1201      60      5      00:30:00  yes
18   SEAS      1201      60      5      00:30:00  yes
19   TELNET    1201      60      5      00:30:00  yes
20   TELNET    1201      60      5      00:30:00  yes
21   TELNET    1201      60      5      00:30:00  yes
22   TELNET    1201      60      5      00:30:00  yes
23   TELNET    1201      60      5      00:30:00  yes
24   TELNET    1201      60      5      00:30:00  yes
25   TELNET    1203      60      5      00:30:00  yes
26   TELNET    1203      60      5      00:30:00  yes
27   SEAS      1203      60      5      00:30:00  yes
28   TELNET    1203      60      5      00:30:00  yes
29   TELNET    1203      60      5      00:30:00  yes
30   TELNET    1203      60      5      00:30:00  yes
31   TELNET    1203      60      5      00:30:00  yes
32   TELNET    1203      60      5      00:30:00  yes
33   TELNET    1205      60      5      00:30:00  yes
34   TELNET    1205      60      5      00:30:00  yes
35   TELNET    1205      60      5      00:30:00  yes
36   TELNET    1205      60      5      00:30:00  yes
37   TELNET    1205      60      5      00:30:00  yes
38   TELNET    1205      60      5      00:30:00  yes
```

39	TELNET	1205	60	5	00:30:00	yes
40	TELNET	1205	60	5	00:30:00	yes

Note: The `rtrv-trm` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-trm` command, see the `rtrv-trm` command description in the *Commands Manual*.

3. Display the status of the terminals with the `rept-stat-trm` command with the terminal number of the OAP or SEAS terminals.

If OAP terminals are shown in the `rtrv-trm` output in step 2, for this example, enter these commands.

```
rept-stat-trm:trm=6
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM   PST           SST           AST
6     IS-NR         Active        -----
Command Completed.
```

```
rept-stat-trm:trm=9
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM   PST           SST           AST
9     IS-NR         Active        -----
Command Completed.
```

If SEAS terminals are shown in the `rtrv-trm` output in step 2, for this example, enter these commands.

```
rept-stat-trm:trm=18
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM   PST           SST           AST
18    IS-NR         Active        -----
Command Completed.
```

```
rept-stat-trm:trm=27
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM   PST           SST           AST
27    IS-NR         Active        -----
Command Completed.
```

4. Place the OAP or SEAS terminals out of service using the `rmv-trm` command with the number of the terminal displayed in step 3 whose state is not OOS-MT-DSBLD.

The `force=yes` parameter must be used when placing the last OAP or SEAS terminal out of service.

If OAP terminals are shown in the `rept-stat-trm` output in step 3, for this example, enter these commands.

```
rmv-trm:trm=6
```

```
rmv-trm:trm=9:force=yes
```

If SEAS terminals are shown in the `rept-stat-trm` output in step 3, for this example, enter these commands.

```
rmv-trm:trm=18
```

```
rmv-trm:trm=27:force=yes
```

If the status of the OAP and SEAS terminals shown in the PST field in step 3 is OOS-MT-DSBLD (out-of-service maintenance disabled), the terminal is already out of service and the `rmv-trm` command does not need to be executed for that terminal.

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Inhibit message sent to terminal

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Command Completed.
```

5. Enter the `chg-db:action=repair` command.

This command can take up to 30 minutes to execute, depending on the size of the database and other system activity that is in progress when this command is entered.

Note: If this command takes more than 60 minutes to execute, contact the Customer Care Center. Refer to [Customer Care Center](#) on page 4 for the contact information.

During command execution, these messages appear:

```
REPAIR: MASP A - Repair starts on standby MASP.
REPAIR: MASP A - Standby MASP will reboot to load data.
REPAIR: MASP A - Repair from fixed disk complete.
```

6. Verify that the databases of both MASPs are coherent using the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP  N          55 04-06-01 13:11:43 GMT Y          55 04-06-01 13:11:43 GMT
FD CRNT  N          55
      MDAL 1117
      - - - - -
RD BKUP  -          -          -          -
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP  N          55 09-03-01 13:11:43 GMT Y          55 09-03-01 13:11:43 GMT
FD CRNT  N          55
      MCAP 1113
      - - - - -
      MCAP 1115
      - - - - -
```

RD BKUP	-	-	-	-	-	-	-	-	-	GMT
USB BKP	-	-	-	-	-	-	-	-	-	GMT

If OAP or SEAS terminals are shown in the `rtrv-trm` command output in step 2, go to step 7. Otherwise this procedure is completed.

- Put the OAP and SEAS terminals back into service with the `rst-trm` command with the number of the terminals specified in step 4.

For this example, enter these commands.

```
rst-trm:trm=6
```

```
rst-trm:trm=9
```

```
rst-trm:trm=18
```

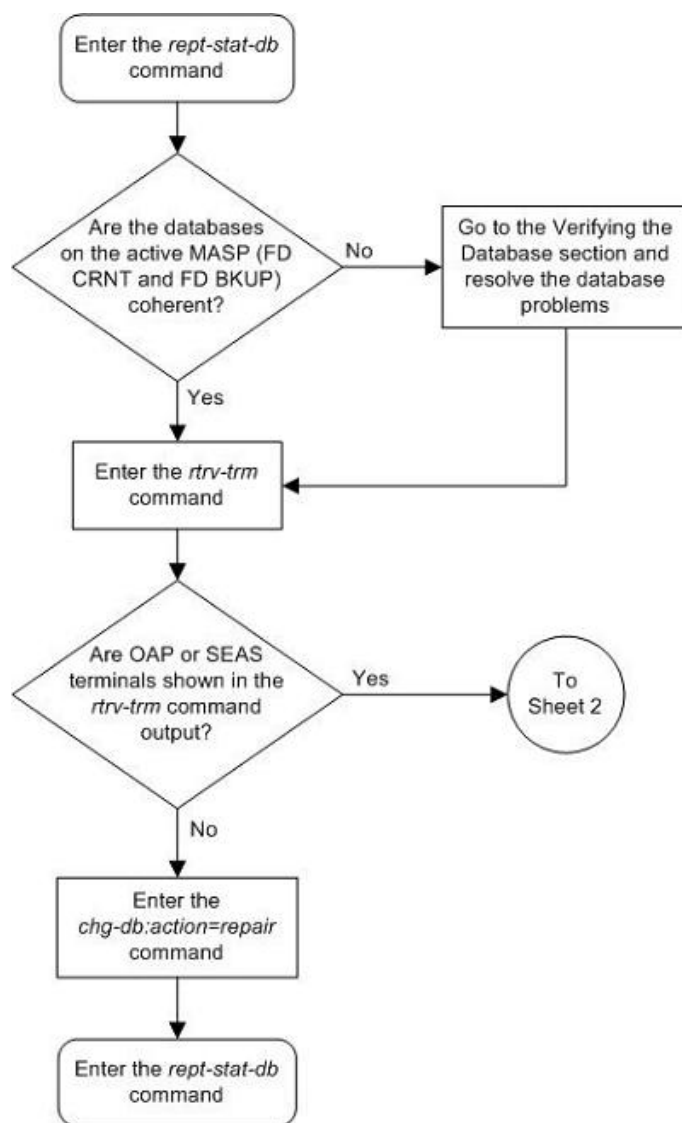
```
rst-trm:trm=27
```

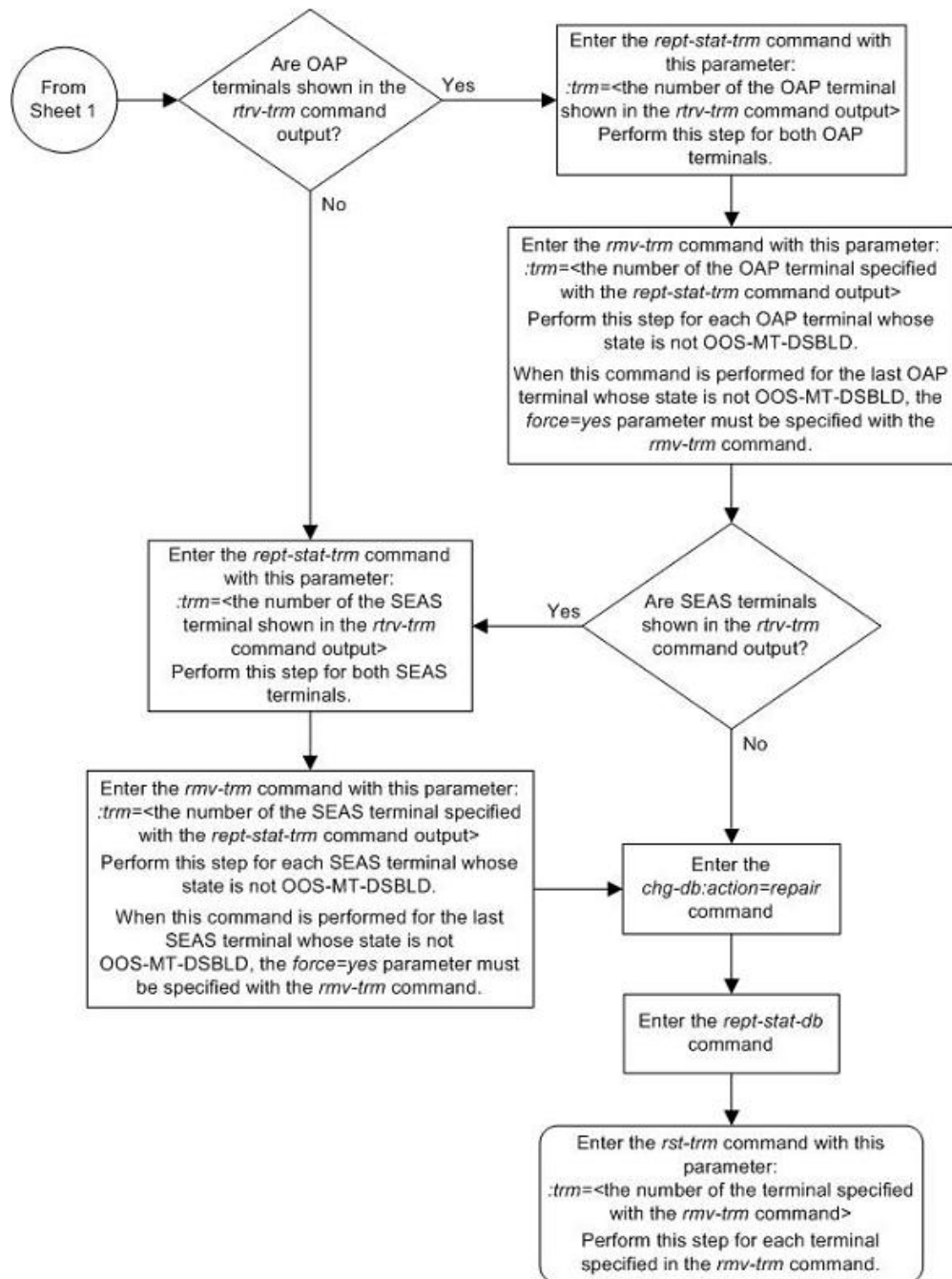
This message should appear when each command has successfully completed.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Allow message sent to terminal

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Command Completed.
```

Figure 15: Repairing the Database

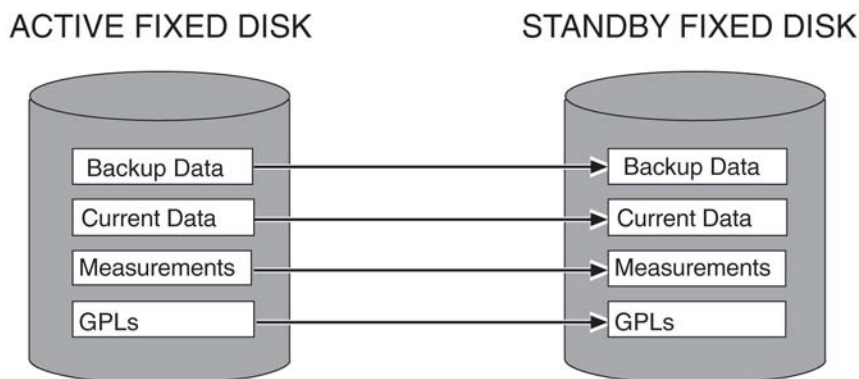




Copying the Database from the Active to the Standby Fixed Disk

This procedure copies everything on the active fixed disk to the standby fixed disk using the `copy-disk` command. [Figure 16: Action of the Copy Disk Procedure](#) on page 58 shows the action of the `copy-disk` command.

Figure 16: Action of the Copy Disk Procedure



The `copy-disk` command uses these parameters.

`:sloc` – the card location of the active fixed disk

`:dloc` – the card location of the standby fixed disk

`:force` – does the standby fixed disk contain system data? This parameter provides some protection against data loss from copying over a fixed disk containing system data. If the standby fixed disk contains system data, you must specify the `force=yes` parameter. The default value for this parameter is `no`.

`:format` – is the standby fixed disk to be formatted before the data from the active fixed disk is copied to the standby fixed disk? The default value for this parameter is `yes`, the standby fixed disk will be formatted before copying.

Specify the `format=no` parameter with the `copy-disk` command to copy to the standby fixed disk without formatting the standby fixed disk. The standby fixed disk must be properly formatted to specify the `format=no` parameter. If the standby fixed disk is not properly formatted and the `format=no` parameter is specified, the `copy-disk` command will be rejected with this message.

E2819 Cmd Rej: Destination disk is unformatted

Note: The performance time required to copy a fixed disk to another fixed disk varies depending on database size and system activity. This operation should typically take no longer than 2.5 hours. If you are not performing the low-level format (`format=no`), the operation should take no longer than 1 hour. If the `copy-disk` operation exceeds 3 hours, contact the Customer Care Center for assistance. Refer to [Customer Care Center](#) on page 4 for the contact information. If the `copy-disk` operation without the low-level format exceeds 1.5 hours, contact the Customer Care Center.

The databases in the current (FD CRNT) and the backup (FD BKUP) partitions of the active MASP must be coherent. For more information on verifying the database, refer to [Verifying the Database](#) on page 22. Measurements must be inhibited.

The standby fixed disk cannot be formatted if the security log on the standby fixed disk contains any entries that have not been copied to the FTA area of the fixed disk. This can be verified with the `rept -stat -secu log` command. If the security log on the standby fixed disk contains entries that have not been copied to the file transfer area of the fixed disk, copy these entries to the file transfer area using the `copy -secu log` command.

The `copy -disk` command can be executed if the status of the security log on the standby fixed disk cannot be determined. This allows the `copy -disk` command to format and initialize a previously un-initialized fixed disk. An un-initialized fixed disk does not contain a security log.



CAUTION

CAUTION: To prevent any potential database corruption when performing this procedure, the OAP or SEAS terminals must be placed out of service with the `rmv -trm` command before executing the `copy -disk` command.

1. Verify that the databases in the current (FD CRNT) and the backup (FD BKUP) partitions of the active MASP are coherent using the `rept -stat -dbcommand`.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y          75 04-06-01 13:11:43 GMT Y          95 04-06-01 13:11:43 GMT
FD CRNT N          55 DIFF LEVEL           Y          105
      MDAL 1117
      - - - - -
RD BKUP -          -          -          -
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP Y          75 09-02-19 10:19:18 GMT Y          95 09-02-19 10:19:18 GMT
FD CRNT N          55 DIFF LEVEL           Y          105
      MCAP 1113              MCAP 1115
      - - - - -
RD BKUP -          -          -          -
USB BKP -          -          -          -
```

2. Verify whether or nor the Measurements Platform option is enabled (`PLATFORMENABLE = on`) using the `rtrv-measopts` command.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
PLATFORMENABLE = on
COLLECT15MIN   = off
CLLIBASEDNAME  = off
-----
SYSTOTSTP      = off
SYSTOTTT       = off
```

Note: The `rtrv-measopts` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-measopts` command, see the `rtrv-measopts` command description in the *Commands Manual*.

- If the Measurements Platform is enabled, skip steps 3 and 4, and go to step 5.
 - If the Measurements Platform is not enabled, go to step 3.
3. Verify that measurement collection is on or off using the `rtrv-meas-sched` command.

This is an example of the possible output. The `COLLECT` field shows whether measurement collection is on or off. In this example, measurement collection is on.

```
rlghncxa03w 06-10-01 12:22:55 GMT EAGLE5 36.0.0
COLLECT      = on
GTWYLSFLTR  = both
-----
SYSTOT-STP  = off
SYSTOT-TT   = off
SYSTOT-STPLAN = on
COMP-LNKSET = off
COMP-LINK    = on
GTWY-STP     = on
GTWY-LNKSET  = on
MTC-D-STP    = on
MTC-D-LINK   = on
MTC-D-STPLAN = on
MTC-D-LNKSET = on
```

- If measurement collection is off, skip step 4 and go to step 5.
 - If measurement collection is on, continue this procedure with step 4.
4. Inhibit all measurements using the `chg-meas:collect=off` command.

**CAUTION**

Measurements must be inhibited or the `copy-disk` command cannot be executed. The `chg-meas:collect=on` command should not be executed while the `copy-disk` command is in progress. If possible, do not inhibit measurements at midnight since doing so can cause the loss of an entire day of measurements. When measurements are inhibited, measurement collection is stopped. For the period of time that measurements are inhibited, those measurements will be lost.

This message should appear.

```
rlghncxa03w 06-10-01 16:12:50 GMT EAGLE5 36.0.0
CHG-MEAS: MASP A - COMPLTD
```

5. Verify that the security log on the standby MASP contains no entries that must be copied to the FTA area of the fixed disk with the `rept-stat-seclog` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:59:06 GMT EAGLE5 36.0.0
-- SINCE LAST UPLOAD -- OLDEST NEWEST LAST
LOC  ROLE  ENTRIES %FULL OFLO FAIL RECORD RECORD UPLOAD
1114 Active 8312    84    No  No  03-12-05 04-06-01 04-05-30
      11:23:56 15:59:06 14:02:22

1116 Standby 693     7     No  No  03-12-05 04-06-01 04-05-30
      11:24:12 14:00:06 14:02:13
```

If the number shown in the `ENTRIES` field for the standby MASP (shown with the entry `Standby` in the `ROLE` field) is 0, go to step 7.

If the number shown in the ENTRIES field for the standby MASP is greater than 0, these entries must be copied to the FTA area of the fixed disk. To copy these entries, go to step 6. For this example, go to step 6.

6. Copy the security log entries on the standby MASP to the FTA area on the fixed disk with the copy-secu log command.

For this example, enter the copy-secu log:s log=stb command. This is an example of the message that should appear.

```
rlghncxa03w 06-10-01 15:59:06 GMT EAGLE5 36.0.0
Security log on TDM 1116 copied to file 961004s.log on TDM 1114
```

7. Display the terminal configuration in the database with the rtrv-trm command.

The OAP terminals are shown in the output with the entry OAP in the TYPE field. The SEAS terminals are shown in the output with the entry SEAS in the TYPE field. This is an example of the possible output. In this example, the OAP terminals are terminals 6 and 9, and the SEAS terminals are terminals 18 and 27. If no OAP and SEAS terminals are shown in the rtrv-trm command output, go to step 10.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 39.0.0
```

TRM	TYPE	COMM	FC	TMOUT	MXINV	DURAL
1	VT320	9600-7-E-1	SW	30	5	99:59:59
2	KSR	9600-7-E-1	HW	30	5	INDEF
3	PRINTER	4800-7-E-1	HW	30	0	00:00:00
4	VT320	2400-7-E-1	BOTH	30	5	00:30:00
5	VT320	9600-7-0-1	NONE	30	5	00:00:30
6	OAP	19200-7-E-1	SW	0	5	INDEF
7	PRINTER	9600-7-N-2	HW	30	5	00:30:00
8	KSR	19200-7-E-2	BOTH	30	5	00:30:00
9	OAP	19200-7-E-1	SW	0	5	INDEF
10	VT320	9600-7-E-1	HW	30	5	00:30:00
11	VT320	4800-7-E-1	HW	30	5	00:30:00
12	PRINTER	9600-7-E-1	HW	30	4	00:30:00
13	VT320	9600-7-0-1	NONE	30	5	00:30:00
14	VT320	9600-7-E-2	SW	30	8	00:30:00
15	VT320	9600-7-N-2	HW	30	5	00:30:00
16	VT320	9600-7-E-2	BOTH	30	3	00:30:00

TRM	TYPE	LOC	TMOUT	MXINV	DURAL	SECURE
17	TELNET	1201	60	5	00:30:00	yes
18	SEAS	1201	60	5	00:30:00	yes
19	TELNET	1201	60	5	00:30:00	yes
20	TELNET	1201	60	5	00:30:00	yes
21	TELNET	1201	60	5	00:30:00	yes
22	TELNET	1201	60	5	00:30:00	yes
23	TELNET	1201	60	5	00:30:00	yes
24	TELNET	1201	60	5	00:30:00	yes
25	TELNET	1203	60	5	00:30:00	yes
26	TELNET	1203	60	5	00:30:00	yes
27	SEAS	1203	60	5	00:30:00	yes
28	TELNET	1203	60	5	00:30:00	yes
29	TELNET	1203	60	5	00:30:00	yes
30	TELNET	1203	60	5	00:30:00	yes
31	TELNET	1203	60	5	00:30:00	yes
32	TELNET	1203	60	5	00:30:00	yes
33	TELNET	1205	60	5	00:30:00	yes
34	TELNET	1205	60	5	00:30:00	yes
35	TELNET	1205	60	5	00:30:00	yes
36	TELNET	1205	60	5	00:30:00	yes
37	TELNET	1205	60	5	00:30:00	yes
38	TELNET	1205	60	5	00:30:00	yes

39	TELNET	1205	60	5	00:30:00	yes
40	TELNET	1205	60	5	00:30:00	yes

Note: The `rtrv-trm` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-trm` command, see the `rtrv-trm` command description in the *Commands Manual*.

8. Display the status of the terminals with the `rept-stat-trm` command with the terminal number of the OAP or SEAS terminals.

If OAP terminals are shown in the `rtrv-trm` output in step 7, for this example, enter these commands.

```
rept-stat-trm:trm=6
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM   PST           SST           AST
6     IS-NR         Active        -----
Command Completed.
```

```
rept-stat-trm:trm=9
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM   PST           SST           AST
9     IS-NR         Active        -----
Command Completed.
```

If SEAS terminals are shown in the `rtrv-trm` output in step 7, for this example, enter these commands.

```
rept-stat-trm:trm=18
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM   PST           SST           AST
18    IS-NR         Active        -----
Command Completed.
```

```
rept-stat-trm:trm=27
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM   PST           SST           AST
27    IS-NR         Active        -----
Command Completed.
```

9. Place the OAP or SEAS terminals out of service using the `rmv-trm` command with the number of the terminal displayed in step 8 whose state is not OOS-MT-DSBLD.

The `force=yes` parameter must be used when placing the last OAP or SEAS terminal out of service.

If OAP terminals are shown in the `rept-stat-trm` output in step 8, for this example, enter these commands.

```
rmv-trm:trm=6
```

```
rmv-trm:trm=9:force=yes
```

If SEAS terminals are shown in the `rept-stat-trm` output in step 8, for this example, enter these commands.

```
rmv-trm:trm=18
```

```
rmv-trm:trm=27:force=yes
```

If the status of the OAP and SEAS terminals shown in the PST field in step 8 is OOS-MT-DSBLD (out-of-service maintenance disabled), the terminal is already out of service and the `rmv-trm` command does not need to be executed for that terminal.

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Inhibit message sent to terminal

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Command Completed.
```

10. Enter the `copy-disk` command along with the card location of the standby TDM (shown by the indicator STDBY in the `rept-stat-db` command output in step 1) that the data is being copied to.

If the standby fixed disk contains system data, the `force=yes` parameter must be specified with the `copy-disk` command. If you do not wish to format the standby fixed disk before copying, specify the `format=no` parameter with the `copy-disk` command.

For this example, enter this command.

```
copy-disk:dloc=1114:sloc=1116:force=yes:format=yes
```

In this example, the standby fixed disk contains EAGLE 5 ISS data and will be formatted before any data is copied to the standby fixed disk.

Note: The performance time required to copy a fixed disk to another fixed disk varies depending on database size and system activity. This operation should typically take no longer than 2.5 hours. If you are not performing the low-level format (`format=no`), the operation should take no longer than 1 hour. If the `copy-disk` operation exceeds 3 hours, contact the Customer Care Center for assistance. Refer to [Customer Care Center](#) on page 4 for the contact information. If the `copy-disk` operation without the low-level format exceeds 1.5 hours, contact the Customer Care Center.

 **WARNING:** Failure of the `copy-disk` command may result in corrupted TDMs. If you experience a `copy-disk` command failure, contact the Customer Care Center for assistance. Refer to [Customer Care Center](#) on page 4 for the contact information.

When the command has been executed and completed, these messages should appear.

```
rlghncxa03w 06-10-01 10:22:05 GMT EAGLE5 36.0.0
copy-disk:sloc=1116:dloc=1114:force=yes
Command entered at terminal #3.
;

rlghncxa03w 06-10-01 10:22:06 GMT EAGLE5 36.0.0
Copy-disk (fixed): from active (1116) to standby (1114) started.
Extended processing required, please wait.
;
```

```

rlghncxa03w 06-10-01 10:22:08 GMT EAGLE5 36.0.0
Copy-disk (fixed): format of standby disk started
;

rlghncxa03w 06-10-01 10:27:08 GMT EAGLE5 36.0.0
Copy-disk (fixed): format in progress
;

rlghncxa03w 06-10-01 10:32:08 GMT EAGLE5 36.0.0
Copy-disk (fixed): format in progress
;

rlghncxa03w 06-10-01 11:07:05 GMT EAGLE5 36.0.0
Copy-disk (fixed): format of standby disk completed
;

rlghncxa03w 06-10-01 11:07:06 GMT EAGLE5 36.0.0
Copy-disk (fixed): copying to standby disk started
;

rlghncxa03w 06-10-01 11:12:06 GMT EAGLE5 36.0.0
Copy-disk (fixed): copy in progress
;

rlghncxa03w 06-10-01 11:27:10 GMT EAGLE5 36.0.0
Copy-disk (fixed): from active (1116) to standby (1114) completed.
Measurements collection may be turned on now if desired.

```

If the format=no parameter was specified in this example, these messages should appear when the copy-disk command has successfully completed.

copy-disk:dloc=1114:sloc=1116:force=yes:format=no

```

rlghncxa03w 06-10-01 10:22:06 GMT EAGLE5 36.0.0
Copy-disk (fixed): from active (1116) to standby (1114) started.
Extended processing required, please wait.
;

rlghncxa03w 06-10-01 11:07:08 GMT EAGLE5 36.0.0
Copy-disk (fixed): copying to standby disk started
;

rlghncxa03w 06-10-01 11:12:06 GMT EAGLE5 36.0.0
Copy-disk (fixed): copy in progress
;

rlghncxa03w 06-10-01 11:17:06 GMT EAGLE5 36.0.0
Copy-disk (fixed): copy in progress
;

rlghncxa03w 06-10-01 11:22:06 GMT EAGLE5 36.0.0
Copy-disk (fixed): copy in progress
;

rlghncxa03w 06-10-01 11:27:08 GMT EAGLE5 36.0.0
Copy-disk (fixed): from active (1116) to standby (1114) completed.
Measurements collection may be turned on now if desired.

```

The standby MASP is rebooted to load the data when the command completes successfully.

Note: While this command is executing, commands that affect the database configuration cannot be executed. Any attempt to execute such a command will be rejected.

- If measurement collection was turned off in step 4, continue the procedure with step 11.

- If measurement collection was not turned off in step 4, skip step 11, and go to step 12.

11. Turn on the measurements using the `chg-meas:collect=on` command.

This message should appear.

```
rlghncxa03w 06-10-01 16:12:50 GMT EAGLE5 36.0.0
CHG-MEAS: MASP A - COMPLTD
```

12. Verify that the databases of both MASPs are coherent using the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )
      C  LEVEL      TIME LAST BACKUP
      -  - - - - -
FD BKUP Y          95 04-06-01 05:53:36 GMT
FD CRNT Y          105
      MDAL 1117
      -  - - - - -
RD BKUP -          -          -          -
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )
      C  LEVEL      TIME LAST BACKUP
      -  - - - - -
FD BKUP Y          95 09-02-19 10:19:18 GMT
FD CRNT Y          105
      MCAP 1113
      -  - - - - -
RD BKUP -          -          -          -
USB BKP -          -          -          -
      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP
      -  - - - - -
FD BKUP Y          95 09-02-19 10:19:18 GMT
FD CRNT Y          105
      MCAP 1115
      -  - - - - -
RD BKUP -          -          -          -
USB BKP -          -          -          -
```

If OAP or SEAS terminals are shown in the `rtv-trm` command output in step 7, go to step 13. Otherwise this procedure is completed.

13. Put the OAP and SEAS terminals back into service using the `rst-trm` command with the number of the terminals specified in step 9 .

For this example, enter these commands.

```
rst-trm:trm=6
```

```
rst-trm:trm=9
```

```
rst-trm:trm=18
```

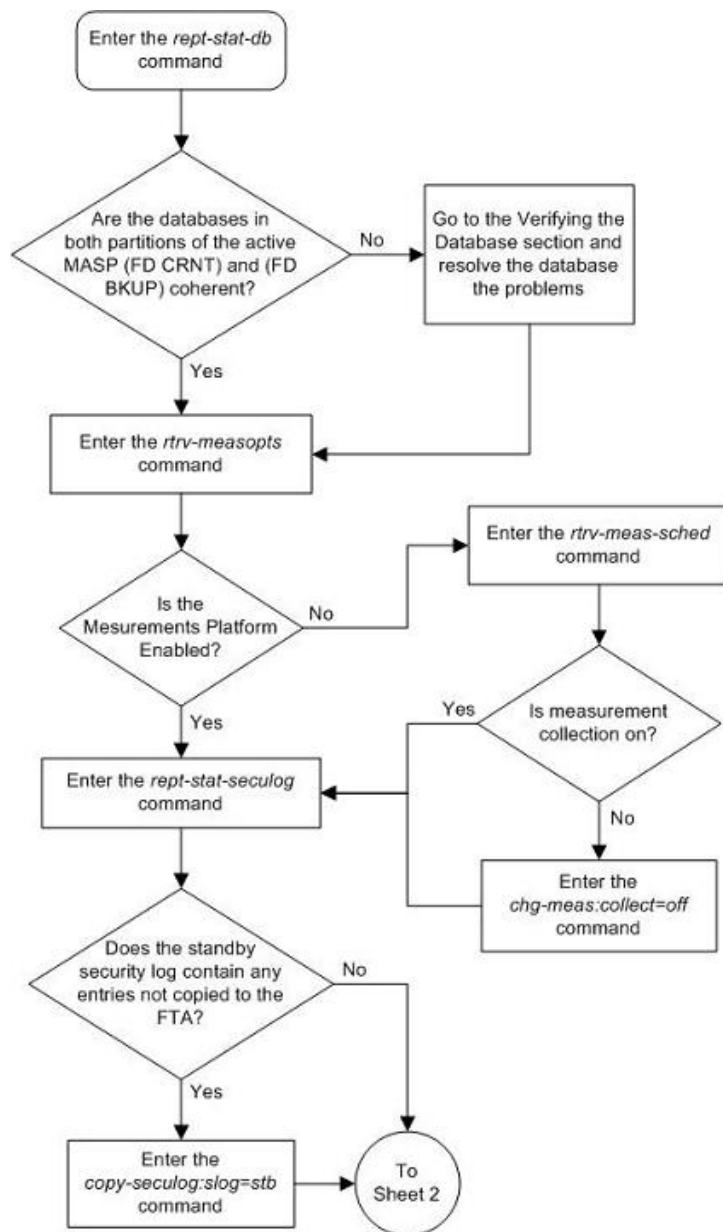
```
rst-trm:trm=27
```

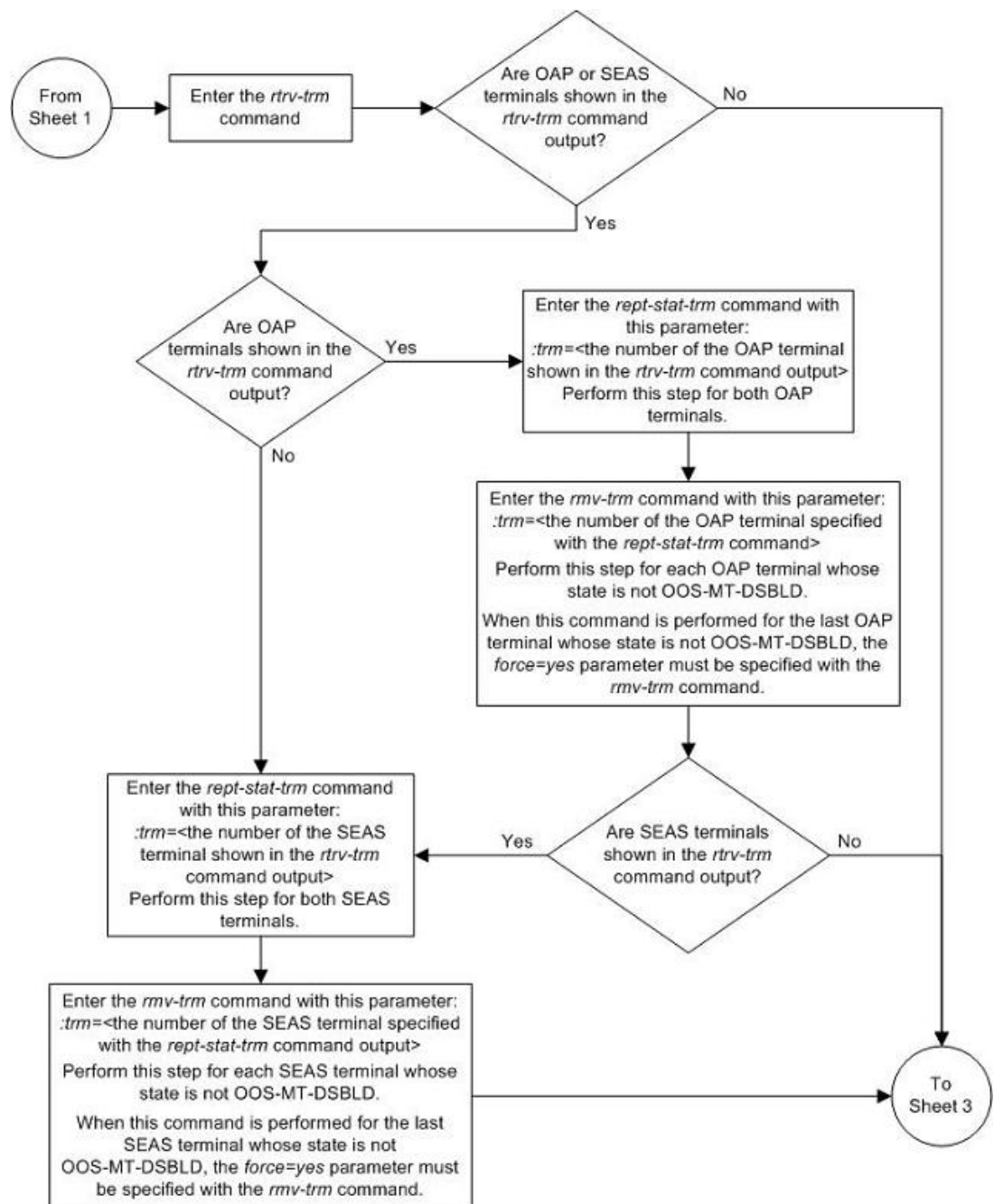
This message should appear when each command has successfully completed.

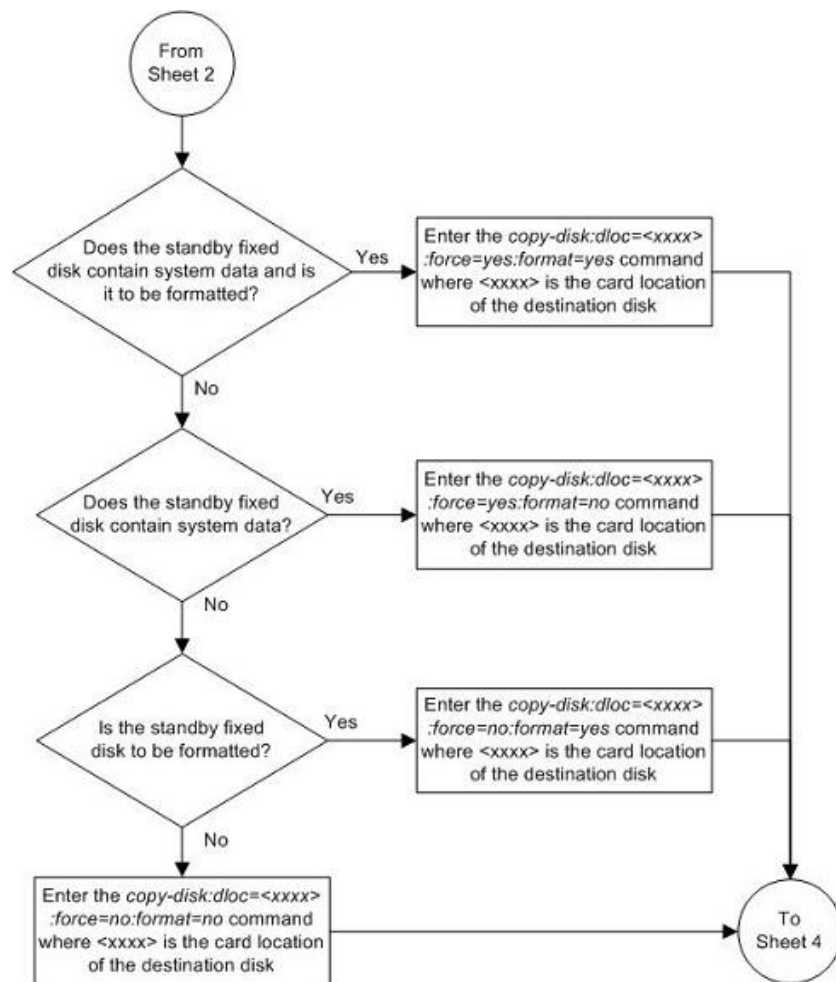
```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Allow message sent to terminal
```

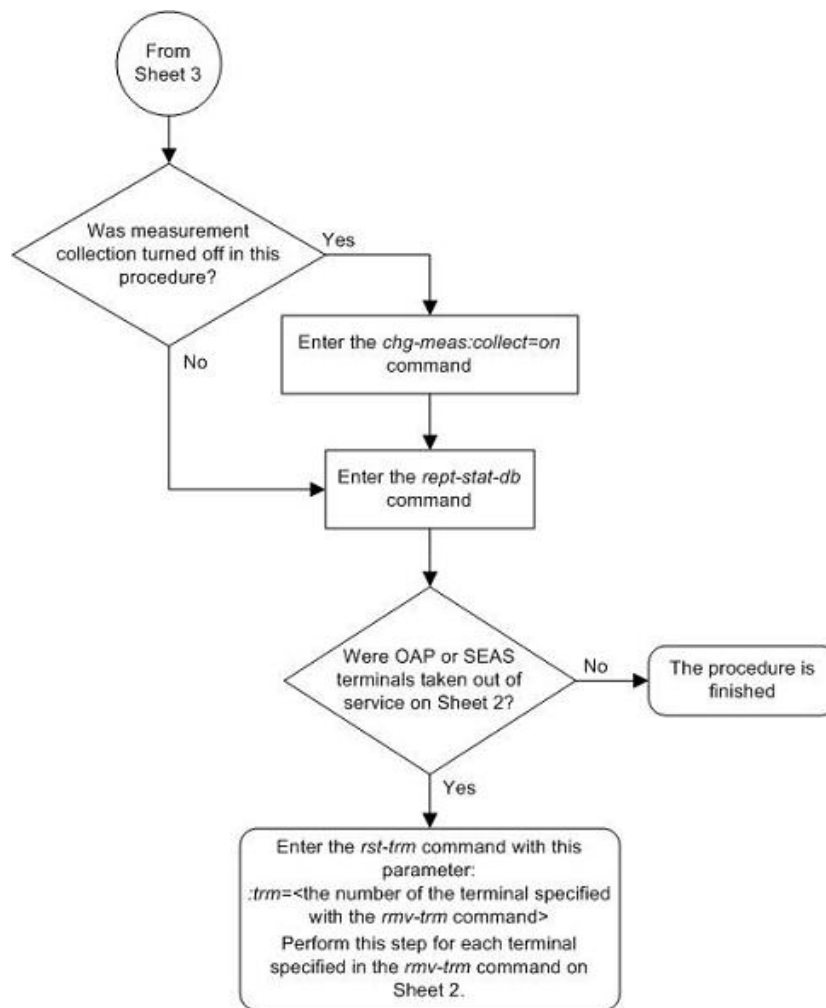
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Command Completed.

Figure 17: Copying the Database from the Active to the Standby Fixed Disk









Backing Up System Data to the Removable Cartridge or Removable Media

This section details the procedure used to make a backup copy of the system data in addition to the database.

The term “database” refers to all data that can be administered by the user, including shelves, cards, links, routes, global title translation tables, and gateway screening tables. The term “system data” refers to data that cannot be administered by the user, including maintenance software modules and generic program loads (GPLs).

1. Perform [Making a Backup of the Database to the Removable Cartridge or Removable Media](#) on page 28 to make a backup of the database to the removable cartridge or removable media. Perform this procedure with performing the last two steps (removing the cartridge or media) and labeling the cartridge or media. After the backup of the database has been made, continue the procedure with [Step 2](#) on page 70.

2. Make a backup copy of the GPLs on the fixed disk of the active TDM to the removable cartridge, removable media, or the USB credit card flash media using the `copy-gpl` command. Perform one of these substeps.

- a) If legacy control cards are installed on the EAGLE 5 ISS, the GPLs are copied from the active TDM to the removable cartridge. For this example, enter this command.

```
copy-gpl:sloc=1116:dloc=1117
```

During command execution, these messages should appear.

```
rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY-GPL: MASP B - COPY STARTS ON ACTIVE MASP
COPY GPL: MASP B - COPY TO REMOVABLE CARTRIDGE COMPLETE
```

- b) If E5-based control cards are installed on the EAGLE 5 ISS, and the removable media was used to make the backup of the database, the GPLs are copied from the active TDM to the removable media on the active MASP. For this example, enter this command.

```
copy-gpl:sloc=1116:dloc=1115:ddrv=remove
```

During command execution, these messages should appear.

```
rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY-GPL: MASP B - COPY STARTS ON ACTIVE MASP
;
rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY GPL: MASP B - COPY TO REMOVABLE DRIVE COMPLETE
```

- c) If E5-based control cards are installed on the EAGLE 5 ISS, and the USB credit card flash media was used to make the backup of the database, the GPLs are copied from the active TDM to the USB credit card flash media on the active MASP. For this example, enter this command.

```
copy-gpl:sloc=1116:dloc=1115:ddrv=usb
```

During command execution, these messages should appear.

```
rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY-GPL: MASP B - COPY STARTS ON ACTIVE MASP
;
rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY GPL: MASP B - COPY TO USB DRIVE COMPLETE
```

3. Verify the GPLs on the removable cartridge, removable media, or the USB credit card flash media with the `rtrv-gpl` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 07:01:08 GMT EAGLE5 41.0.0
GPL Auditing  ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
EOAM	1114	132-003-000	132-003-000	132-002-000	132-003-000
EOAM	1116	132-003-000	132-003-000	132-002-000	132-003-000
EOAM	1115	-----	-----	-----	-----
GLS	1114	132-003-000	132-003-000	132-002-000	132-003-000
GLS	1116	132-003-000	132-003-000	132-002-000	132-003-000
GLS	1115	-----	-----	-----	-----

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CDU	1114	162-001-000	162-001-000	162-000-000	162-001-000
CDU	1116	162-001-000	162-001-000	162-000-000	162-001-000
CDU	1115	-----	-----	-----	-----
IMT	1114	132-003-000	132-003-000	132-002-000	132-003-000
IMT	1116	132-003-000	132-003-000	132-002-000	132-003-000
IMT	1115	-----	-----	-----	-----
ATMANSI	1114	132-003-000	132-003-000	132-002-000	132-003-000
ATMANSI	1116	132-003-000	132-003-000	132-002-000	132-003-000
ATMANSI	1115	-----	-----	-----	-----
BPHCAP	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPHCAP	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPHCAP	1115	-----	-----	-----	-----
BPDCM	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM	1115	-----	-----	-----	-----
BLMCAP	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLMCAP	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLMCAP	1115	-----	-----	-----	-----
OAMHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
OAMHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
OAMHC	1115	-----	-----	-----	-----
VXWSLAN	1114	132-003-000	132-003-000	132-002-000	132-003-000
VXWSLAN	1116	132-003-000	132-003-000	132-002-000	132-003-000
VXWSLAN	1115	-----	-----	-----	-----
IPLIM	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPLIM	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPLIM	1115	-----	-----	-----	-----
IPLIMI	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPLIMI	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPLIMI	1115	-----	-----	-----	-----
SS7IPGW	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7IPGW	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7IPGW	1115	-----	-----	-----	-----
VSCCP	1114	132-003-000	132-003-000	132-002-000	132-003-000
VSCCP	1116	132-003-000	132-003-000	132-002-000	132-003-000
VSCCP	1115	-----	-----	-----	-----
ATMITU	1114	132-003-000	132-003-000	132-002-000	132-003-000
ATMITU	1116	132-003-000	132-003-000	132-002-000	132-003-000
ATMITU	1115	-----	-----	-----	-----
VCDU	1114	162-001-000	162-001-000	162-000-000	162-001-000
VCDU	1116	162-001-000	162-001-000	162-000-000	162-001-000
VCDU	1115	-----	-----	-----	-----
BPMPPL	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPMPPL	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPMPPL	1115	-----	-----	-----	-----
SS7ML	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7ML	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7ML	1115	-----	-----	-----	-----
BPHMUX	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPHMUX	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPHMUX	1115	-----	-----	-----	-----
IPGWI	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPGWI	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPGWI	1115	-----	-----	-----	-----
IPS	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPS	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPS	1115	-----	-----	-----	-----
BPDCM2	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM2	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM2	1115	-----	-----	-----	-----
EROUTE	1114	132-003-000	132-003-000	132-002-000	132-003-000
EROUTE	1116	132-003-000	132-003-000	132-002-000	132-003-000
EROUTE	1115	-----	-----	-----	-----
BPMPPLT	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPMPPLT	1116	132-003-000	132-003-000	132-002-000	132-003-000

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BPMPLT	1115	-----	-----	-----	-----
MCP	1114	132-003-000	132-003-000	132-002-000	132-003-000
MCP	1116	132-003-000	132-003-000	132-002-000	132-003-000
MCP	1115	-----	-----	-----	-----
BPHCAPT	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPHCAPT	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPHCAPT	1115	-----	-----	-----	-----
HIPR	1114	132-003-000	132-003-000	132-002-000	132-003-000
HIPR	1116	132-003-000	132-003-000	132-002-000	132-003-000
HIPR	1115	-----	-----	-----	-----
SS7HC	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7HC	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7HC	1115	-----	-----	-----	-----
BLBIOS	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLBIOS	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLBIOS	1115	-----	-----	-----	-----
BLCPLD	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLCPLD	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLCPLD	1115	-----	-----	-----	-----
GLSHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
GLSHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
GLSHC	1115	-----	-----	-----	-----
IMTPCI	1114	132-003-000	132-003-000	132-002-000	132-003-000
IMTPCI	1116	132-003-000	132-003-000	132-002-000	132-003-000
IMTPCI	1115	-----	-----	-----	-----
PLDPMC1	1114	132-003-000	132-003-000	132-002-000	132-003-000
PLDPMC1	1116	132-003-000	132-003-000	132-002-000	132-003-000
PLDPMC1	1115	-----	-----	-----	-----
IPLHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPLHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPLHC	1115	-----	-----	-----	-----
IPGHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPGHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPGHC	1115	-----	-----	-----	-----
SS7EPM	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7EPM	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7EPM	1115	-----	-----	-----	-----
BLBEPM	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLBEPM	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLBEPM	1115	-----	-----	-----	-----
BLVXW6	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLVXW6	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLVXW6	1115	-----	-----	-----	-----
BLDIAG6	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLDIAG6	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLDIAG6	1115	-----	-----	-----	-----
SCCPHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
SCCPHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
SCCPHC	1115	-----	-----	-----	-----
BLBSMG	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLBSMG	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLBSMG	1115	-----	-----	-----	-----
SLANHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
SLANHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
SLANHC	1115	-----	-----	-----	-----
ERTHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
ERTHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
ERTHC	1115	-----	-----	-----	-----
IPSHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPSHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPSHC	1115	-----	-----	-----	-----
ATMHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
ATMHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
ATMHC	1115	-----	-----	-----	-----
IPSG	1114	132-003-000	132-003-000	132-002-000	132-003-000

IPSG	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPSG	1115	-----	-----	-----	-----
BLROM1	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLROM1	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLROM1	1115	-----	-----	-----	-----

This example shows GPLs on an EAGLE 5 ISS that has E5-based control cards installed. The GPLs were copied to the removable media in both MASP. The USB credit card flash media is not inserted into the USB credit card flash media drive in the E5-MCAP card of the active MASP (card location 1115). If the GPLs were copied only to the removable media on the active MASP, the removable media is not inserted in the standby MASP and the GPL version number for the standby MASP is not displayed. If the GPLs were copied to the USB credit card flash media, the GPL version number is displayed in the REMOVE TRIAL column and dashes are displayed in the RELEASE, APPROVED, and TRIAL columns.

If the GPLs were copied to the removable cartridge (legacy control cards are installed in the EAGLE 5 ISS), the entry for the USB credit card flash media on the active MASP (in this example, card location 1115) is not displayed. The GPL version entry for the standby MASP is not displayed.

4. Perform one of these actions.

If a removable cartridge was used in this procedure, remove the removable cartridge from the removable cartridge drive on the MDAL card. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

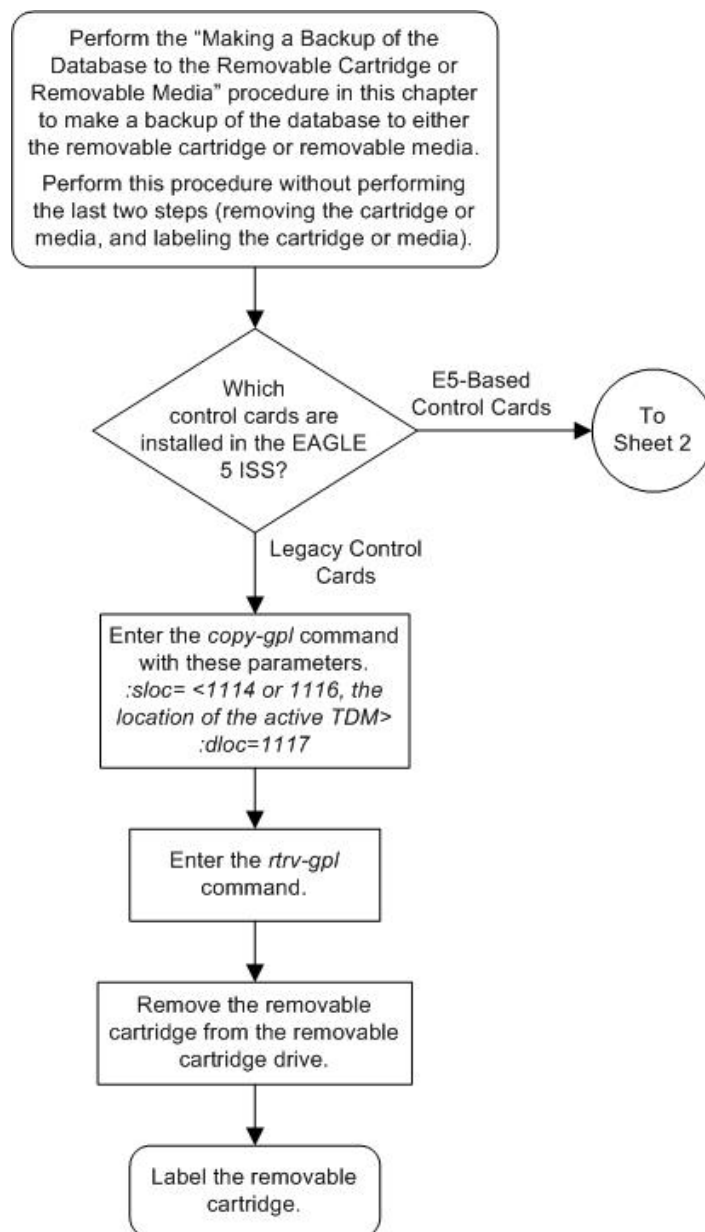
If removable media was used in this procedure, remove the removable media from the removable media drives on the MASPs. For more information on removing the removable media from the removable media drives, refer to [Removable USB Drive](#) on page 20.

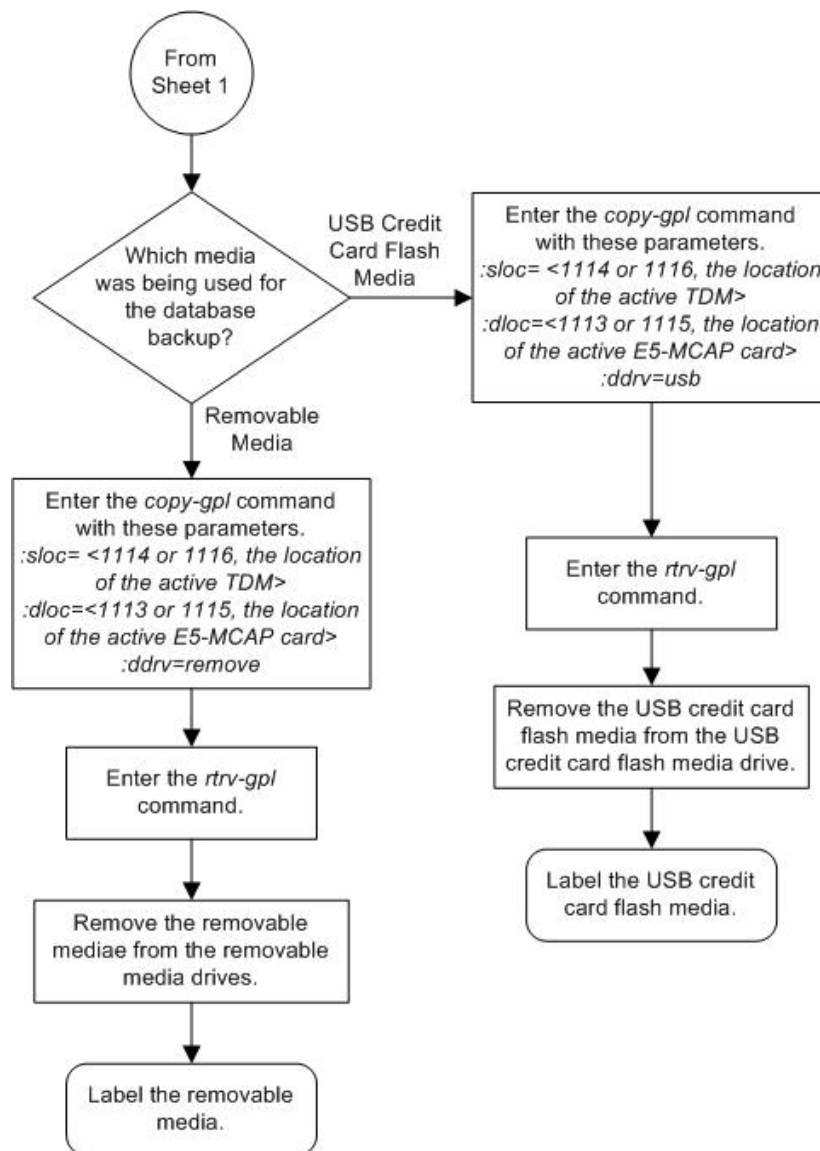
If the USB credit card flash media was used in this procedure, remove the USB credit card flash media from the USB credit card flash media drive on the active MASP.

5. Label the removable cartridge, removable media, or USB credit card flash media, 1 through 4 if the backup is performed weekly or monthly, A through D if the backup is performed quarterly.

For more information on labeling the removable cartridge, removable media, or USB credit card flash media, see Chapter 2, "Preventive Maintenance," in the *Maintenance Manual*.

Figure 18: Backing Up System Data to the Removable Cartridge





Restoring System Data from a Removable Cartridge or Removable Media

This section presents the procedure for restoring system data from a system backup removable cartridge, removable media, or USB credit card flash media that was made by performing [Backing Up System Data to the Removable Cartridge or Removable Media](#) on page 69 .



CAUTION

CAUTION: Using the action=restore parameter with the chg-db command is an emergency recovery procedure, and requires the init-sys command to download the restored database to all the cards in the EAGLE 5 ISS.



CAUTION: If the restore device state option is on, shown by the ON value for the RSTRDEV field in the `rtrv-stpopts` command output, the state of the cards, SS7 signaling links, TCP/IP data links, and terminals before the `chg-db:action=restore` and `init-sys` commands are performed will not be maintained after these commands are performed. The persistent device state table becomes obsolete and is disabled. UIM 1257 is generated.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
1234.1257      SYSTEM      INFO  DB Restore has cleared and disabled PDS
```

1. Perform [Restoring the Database from the Removable Cartridge or Removable Media](#) on page 41 to restore the database from the removable cartridge or removable media. If the database is being restored from a removable cartridge, do not remove the removable cartridge. After the database has been restored, continue the procedure with [Step 2](#) on page 76.
2. Copy the GPLs from the removable cartridge, removable media, or the USB credit card flash media to the standby TDM using the `copy-gpl` command. Perform one of these substeps.
 - a) If legacy control cards are installed on the EAGLE 5 ISS, the GPLs are copied from the removable cartridge to the standby TDM. For this example, enter this command.

```
copy-gpl:sloc=1117:dloc=1114
```

During command execution, these messages should appear.

```
rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY GPL:  MASP A - COPY STARTS ON REMOVABLE DRIVE
;

rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY GPL:  MASP A - COPY TO STANDBY MASP COMPLETE
```

- b) If E5-based control cards are installed on the EAGLE 5 ISS, and the removable media was used to restore the database, the GPLs are copied from the removable media on on the active MASP to the standby TDM. For this example, enter this command.

```
copy-gpl:sloc=1115:dloc=1114:sdrv=remove
```

During command execution, these messages should appear.

```
rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY-GPL:  MASP A - COPY STARTS ON REMOVABLE DRIVE
;

rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY GPL:  MASP A - COPY TO STANDBY MASP COMPLETE
```

- c) If E5-based control cards are installed on the EAGLE 5 ISS, and the USB credit card flash media was used to restore the database, the GPLs are copied from the USB credit card flash media on the active MASP to the standby TDM. For this example, enter this command.

```
copy-gpl:sloc=1115:dloc=1114:sdrv=usb
```

During command execution, these messages should appear.

```
rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY-GPL:  MASP A - COPY STARTS ON USB DRIVE
;
```

```
rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY GPL: MASP A - COPY TO STANDBY MASP COMPLETE
```

3. Verify the GPLs on the standby TDM and the removable cartridge, removable media, or the USB credit card flash media with the `rtrv-gpl` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 07:01:08 GMT EAGLE5 41.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
EOAM	1114	132-003-000	132-003-000	132-002-000	132-003-000
EOAM	1116	132-003-000	132-002-000	132-002-000	132-003-000
EOAM	1115	-----	-----	-----	-----
GLS	1114	132-003-000	132-003-000	132-002-000	132-003-000
GLS	1116	132-003-000	132-002-000	132-002-000	132-003-000
GLS	1115	-----	-----	-----	-----
CDU	1114	162-001-000	162-001-000	162-000-000	162-001-000
CDU	1116	162-001-000	162-000-000	162-000-000	162-001-000
CDU	1115	-----	-----	-----	-----
IMT	1114	132-003-000	132-003-000	132-002-000	132-003-000
IMT	1116	132-003-000	132-002-000	132-002-000	132-003-000
IMT	1115	-----	-----	-----	-----
ATMANSI	1114	132-003-000	132-003-000	132-002-000	132-003-000
ATMANSI	1116	132-003-000	132-002-000	132-002-000	132-003-000
ATMANSI	1115	-----	-----	-----	-----
BPHCAP	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPHCAP	1116	132-003-000	132-002-000	132-002-000	132-003-000
BPHCAP	1115	-----	-----	-----	-----
BPDCM	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM	1116	132-003-000	132-002-000	132-002-000	132-003-000
BPDCM	1115	-----	-----	-----	-----
BLMCAP	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLMCAP	1116	132-003-000	132-002-000	132-002-000	132-003-000
BLMCAP	1115	-----	-----	-----	-----
OAMHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
OAMHC	1116	132-003-000	132-002-000	132-002-000	132-003-000
OAMHC	1115	-----	-----	-----	-----
VXWSLAN	1114	132-003-000	132-003-000	132-002-000	132-003-000
VXWSLAN	1116	132-003-000	132-002-000	132-002-000	132-003-000
VXWSLAN	1115	-----	-----	-----	-----
IPLIM	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPLIM	1116	132-003-000	132-002-000	132-002-000	132-003-000
IPLIM	1115	-----	-----	-----	-----
IPLIMI	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPLIMI	1116	132-003-000	132-002-000	132-002-000	132-003-000
IPLIMI	1115	-----	-----	-----	-----
SS7IPGW	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7IPGW	1116	132-003-000	132-002-000	132-002-000	132-003-000
SS7IPGW	1115	-----	-----	-----	-----
VSCCP	1114	132-003-000	132-003-000	132-002-000	132-003-000
VSCCP	1116	132-003-000	132-002-000	132-002-000	132-003-000
VSCCP	1115	-----	-----	-----	-----
ATMITU	1114	132-003-000	132-003-000	132-002-000	132-003-000
ATMITU	1116	132-003-000	132-002-000	132-002-000	132-003-000
ATMITU	1115	-----	-----	-----	-----
VCDU	1114	162-001-000	162-001-000	162-000-000	162-001-000
VCDU	1116	162-001-000	162-000-000	162-000-000	162-001-000
VCDU	1115	-----	-----	-----	-----
BPMPPL	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPMPPL	1116	132-003-000	132-002-000	132-002-000	132-003-000
BPMPPL	1115	-----	-----	-----	-----
SS7ML	1114	132-003-000	132-003-000	132-002-000	132-003-000

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SS7ML	1116	132-003-000	132-002-000	132-002-000	132-003-000
SS7ML	1115	-----	-----	-----	-----
BPHMUX	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPHMUX	1116	132-003-000	132-002-000	132-002-000	132-003-000
BPHMUX	1115	-----	-----	-----	-----
IPGWI	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPGWI	1116	132-003-000	132-002-000	132-002-000	132-003-000
IPGWI	1115	-----	-----	-----	-----
IPS	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPS	1116	132-003-000	132-002-000	132-002-000	132-003-000
IPS	1115	-----	-----	-----	-----
BPDCM2	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM2	1116	132-003-000	132-002-000	132-002-000	132-003-000
BPDCM2	1115	-----	-----	-----	-----
EROUTE	1114	132-003-000	132-003-000	132-002-000	132-003-000
EROUTE	1116	132-003-000	132-002-000	132-002-000	132-003-000
EROUTE	1115	-----	-----	-----	-----
BPMLT	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPMLT	1116	132-003-000	132-002-000	132-002-000	132-003-000
BPMLT	1115	-----	-----	-----	-----
MCP	1114	132-003-000	132-003-000	132-002-000	132-003-000
MCP	1116	132-003-000	132-002-000	132-002-000	132-003-000
MCP	1115	-----	-----	-----	-----
BPHCAPT	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPHCAPT	1116	132-003-000	132-002-000	132-002-000	132-003-000
BPHCAPT	1115	-----	-----	-----	-----
HIPR	1114	132-003-000	132-003-000	132-002-000	132-003-000
HIPR	1116	132-003-000	132-002-000	132-002-000	132-003-000
HIPR	1115	-----	-----	-----	-----
SS7HC	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7HC	1116	132-003-000	132-002-000	132-002-000	132-003-000
SS7HC	1115	-----	-----	-----	-----
BLBIO5	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLBIO5	1116	132-003-000	132-002-000	132-002-000	132-003-000
BLBIO5	1115	-----	-----	-----	-----
BLCPLD	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLCPLD	1116	132-003-000	132-002-000	132-002-000	132-003-000
BLCPLD	1115	-----	-----	-----	-----
GLSHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
GLSHC	1116	132-003-000	132-002-000	132-002-000	132-003-000
GLSHC	1115	-----	-----	-----	-----
IMTPCI	1114	132-003-000	132-003-000	132-002-000	132-003-000
IMTPCI	1116	132-003-000	132-002-000	132-002-000	132-003-000
IMTPCI	1115	-----	-----	-----	-----
PLDPMC1	1114	132-003-000	132-003-000	132-002-000	132-003-000
PLDPMC1	1116	132-003-000	132-002-000	132-002-000	132-003-000
PLDPMC1	1115	-----	-----	-----	-----
IPLHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPLHC	1116	132-003-000	132-002-000	132-002-000	132-003-000
IPLHC	1115	-----	-----	-----	-----
IPGHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPGHC	1116	132-003-000	132-002-000	132-002-000	132-003-000
IPGHC	1115	-----	-----	-----	-----
SS7EPM	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7EPM	1116	132-003-000	132-002-000	132-002-000	132-003-000
SS7EPM	1115	-----	-----	-----	-----
BLBEPM	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLBEPM	1116	132-003-000	132-002-000	132-002-000	132-003-000
BLBEPM	1115	-----	-----	-----	-----
BLVXW6	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLVXW6	1116	132-003-000	132-002-000	132-002-000	132-003-000
BLVXW6	1115	-----	-----	-----	-----
BLDIAG6	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLDIAG6	1116	132-003-000	132-002-000	132-002-000	132-003-000
BLDIAG6	1115	-----	-----	-----	-----

SCCPHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
SCCPHC	1116	132-003-000	132-002-000	132-002-000	132-003-000
SCCPHC	1115	-----	-----	-----	-----
BLBSMG	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLBSMG	1116	132-003-000	132-002-000	132-002-000	132-003-000
BLBSMG	1115	-----	-----	-----	-----
SLANHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
SLANHC	1116	132-003-000	132-002-000	132-002-000	132-003-000
SLANHC	1115	-----	-----	-----	-----
ERTHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
ERTHC	1116	132-003-000	132-002-000	132-002-000	132-003-000
ERTHC	1115	-----	-----	-----	-----
IPSHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPSHC	1116	132-003-000	132-002-000	132-002-000	132-003-000
IPSHC	1115	-----	-----	-----	-----
ATMHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
ATMHC	1116	132-003-000	132-002-000	132-002-000	132-003-000
ATMHC	1115	-----	-----	-----	-----
IPSG	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPSG	1116	132-003-000	132-002-000	132-002-000	132-003-000
IPSG	1115	-----	-----	-----	-----
BLROM1	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLROM1	1116	132-003-000	132-002-000	132-002-000	132-003-000
BLROM1	1115	-----	-----	-----	-----

This example shows GPLs on an EAGLE 5 ISS that has E5-based control cards installed. The GPLs were copied from the removable media in on the active MASP. The USB credit card flash media is not inserted into the USB credit card flash media drive in the E5-MCAP card of the active MASP (card location 1115). If the GPLs were copied from the USB credit card flash media, the GPL version number is displayed in the REMOVE TRIAL column and dashes are displayed in the RELEASE, APPROVED, and TRIAL columns.

If the GPLs were copied to the removable cartridge (legacy control cards are installed in the EAGLE 5 ISS), the entry for the USB credit card flash media on the active MASP (in this example, card location 1115) is not displayed. The GPL version entry for the standby MASP is not displayed.

4. Enter the `init-card` command specifying the location of the GPSM-II card (if legacy control cards are installed in the EAGLE 5 ISS), or the E5-MCAP card (if E5-based control cards are installed in the EAGLE 5 ISS) making up active MASP.

This step makes the standby MASP the active MASP. The MASP that was active is now the standby MASP.

For this example, enter this command.

```
init-card:loc=1115
```

This message should appear.

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Init Card command issued to card 1115
```

If legacy control cards are installed on the EAGLE 5 ISS, continue the procedure with [Step 5](#) on page 80.

If the GPLs in [Step 2](#) on page 76 were copied from removable media, continue the procedure with [Step 5](#) on page 80.

If the GPLs in [Step 2](#) on page 76 were copied from the USB credit card flash media, remove the USB credit card flash media from the USB credit card flash media drive on the standby

MASP and insert the USB credit card flash media in the USB credit card flash media drive on the active MASP. After the media has been inserted, continue the procedure with [Step 5](#) on page 80.

5. Copy the GPLs from the removable cartridge, removable media, or the USB credit card flash media to the standby TDM using the `copy-gpl` command. Perform one of these substeps.
 - a) If legacy control cards are installed on the EAGLE 5 ISS, the GPLs are copied from the removable cartridge to the standby TDM. For this example, enter this command.

```
copy-gpl:sloc=1117:dloc=1116
```

During command execution, these messages should appear.

```
rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY GPL:  MASP A - COPY STARTS ON REMOVABLE DRIVE
;

rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY GPL:  MASP A - COPY TO STANDBY MASP COMPLETE
```

- b) If E5-based control cards are installed on the EAGLE 5 ISS, and the removable media was used to restore the database, the GPLs are copied from the removable media on on the active MASP to the standby TDM. For this example, enter this command.

```
copy-gpl:sloc=1113:dloc=1116:sdrv=remove
```

During command execution, these messages should appear.

```
rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY-GPL:  MASP A - COPY STARTS ON REMOVABLE DRIVE
;

rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY GPL:  MASP A - COPY TO STANDBY MASP COMPLETE
```

- c) If E5-based control cards are installed on the EAGLE 5 ISS, and the USB credit card flash media was used to restore the database, the GPLs are copied from the USB credit card flash media on the active MASP to the standby TDM. For this example, enter this command.

```
copy-gpl:sloc=1113:dloc=1116:sdrv=usb
```

During command execution, these messages should appear.

```
rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY-GPL:  MASP A - COPY STARTS ON USB DRIVE
;

rlghncxa03w 09-03-01 14:50:46 GMT EAGLE5 40.1.0
COPY GPL:  MASP A - COPY TO STANDBY MASP COMPLETE
```

6. Verify the GPLs on the standby TDM and the removable cartridge, removable media, or the USB credit card flash media with the `rtrv-gpl` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 07:01:08 GMT EAGLE5 41.0.0
GPL Auditing  ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
EOAM	1114	132-003-000	132-003-000	132-002-000	132-003-000

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EOAM	1116	132-003-000	132-003-000	132-002-000	132-003-000
EOAM	1115	-----	-----	-----	-----
GLS	1114	132-003-000	132-003-000	132-002-000	132-003-000
GLS	1116	132-003-000	132-003-000	132-002-000	132-003-000
GLS	1115	-----	-----	-----	-----
CDU	1114	162-001-000	162-001-000	162-000-000	162-001-000
CDU	1116	162-001-000	162-001-000	162-000-000	162-001-000
CDU	1115	-----	-----	-----	-----
IMT	1114	132-003-000	132-003-000	132-002-000	132-003-000
IMT	1116	132-003-000	132-003-000	132-002-000	132-003-000
IMT	1115	-----	-----	-----	-----
ATMANSI	1114	132-003-000	132-003-000	132-002-000	132-003-000
ATMANSI	1116	132-003-000	132-003-000	132-002-000	132-003-000
ATMANSI	1115	-----	-----	-----	-----
BPHCAP	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPHCAP	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPHCAP	1115	-----	-----	-----	-----
BPDCM	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM	1115	-----	-----	-----	-----
BLMCAP	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLMCAP	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLMCAP	1115	-----	-----	-----	-----
OAMHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
OAMHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
OAMHC	1115	-----	-----	-----	-----
VXWSLAN	1114	132-003-000	132-003-000	132-002-000	132-003-000
VXWSLAN	1116	132-003-000	132-003-000	132-002-000	132-003-000
VXWSLAN	1115	-----	-----	-----	-----
IPLIM	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPLIM	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPLIM	1115	-----	-----	-----	-----
IPLIMI	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPLIMI	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPLIMI	1115	-----	-----	-----	-----
SS7IPGW	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7IPGW	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7IPGW	1115	-----	-----	-----	-----
VSCCP	1114	132-003-000	132-003-000	132-002-000	132-003-000
VSCCP	1116	132-003-000	132-003-000	132-002-000	132-003-000
VSCCP	1115	-----	-----	-----	-----
ATMITU	1114	132-003-000	132-003-000	132-002-000	132-003-000
ATMITU	1116	132-003-000	132-003-000	132-002-000	132-003-000
ATMITU	1115	-----	-----	-----	-----
VCDU	1114	162-001-000	162-001-000	162-000-000	162-001-000
VCDU	1116	162-001-000	162-001-000	162-000-000	162-001-000
VCDU	1115	-----	-----	-----	-----
BPMPPL	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPMPPL	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPMPPL	1115	-----	-----	-----	-----
SS7ML	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7ML	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7ML	1115	-----	-----	-----	-----
BPHMUX	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPHMUX	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPHMUX	1115	-----	-----	-----	-----
IPGWI	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPGWI	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPGWI	1115	-----	-----	-----	-----
IPS	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPS	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPS	1115	-----	-----	-----	-----
BPDCM2	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM2	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM2	1115	-----	-----	-----	-----

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EROUTE	1114	132-003-000	132-003-000	132-002-000	132-003-000
EROUTE	1116	132-003-000	132-003-000	132-002-000	132-003-000
EROUTE	1115	-----	-----	-----	-----
BPMPLT	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPMPLT	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPMPLT	1115	-----	-----	-----	-----
MCP	1114	132-003-000	132-003-000	132-002-000	132-003-000
MCP	1116	132-003-000	132-003-000	132-002-000	132-003-000
MCP	1115	-----	-----	-----	-----
BPHCAPT	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPHCAPT	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPHCAPT	1115	-----	-----	-----	-----
HIPR	1114	132-003-000	132-003-000	132-002-000	132-003-000
HIPR	1116	132-003-000	132-003-000	132-002-000	132-003-000
HIPR	1115	-----	-----	-----	-----
SS7HC	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7HC	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7HC	1115	-----	-----	-----	-----
BLBIOS	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLBIOS	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLBIOS	1115	-----	-----	-----	-----
BLCPLD	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLCPLD	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLCPLD	1115	-----	-----	-----	-----
GLSHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
GLSHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
GLSHC	1115	-----	-----	-----	-----
IMTPCI	1114	132-003-000	132-003-000	132-002-000	132-003-000
IMTPCI	1116	132-003-000	132-003-000	132-002-000	132-003-000
IMTPCI	1115	-----	-----	-----	-----
PLDPMC1	1114	132-003-000	132-003-000	132-002-000	132-003-000
PLDPMC1	1116	132-003-000	132-003-000	132-002-000	132-003-000
PLDPMC1	1115	-----	-----	-----	-----
IPLHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPLHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPLHC	1115	-----	-----	-----	-----
IPGHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPGHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPGHC	1115	-----	-----	-----	-----
SS7EPM	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7EPM	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7EPM	1115	-----	-----	-----	-----
BLBEPM	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLBEPM	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLBEPM	1115	-----	-----	-----	-----
BLVXW6	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLVXW6	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLVXW6	1115	-----	-----	-----	-----
BLDIAG6	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLDIAG6	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLDIAG6	1115	-----	-----	-----	-----
SCCPHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
SCCPHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
SCCPHC	1115	-----	-----	-----	-----
BLBSMG	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLBSMG	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLBSMG	1115	-----	-----	-----	-----
SLANHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
SLANHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
SLANHC	1115	-----	-----	-----	-----
ERTHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
ERTHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
ERTHC	1115	-----	-----	-----	-----
IPSHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPSHC	1116	132-003-000	132-003-000	132-002-000	132-003-000

IPSHC	1115	-----	-----	-----	-----
ATMHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
ATMHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
ATMHC	1115	-----	-----	-----	-----
IPSG	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPSG	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPSG	1115	-----	-----	-----	-----
BLROM1	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLROM1	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLROM1	1115	-----	-----	-----	-----

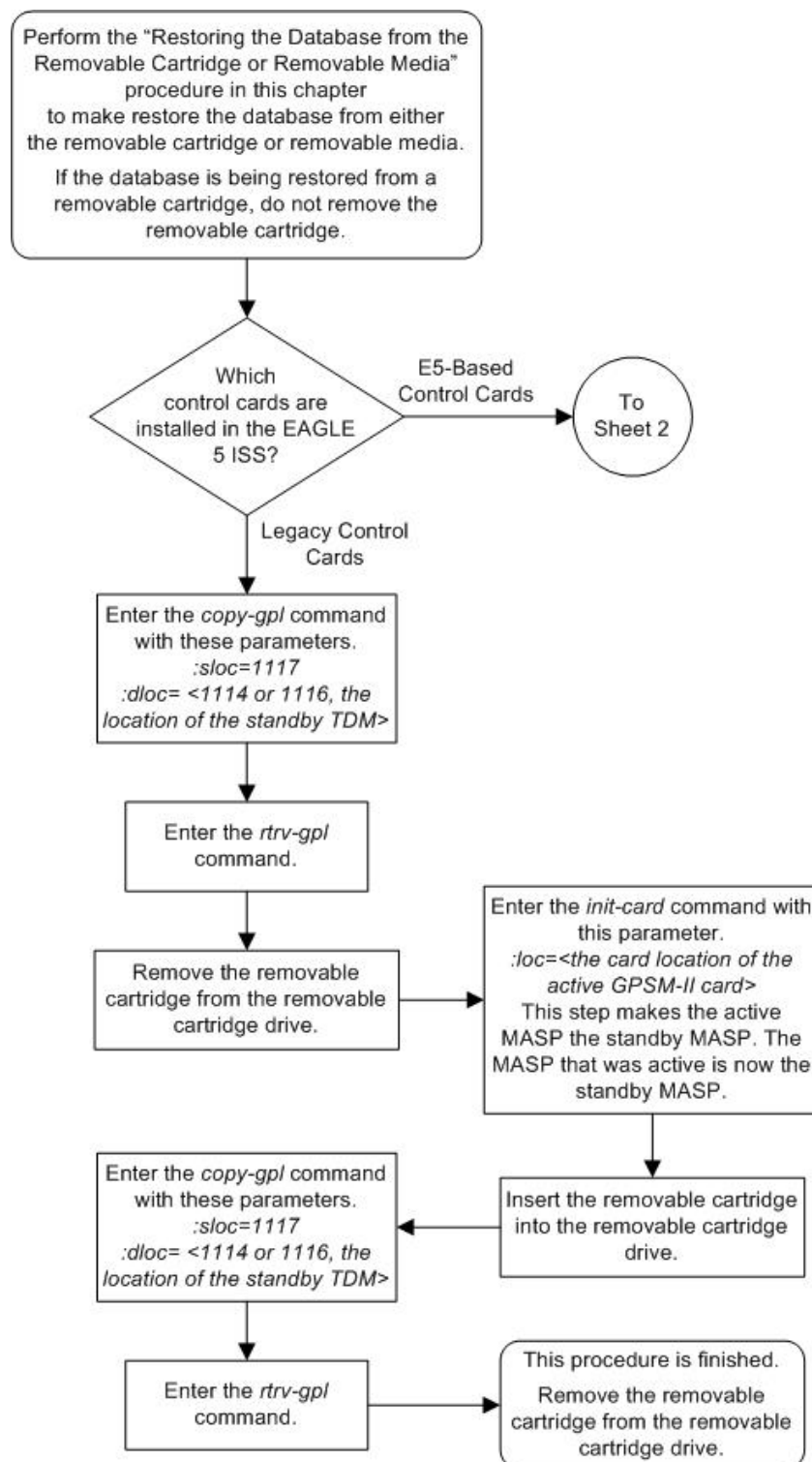
This example shows GPLs on an EAGLE 5 ISS that has E5-based control cards installed. The GPLs were copied from the removable media in on the active MASP. The USB credit card flash media is not inserted into the USB credit card flash media drive in the E5-MCAP card of the active MASP (card location 1115). If the GPLs were copied from the USB credit card flash media, the GPL version number is displayed in the REMOVE TRIAL column and dashes are displayed in the RELEASE, APPROVED, and TRIAL columns.

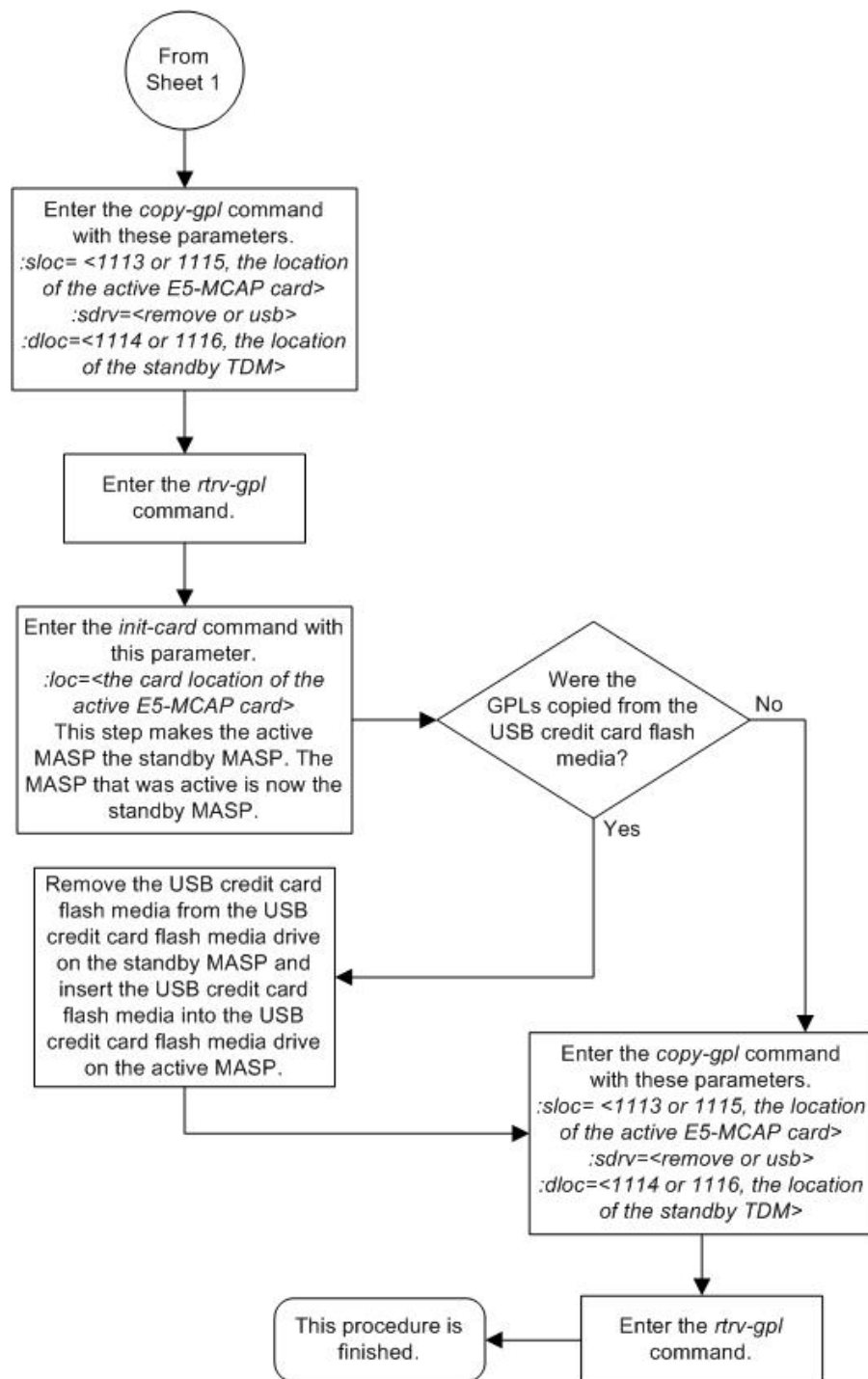
If the GPLs were copied to the removable cartridge (legacy control cards are installed in the EAGLE 5 ISS), the entry for the USB credit card flash media on the active MASP (in this example, card location 1115) is not displayed. The GPL version entry for the standby MASP is not displayed.

If the GPLs were copied from either removable media or the USB credit card flash media, this procedure is finished.

If the GPLs were copied from the removable cartridge, remove the removable cartridge from the removable cartridge drive on the MDAL card. If a removable cartridge was used in this procedure, remove the removable cartridge from the removable cartridge drive on the MDAL card. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19. This procedure is finished.

Figure 19: Restoring System Data from a Removable Cartridge or Removable Media





Formatting a Removable Cartridge

Use this procedure to prepare a new removable cartridge for use on the EAGLE 5 ISS or to take a removable cartridge which was previously used for one purpose and prepare it for the use of another purpose (measurements to system disk and vice versa) using the `format-disk` command. The `format-disk` command uses these parameters.

Note: This procedure can be performed only if legacy control cards are installed in the EAGLE 5 ISS. Refer to [Maintenance and Administration Subsystem](#) on page 7 for more information about the control cards.

: `type` – The type of disk being formatted.

- `system` – A removable cartridge containing system data (GPLs and the database)
- `meas` – A removable cartridge containing measurements data
- `fixed` – The fixed disk of the standby TDM. To format the fixed disk of the standby TDM, go to the [Formatting the Fixed Disk of the Standby TDM](#) on page 96 procedure.

: `low` – Is a low level format being performed on the disk, yes or no? The default value for this parameter is `no`.

: `force` – Format the disk if the disk contains system data, yes or no. The default value for this parameter is `no`.

: `prtnggrp` – Indicates which disk partition group is being formatted, the active partition group (`prtnggrp=active`) or the inactive partition group (`prtnggrp=inactive`). The default value for the `prtnggrp` parameter is `active`. The removable cartridge does not contain an inactive partition group, so the `prtnggrp=inactive` cannot be specified in this procedure.

Note: Reduce extended execution time when specifying the `force=yes` option by also using the `low=no` option.

The database in the current (FD CRNT) partition of the active MASP must be coherent. For more information on verifying the database, refer to [Verifying the Database](#) on page 22 .

Measurements must be inhibited before the `format-disk` command can be executed.

A removable cartridge that is write enabled is required. To write enable a removable cartridge, refer to [MO Removable Cartridge Description](#) on page 17 .

1. Check the removable cartridge drive on the MDAL card for a removable cartridge.

If there is a removable cartridge in the drive, and you do not wish to format this removable cartridge, remove it and go to step 2. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19 .

If you wish to format the removable cartridge in the drive, skip step 2 and go to step 3.

2. Insert the removable cartridge to be formatted in the removable cartridge drive on the MDAL card, making sure that the removable cartridge is write enabled.

For more information on inserting the removable cartridge in the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19 .

For more information on write enabling the removable cartridge, refer to [MO Removable Cartridge Description](#) on page 17 .

Skip step 3 and go to step 4.

3. If you wish to format the removable cartridge found in the removable cartridge drive, remove it from the drive and verify that is a write enabled removable cartridge.

If the removable cartridge is not write enabled, refer to [MO Removable Cartridge Description](#) on page 17 to write enable the removable cartridge. Insert the removable cartridge in the removable cartridge drive and go to step 4.

4. Verify that the database in the current (FD CRNT) partition of the active MASP is coherent using the `rept -stat -db` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:11:34 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY)                TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP    C  LEVEL      TIME LAST BACKUP
-----
FD BKUP  Y          35 04-06-01 10:19:18 GMT Y          35 04-06-01 10:19:18 GMT
FD CRNT  Y          106
      MDAL 1117
      -----
RD BKUP  Y          106 04-05-31 16:09:53 GMT
```

If the current database on the active MASP is not coherent, refer to [Verifying the Database](#) on page 22 and resolve the database problem.

5. Verify that measurement collection is on or off using the `rtrv-meas-sched` command.

This is an example of the possible output. The **COLLECT** field shows whether measurement collection is on or off. In this example, measurement collection is on.

```
rlghncxa03w 06-10-01 12:22:55 GMT EAGLE5 36.0.0
COLLECT      = on
GTWYLSFLTR   = both
-----
SYSTOT-STP   = off
SYSTOT-TT    = off
SYSTOT-STPLAN = on
COMP-LNKSET   = off
COMP-LINK    = on
GTWY-STP     = on
GTWY-LNKSET   = on
MTCd-STP     = on
MTCd-LINK    = on
MTCd-STPLAN  = on
MTCd-LNKSET   = on
```

Note: If measurement collection is off, skip step 6 and go to step 7.

6. Inhibit all measurements using the `chg-meas:collect=off` command.



CAUTION

CAUTION: Measurements must be inhibited or the `format-disk` command cannot be executed. The `chg-meas:collect=on` command should not be executed while the `format-disk` command is in progress. If possible, do not inhibit measurements at midnight since doing so can cause the loss of an entire day of measurements. When measurements are inhibited, measurement collection is stopped. For the period of time that measurements are inhibited, those measurements will be lost.

This message should appear.

```
rlghncxa03w 06-10-01 16:12:50 GMT EAGLE5 36.0.0
CHG-MEAS: MASP A - COMPLTD
```

7. Verify whether or not the Measurements Platform option is enabled (PLATFORMENABLE = on) using the `rtrv-measopts` command.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
PLATFORMENABLE = on
COLLECT15MIN = off
CLLIBASEDNAME = off
-----
SYSTOTSTP = off
SYSTOTT = off
```

Note: The `rtrv-measopts` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-measopts` command, see the `rtrv-measopts` command description in the *Commands Manual*.

Note: If step 7 shows that the Measurements Platform is not enabled, skip steps 8 and 9, and go to step 10.

8. Display the status of the MCPMs in the database with the `rept-stat-meas` command.

This is an example of the possible output.

```
rlghncxa03w 09-02-01 16:43:42 GMT EAGLE5 40.0.0
```

MEAS	SS	PST IS-NR	SST Active	AST -----
ALARM STATUS = No Alarms				
CARD	VERSION	TYPE	PST	SST
2107	P 101-009-000	EDSM	IS-NR	Active
	IP Link A		IS-NR	Active
2108	101-009-000	EDSM	IS-NR	Active
	IP Link A		IS-NR	Active
2111	101-009-000	EDSM	IS-NR	Active
	IP Link A		IS-NR	Active
				Available
CARD	2107	ALARM STATUS = No Alarms		
CARD	2108	ALARM STATUS = No Alarms		
CARD	2111	ALARM STATUS = No Alarms		

9. Place all the MCPMs out of service using the `rmv-card` command, specifying the card location of the MCPM.

If the MCPM to be placed out of service is the last MCPM that is in service, the `force=yes` parameter must also be specified. For this example, enter these commands.

```
rmv-card: loc=2107
```

```
rmv-card: loc=2108
```

```
rmv-card: loc=2111:force=yes
```

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
Card has been inhibited.
```

10. Format the removable cartridge.

If you are formatting the removable cartridge for system data, go to step 11. If you are formatting the removable cartridge for measurements data, go to step 12.

11. To format a removable cartridge for system data, enter this command.

```
format-disk:type=system
```

Note: Because the default value for the `low` parameter (low level format parameter) is `no`, this command will not perform a low level format of the removable cartridge. If you wish to perform a low level format of the removable cartridge, the `low=yes` parameter must be specified with the `format-disk` command.

If the removable cartridge to be formatted contains system data, the `force=yes` parameter must be specified with the `format-disk` command. All data on the removable cartridge will be lost.

It takes approximately 31 minutes to format a removable cartridge for system data. It may take longer depending on other system activity that is in progress when this command is entered. When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
format-disk:type=system
Command entered at terminal #3.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk of system removable cartridge started.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk in progress.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk in progress.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk (removable cartridge) format is complete.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk of system removable cartridge completed.
Measurements collection may be turned on now if desired.
```

If you wish to turn measurement collection on, perform steps 13 and 14 , otherwise, this procedure is finished.

12. To format a removable cartridge for measurements data, enter this command.

```
format-disk:type=meas
```

Note: Because the default value for the `low` parameter (low level format parameter) is `no`, this command will not perform a low level format of the removable cartridge. If you wish to perform a low level format of the removable cartridge, the `low=yes` parameter must be specified with the `format-disk` command.

If the removable cartridge to be formatted contains system data, the `force=yes` parameter must be specified with the `format-disk` command. All data on the removable cartridge will be lost.

It takes approximately 27 minutes to format a removable cartridge for measurement data. When this command has successfully completed, these messages should appear.

```

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
format-disk:type=meas
Command entered at terminal #3.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk of measurements removable cartridge started.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk in progress.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk in progress.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk (removable cartridge) format is complete.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk of measurements removable cartridge completed.
Measurements collection may be turned on now if desired.

```

Note: If measurement collection was not turned off in step 6, skip steps 13 and 14, and go to step 15.

13. Turn on the measurements using the `chg-meas:collect=on` command.

This message should appear.

```

rlghncxa03w 06-10-01 16:12:50 GMT  EAGLE5 36.0.0
CHG-MEAS: MASP A - COMPLTD

```

14. Verify that measurement collection is on using the `rtv-meas-sched` command, shown by the `COLLECT = on` field in the output.

This is an example of the possible output.

```

rlghncxa03w 06-10-01 12:22:55 GMT  EAGLE5 36.0.0
COLLECT          = on
GTWYLSFLTR      = both
-----
SYSTOT-STP      = off
SYSTOT-TT       = off
SYSTOT-STPLAN   = on
COMP-LNKSET     = off
COMP-LINK       = on
GTWY-STP        = on
GTWY-LNKSET     = on
MTCD-STP        = on
MTCD-LINK       = on
MTCD-STPLAN     = on
MTCD-LNKSET     = on

```

Note: If MCPMs were not placed out of service in step 9, skip steps 15 and 16. This procedure is finished.

15. Place the MCPMs back into service using the `rst-card` specifying the location of each MCPM.

For this example, enter these commands.

```
rst-card: loc=2107
```

```
rst-card: loc=2108
```

```
rst-card: loc=2111
```

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 21:20:37 GMT EAGLE5 36.0.0
Card has been allowed.
```

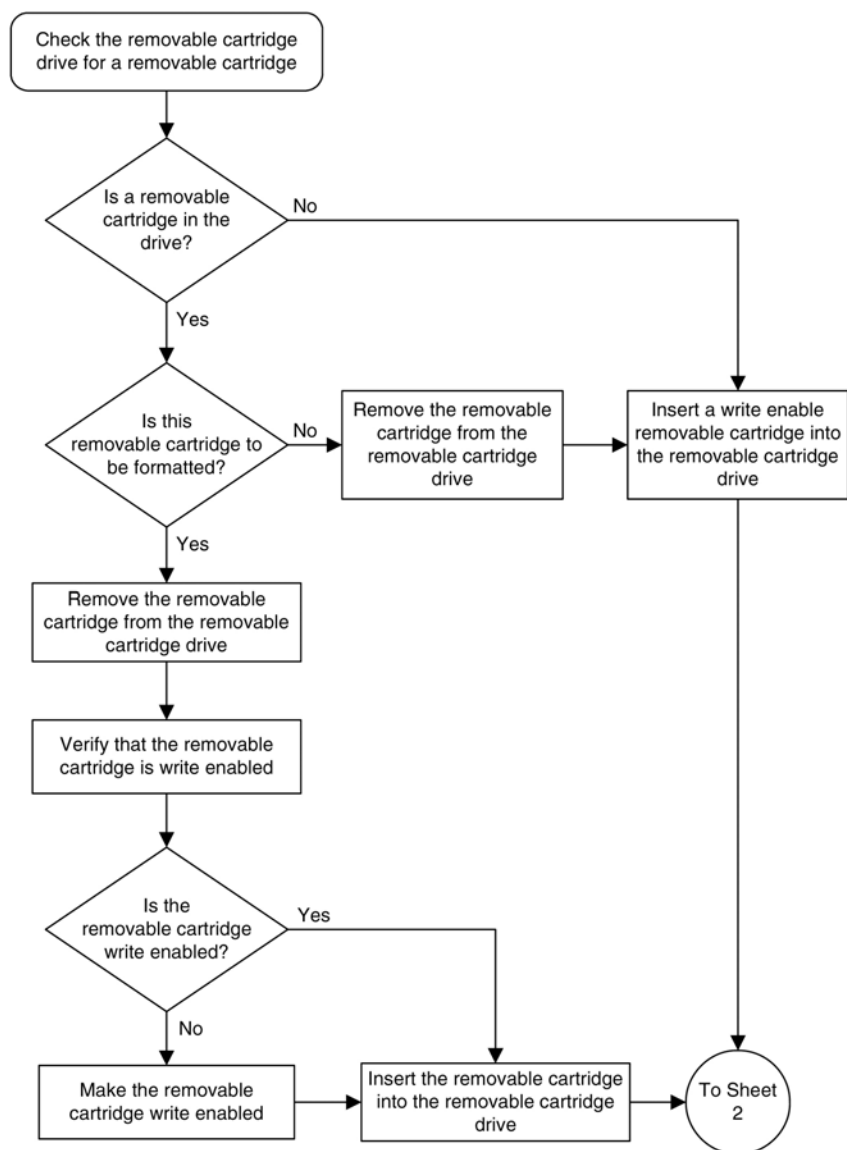
16. Display the status of the MCPMs in the database with the `rept-stat-meas` command.

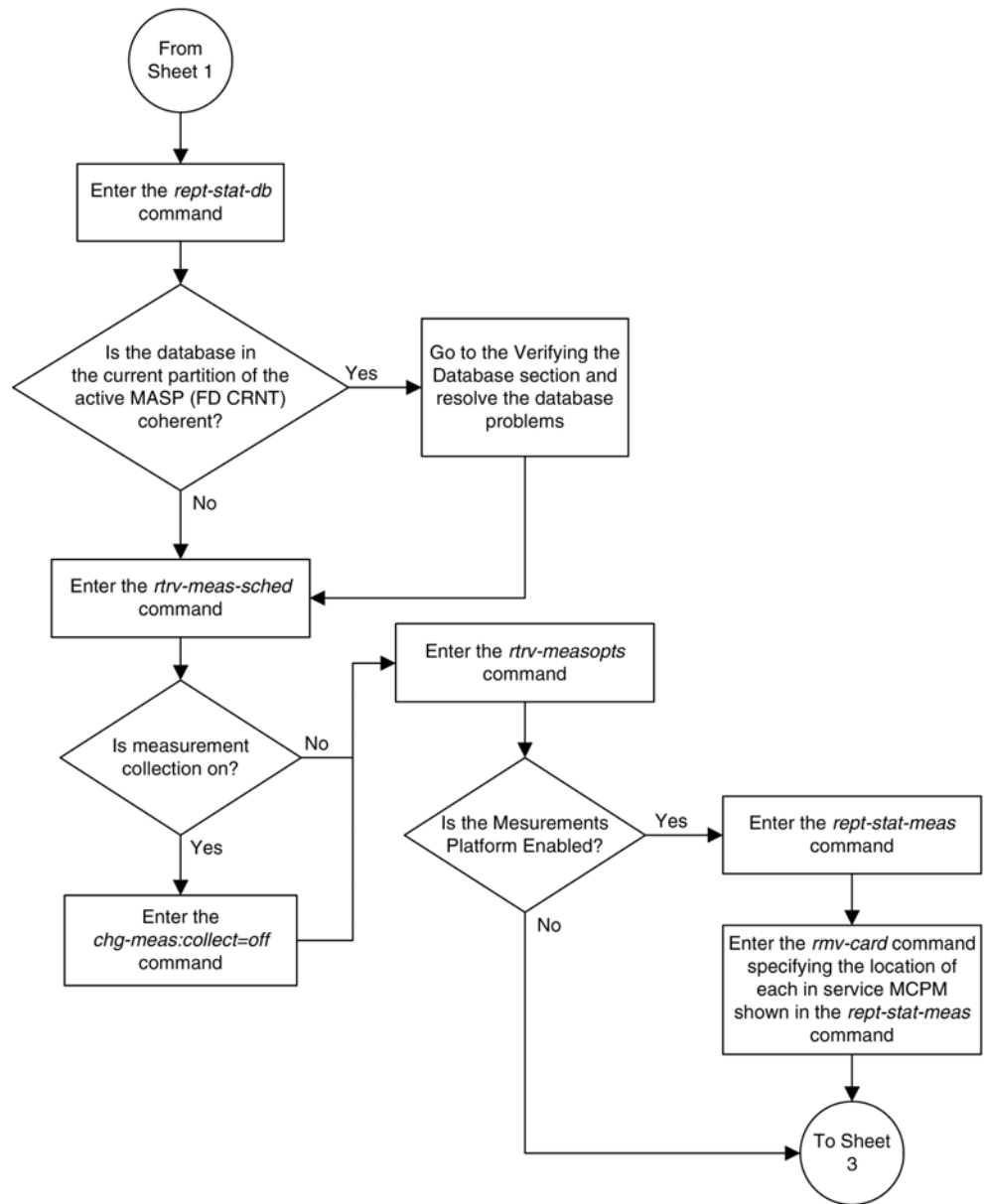
This is an example of the possible output.

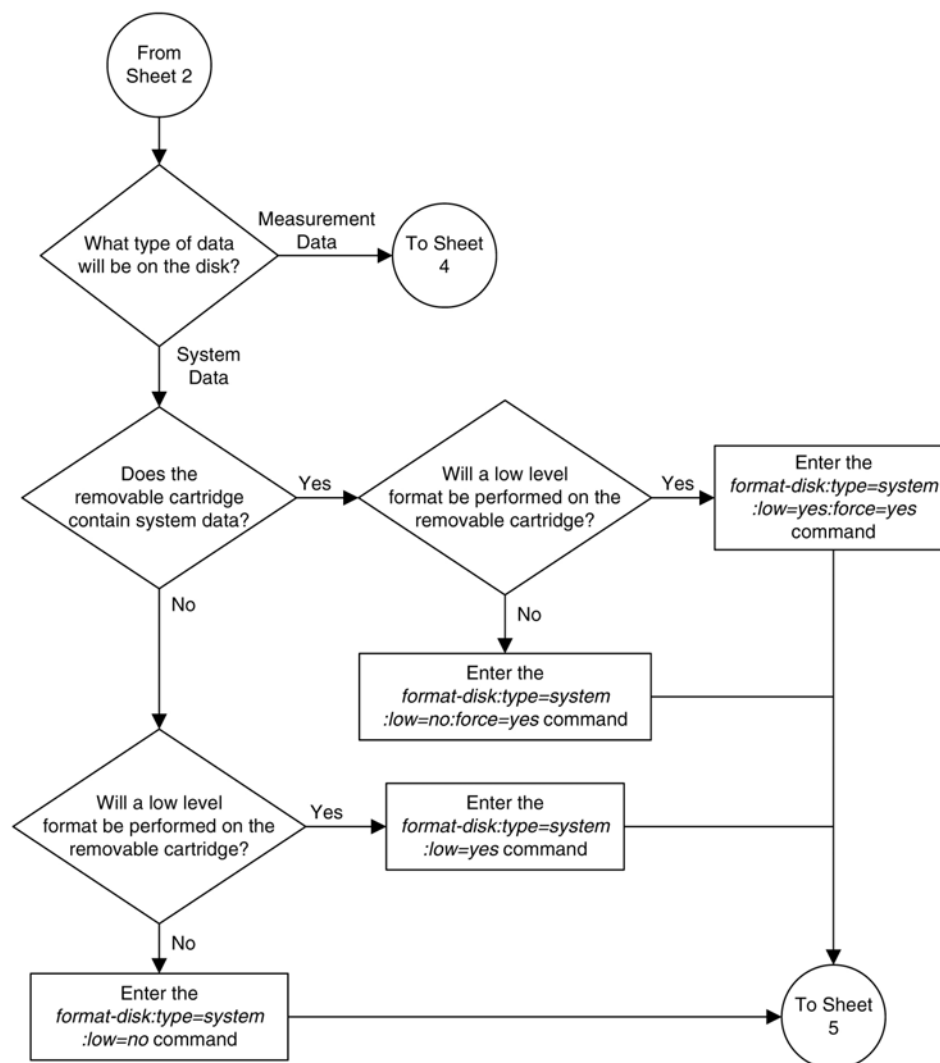
```
rlghncxa03w 09-02-01 16:43:42 GMT EAGLE5 40.0.0
```

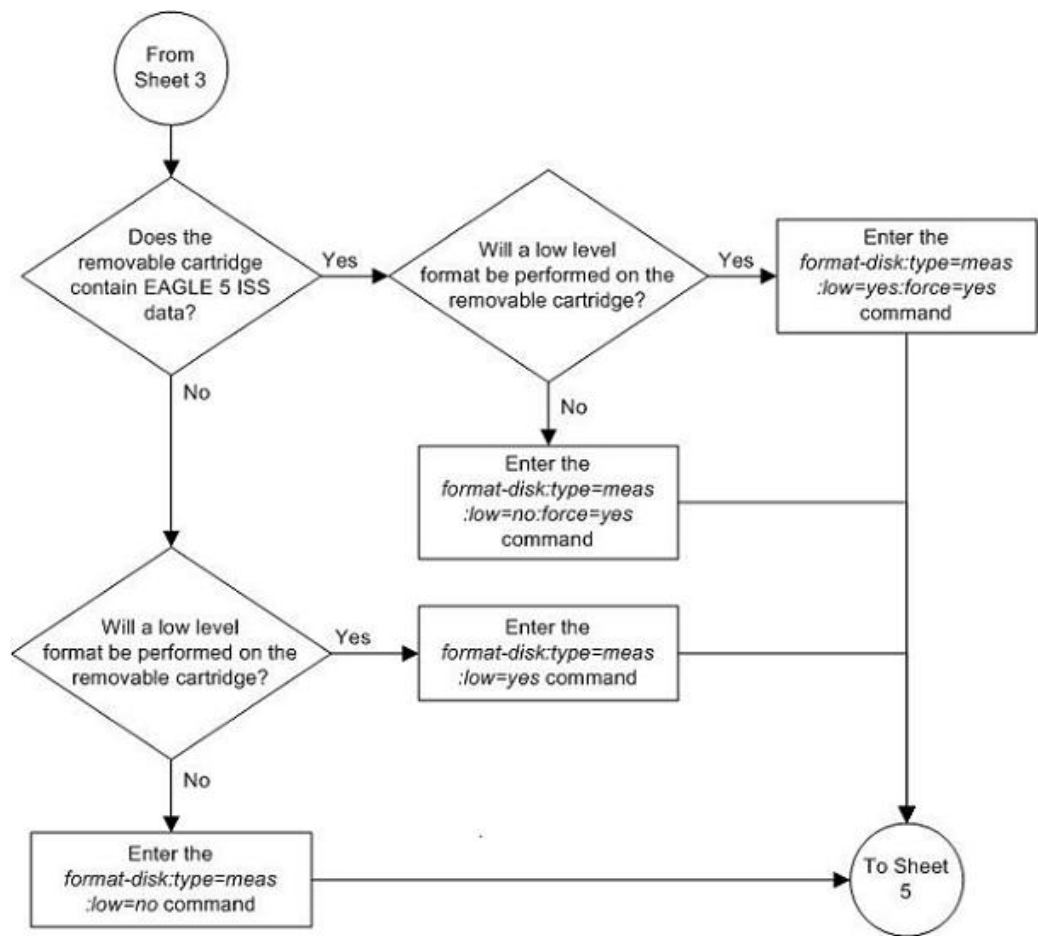
MEAS	SS		PST IS-NR	SST Active	AST -----
		ALARM STATUS =	No Alarms		
CARD	VERSION		TYPE	PST	SST
2107 P	101-009-000		EDSM	IS-NR	Active
IP Link A				IS-NR	Active
2108	101-009-000		EDSM	IS-NR	Active
IP Link A				IS-NR	Active
2111	101-009-000		EDSM	IS-NR	Active
IP Link A				IS-NR	Active
		CARD 2107 ALARM STATUS =	No Alarms		
		CARD 2108 ALARM STATUS =	No Alarms		
		CARD 2111 ALARM STATUS =	No Alarms		

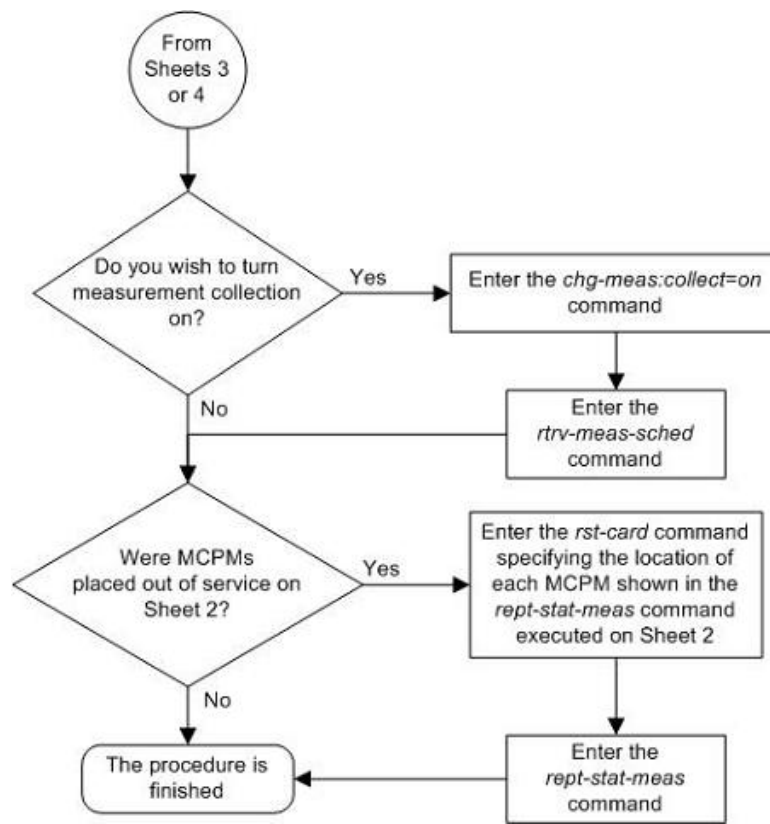
Figure 20: Formatting the Removable Cartridge











Formatting the Fixed Disk of the Standby TDM

Use this procedure to format the fixed disk of the standby TDM using the `format -disk` command.

The `format -disk` command uses these parameters.

: type – The type of disk or media being formatted.

- **system** – A removable cartridge or removable media containing system data (GPLs and the database). To format a removable cartridge, perform [Formatting a Removable Cartridge](#) on page 86. To format removable media, perform [Formatting Removable Media or the USB Credit Card Flash Media](#) on page 105.
- **usb** – The USB credit card flash media. To format the USB credit card flash media, perform [Formatting Removable Media or the USB Credit Card Flash Media](#) on page 105.
- **fixed** – The fixed disk of the standby TDM.

Note: If a `format -disk:type=fixed` command failure causes the standby TDM to boot continuously, insert a removable disk that has the same release as the active TDM into the MDAL. The standby TDM can then boot off of the removable disk.

: loc – The location of the standby TDM, either 1114 or 1116.

: low – Is a check of the disk or media being performed and any problems found on the disk or media being repaired, yes or no? The `low=yes` parameter performs a check of the disk or media

and any problems that are found are repaired. If the TDM is a legacy TDM, data on the disk is destroyed during this operation. If the TDM is an E5-TDM, no data is destroyed during this operation. If the `low=no` parameter is specified, the check of the disk or media is not performed. The default value for this parameter is `no`.

: `force` – Format the disk if the disk contains system data, `yes` or `no`. The default value for this parameter is `no`.

Note: Reduce extended execution time when specifying the `force=yes` option by also using the `low=no` option.

: `prtngrp` – Indicates which disk partition group is being formatted, the active partition group (`prtngrp=active`) or the inactive partition group (`prtngrp=inactive`). The default value for the `prtngrp` parameter is `active`. The `prtngrp` parameter can be specified only with the `low=no` parameter. Contact the Customer Care Center before using the `prtngrp=inactive` parameter. Refer to [Customer Care Center](#) on page 4 for the contact information.

The database in the current (FD CRNT) partition of the active MASP must be coherent. For more information on verifying the database, refer to [Verifying the Database](#) on page 22.

Measurements must be inhibited before the `format-disk` command can be executed.

The standby fixed disk cannot be formatted if the security log on the standby fixed disk contains any entries that have not been copied to the FTA area of the fixed disk. This can be verified with the `rept-stat-secu log` command. If the security log on the standby fixed disk contains entries that have not been copied to the file transfer area of the fixed disk, copy these entries to the file transfer area using the `copy-secu log` command.

1. Verify that the database in the current (FD CRNT) partition of the active MASP is coherent using the `rept-stat-db` command.

If legacy control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 06-10-01 16:11:34 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )
      C  LEVEL      TIME LAST BACKUP
      -  - - - - -
FD BKUP Y          35 04-06-01 10:19:18 GMT
FD CRNT Y          106
      MDAL 1117
      -  - - - - -
RD BKUP -  - - - - -
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY )
      C  LEVEL      TIME LAST BACKUP
      -  - - - - -
FD BKUP Y          35 09-02-19 10:19:18 GMT
FD CRNT Y          106
      MCAP 1113
      -  - - - - -
      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP
      -  - - - - -
FD BKUP Y          35 09-02-19 10:19:18 GMT
FD CRNT Y          106
      MCAP 1115
      -  - - - - -
```

```
RD BKUP Y      106 09-02-15 16:09:53 GMT Y      106 09-02-15 16:09:53 GMT
USB BKP -      -    -          -          Y      95 09-02-13 16:09:53 GMT
```

If the current database on the active MASP is not coherent, refer to [Verifying the Database](#) on page 22 to resolve the database problem.

2. Verify that measurement collection is on or off using the `rtrv-meas-sched` command.

This is an example of the possible output. The `COLLECT` field shows whether measurement collection is on or off. In this example, measurement collection is on

```
.
rlghncxa03w 06-10-01 12:22:55 GMT EAGLE5 36.0.0
COLLECT      = on
GTWYLSFLTR   = both
-----
SYSTOT-STP   = off
SYSTOT-TT    = off
SYSTOT-STPLAN = on
COMP-LNKSET  = off
COMP-LINK    = on
GTWY-STP     = on
GTWY-LNKSET  = on
MTCN-STP     = on
MTCN-LINK    = on
MTCN-STPLAN  = on
MTCN-LNKSET  = on
```

Note: If measurement collection is off, skip step 3 and go to step 4.

3. Inhibit all measurements using the `chg-meas:collect=off` command.



CAUTION

CAUTION: Measurements must be inhibited or the `format-disk` command cannot be executed. The `chg-meas:collect=on` command should not be executed while the `format-disk` command is in progress. If possible, do not inhibit measurements at midnight since doing so can cause the loss of an entire day of measurements. When measurements are inhibited, measurement collection is stopped. For the period of time that measurements are inhibited, those measurements will be lost.

This message should appear.

```
rlghncxa03w 06-10-01 16:12:50 GMT EAGLE5 36.0.0
CHG-MEAS: MASP A - COMPLTD
```

4. Verify whether or not the Measurements Platform option is enabled (`PLATFORMENABLE = on`) using the `rtrv-measopts` command.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
PLATFORMENABLE = on
COLLECT15MIN   = off
CLLIBASENAME   = off
-----
SYSTOTSTP     = off
SYSTOTTT      = off
```

Note: The `rtrv-measopts` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-measopts` command, see the `rtrv-measopts` command description in the *Commands Manual*.

Note: If step 4 shows that the Measurements Platform is not enabled, skip steps 5 and 6, and go to step 7.

5. Display the status of the MCPMs in the database with the `rept -stat -meas` command.

This is an example of the possible output.

```
rlghncxa03w 09-02-01 16:43:42 GMT EAGLE5 40.0.0

MEAS SS          PST          SST          AST
          IS-NR          Active          -----
          ALARM STATUS =    No Alarms

CARD  VERSION      TYPE  PST          SST          AST
2107 P 101-009-000  EDSM  IS-NR          Active          -----
      IP Link A      IS-NR          Active          Available
2108 101-009-000  EDSM  IS-NR          Active          -----
      IP Link A      IS-NR          Active          Available
2111 101-009-000  EDSM  IS-NR          Active          -----
      IP Link A      IS-NR          Active          Available

CARD 2107 ALARM STATUS = No Alarms
CARD 2108 ALARM STATUS = No Alarms
CARD 2111 ALARM STATUS = No Alarms
```

6. Place all the MCPMs out of service using the `rmv -card` command, specifying the card location of the MCPM.

If the MCPM to be placed out of service is the last MCPM that is in service, the `force=yes` parameter must also be specified. For this example, enter these commands.

```
rmv-card: loc=2107
rmv-card: loc=2108
rmv-card: loc=2111:force=yes
```

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
Card has been inhibited.
```

7. Verify that the security log on the standby MASP contains no entries that must be copied to the FTA area of the fixed disk with the `rept -stat -secu log` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:59:06 GMT EAGLE5 36.0.0
-- SINCE LAST UPLOAD -- OLDEST NEWEST LAST
LOC ROLE ENTRIES %FULL OFLO FAIL RECORD RECORD UPLOAD
1114 Active 8312 84 No No 03-12-05 04-06-01 04-05-30
      11:23:56 15:59:06 14:02:22
1116 Standby 693 7 No No 03-12-05 04-06-01 04-05-30
      11:24:12 14:00:06 14:02:13
```

If the number shown in the **ENTRIES** field for the standby MASP (shown with the entry **Standby** in the **ROLE** field) is 0, go to step 9.

If the number shown in the **ENTRIES** field for the standby MASP is greater than 0, these entries must be copied to the FTA area of the fixed disk. To copy these entries, go to step 8.

For this example, go to step 8.

8. Copy the security log entries on the standby MASP to the FTA area on the fixed disk with the `copy-secu log` command.

For this example, enter the `copy-secu log:s log=stb` command. This is an example of the message that should appear.

```
rlghncxa03w 06-10-01 15:59:06 GMT EAGLE5 36.0.0
Security log on TDM 1116 copied to file 961004s.log on TDM 1114
```

9. Format the fixed disk of the standby TDM by entering the `format-disk` command.

For this example, the fixed disk of the standby TDM contains system data and a check of the fixed disk of the standby TDM for problems is not performed.

```
format-disk:type=fixed:force=yes:low=no:loc=1114
```

Note:

1. The `force=yes` parameter must be specified with the `format-disk` command if the fixed disk of the standby TDM to be formatted contains system data. All data on the fixed disk of the standby TDM will be lost.
2. The `low=no` parameter specified in this command example does not allow a check of the fixed disk of the standby TDM for problems to be performed. If you wish to perform a check of the fixed disk of the standby TDM for problems, specify the `low=yes` parameter with the `format-disk` command. Because the default value for the `low` parameter is `no`, the `low` parameter can be omitted when entering the `format-disk` command if you do not wish to perform a check of the fixed disk of the standby TDM for problems.
3. If a `format-disk:type=fixed` command failure causes the standby TDM to boot continuously, insert a removable disk that has the same release as the active TDM into the MDAL. The standby TDM can then boot off of the removable disk.
4. The optional parameter `prtnggrp` parameter can be specified with this command. The `prtnggrp` parameter indicates which disk partition group is being formatted, the active partition group (`prtnggrp=active`) or the inactive partition group (`prtnggrp=inactive`). The default value for the `prtnggrp` parameter is `active`. The `prtnggrp` parameter can be specified only with the `low=no` parameter. Contact the Customer Care Center before using the `prtnggrp=inactive` parameter. Refer to [Customer Care Center](#) on page 4 for the contact information.

Formatting the fixed disk of the standby TDM can take from 14 minutes to 1 hour and 25 minutes to execute. It may take longer depending on other system activity that is in progress when this command is entered. When this command has successfully completed, these messages should appear.

```
rlghncxa03w 06-10-01 09:44:08 GMT EAGLE5 36.0.0
format-disk:type=fixed:low=no:force=yes
Command entered at terminal #3.
;

rlghncxa03w 06-10-01 09:44:08 GMT EAGLE5 36.0.0
Format-disk of standby fixed disk started.
Extended processing required, please wait.
;

rlghncxa03w 06-10-01 09:44:08 GMT EAGLE5 36.0.0
Format-disk (fixed) format in progress.
```

```
;
rlghncxa03w 06-10-01 09:44:08 GMT EAGLE5 36.0.0
Format-disk (fixed) format is complete.
;

rlghncxa03w 06-10-01 09:44:08 GMT EAGLE5 36.0.0
Format-disk of standby fixed disk completed.
```

If you wish to turn measurement collection on, go to step 10, otherwise, this procedure is finished.

If measurement collection was not turned off in step 3, skip steps 10 and 11, and go to step 12.

10. If you wish to turn measurement collection on, enter this command.

```
chg-meas:collect=on
```

This message should appear.

```
rlghncxa03w 06-10-01 16:12:50 GMT EAGLE5 36.0.0
CHG-MEAS: MASP A - COMPLTD
```

11. Verify that measurement collection is on using the `rtrv-meas-sched` command, shown by the `COLLECT = on` field in the output.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 12:22:55 GMT EAGLE5 36.0.0
COLLECT          = on
GTWYLSFLTR      = both
-----
SYSTOT-STP      = off
SYSTOT-TT       = off
SYSTOT-STPLAN   = on
COMP-LNKSET     = off
COMP-LINK       = on
GTWY-STP        = on
GTWY-LNKSET     = on
MTCD-STP        = on
MTCD-LINK       = on
MTCD-STPLAN     = on
MTCD-LNKSET     = on
```

Note: MCPMs were not placed out of service in step 6, skip steps 12 and step 13. This procedure is finished.

12. Place the MCPMs back into service using the `rst-card` specifying the location of each MCPM.

For this example, enter these commands.

```
rst-card:loc=2107
```

```
rst-card:loc=2108
```

```
rst-card:loc=2111
```

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 21:20:37 GMT EAGLE5 36.0.0
Card has been allowed.
```

13. Display the status of the MCPMs in the database with the `rept-stat-meas` command.

This is an example of the possible output.

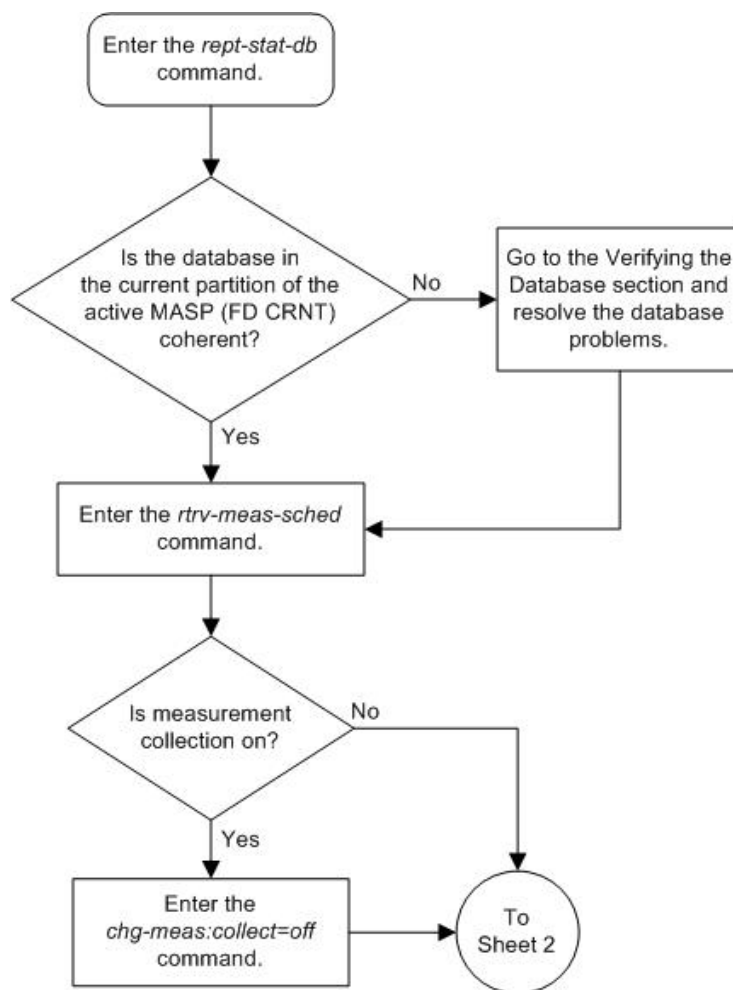
```
rlghncxa03w 09-02-01 16:43:42 GMT EAGLE5 40.0.0
```

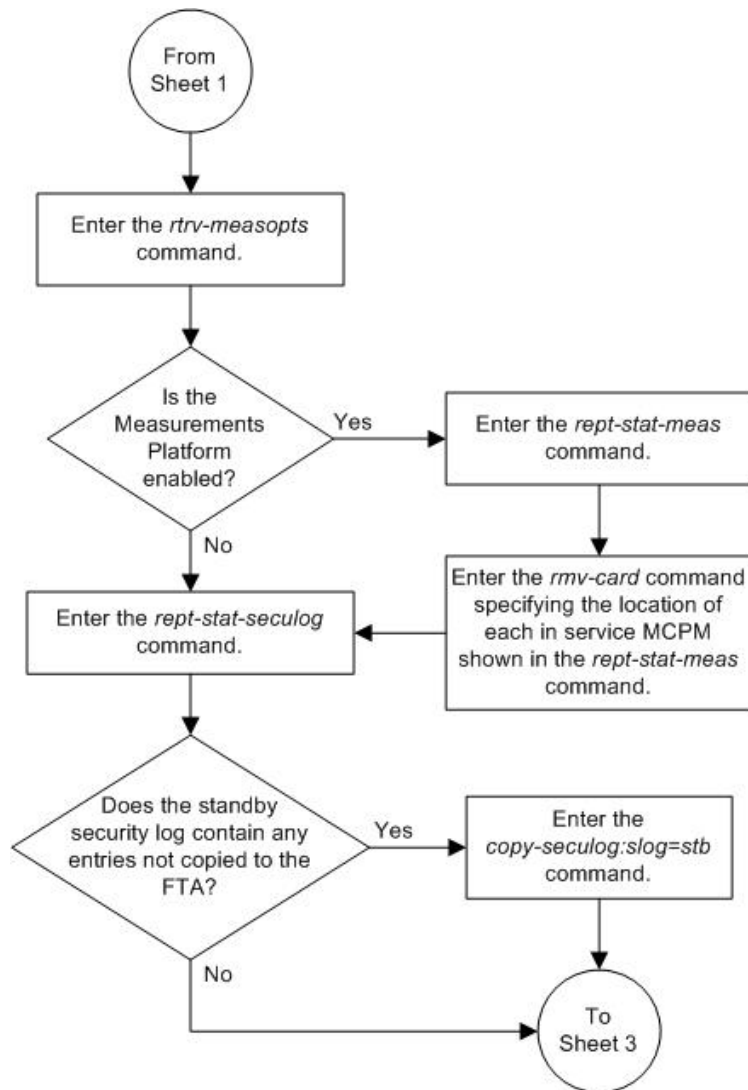
```
MEAS SS          PST      SST      AST
          IS-NR      Active  -----
          ALARM STATUS = No Alarms
```

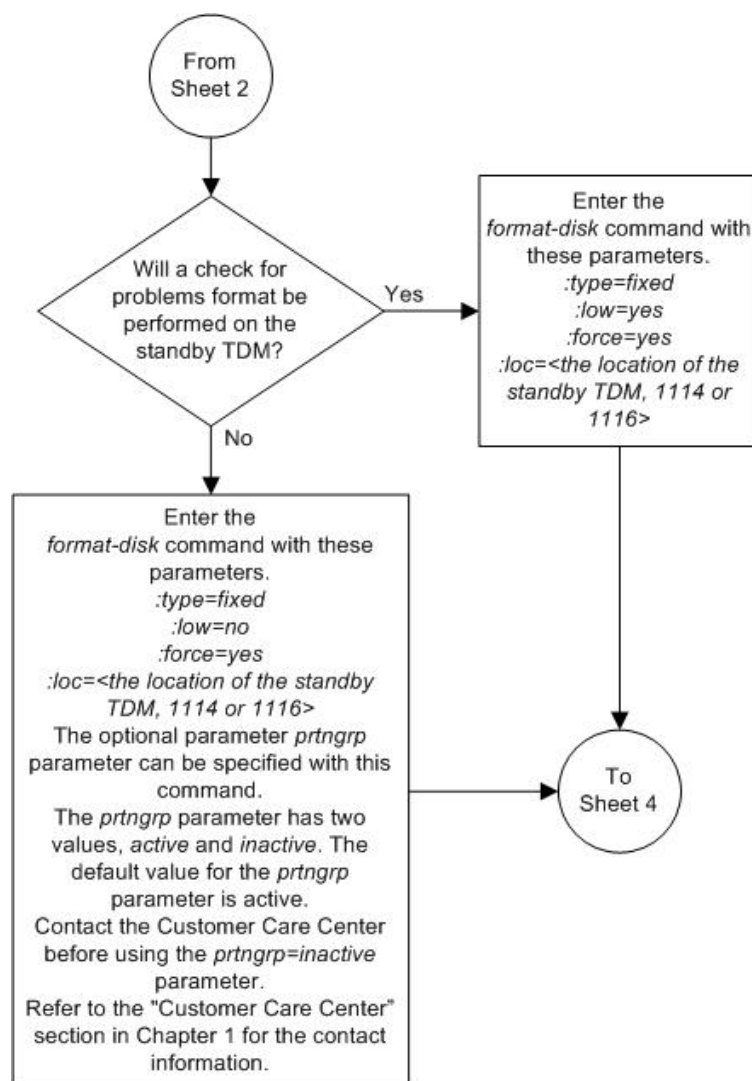
CARD	VERSION	TYPE	PST	SST	AST
2107 P	101-009-000	EDSM	IS-NR	Active	-----
IP Link A			IS-NR	Active	Available
2108	101-009-000	EDSM	IS-NR	Active	-----
IP Link A			IS-NR	Active	Available
2111	101-009-000	EDSM	IS-NR	Active	-----
IP Link A			IS-NR	Active	Available

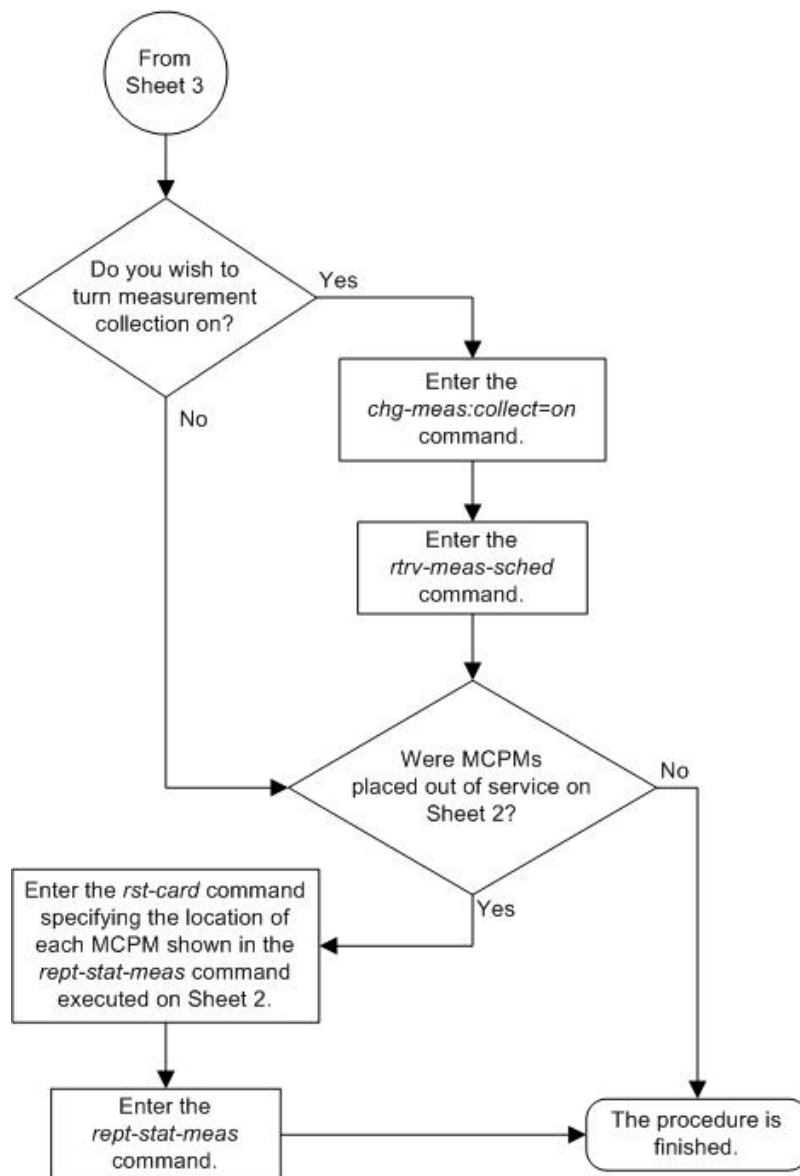
```
CARD 2107 ALARM STATUS = No Alarms
CARD 2108 ALARM STATUS = No Alarms
CARD 2111 ALARM STATUS = No Alarms
```

Figure 21: Formatting the Fixed Disk of the Standby TDM









Formatting Removable Media or the USB Credit Card Flash Media

Use this procedure to prepare removable media or the USB credit card flash media for use on the EAGLE 5 ISS for holding system data or measurements data using the `format-disk` command. The `format-disk` command uses these parameters.

Note: This procedure can be performed only if E5-based control cards are installed in the EAGLE 5 ISS. If legacy control cards are installed in the EAGLE 5 ISS, perform [Formatting a Removable Cartridge](#) on page 86. Refer to [Maintenance and Administration Subsystem](#) on page 7 for more information about the control cards.

: type – The type of media that is being formatted.

- **system** – Removable media containing system data (GPLs and the database)
- **meas** – Removable media containing measurements data
- **usb** – The USB credit card flash media. This media can contain only system data.
- **fixed** – The fixed disk of the standby TDM. To format the fixed disk of the standby TDM, perform [Formatting the Fixed Disk of the Standby TDM](#) on page 96.

: **loc** – The location of the E5-MCAP card that contains the media that is being formatted, either 1113 or 1115.

: **low** – Is a check of the media being performed and any problems found on the media being repaired, **yes** or **no**? The **low=yes** parameter performs a check of the media and any problems that are found are repaired. No data is destroyed during this operation. If the **low=no** parameter is specified, the check of the media is not performed. The default value for this parameter is **no**.

: **force** – Format the media if the media contains system data, **yes** or **no**. The default value for this parameter is **no**.

: **prtnggrp** – Indicates which disk partition group is being formatted, the active partition group (**prtnggrp=active**) or the inactive partition group (**prtnggrp=inactive**). The default value for the **prtnggrp** parameter is **active**. The removable media or the USB credit card flash media does not contain an inactive partition group, so the **prtnggrp=inactive** cannot be specified in this procedure.

Note: Reduce extended execution time when specifying the **force=yes** option by also using the **low=no** option.

The database in the current (FD CRNT) partition of the active MASP must be coherent. If the current partition of the active MASP is not coherent, contact the customer care center. Refer to [Customer Care Center](#) on page 4 for the contact information.

Measurements must be inhibited before the **format -disk** command can be executed.

1. Check the removable media drives on each MASP for removable media.

Note: If the USB credit card flash media is being formatted, do not perform this step. Continue the procedure with [Step 2](#) on page 106.

Perform one of these substeps.

- a) If there is no removable media in both removable media drives, insert the removable media that will be formatted into one of the removable media drives. Continue the procedure with [Step 2](#) on page 106. Refer to [Removable USB Drive](#) on page 20 for more information about removing the removable media.
 - b) If removable media is in the removable media drives, and the media in these drives will be formatted, continue the procedure with [Step 2](#) on page 106.
 - c) If removable media is in the removable media drives, and the media in these drives will not be formatted, remove the removable media from the removable media drive that will be used to format the removable media. Insert the removable media that will be formatted into this drive. Continue the procedure with [Step 2](#) on page 106. Refer to [Removable USB Drive](#) on page 20 for more information about removing and inserting the removable media.
2. Verify that the database in the current (FD CRNT) partition of the active MASP is coherent using the **rept -stat -db** command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
```



```

DATABASE STATUS: >> OK <<
                TDM 1114 ( STDBY )
                C  LEVEL      TIME LAST BACKUP
                -----
FD BKUP Y          35 09-02-19 10:19:18 GMT
FD CRNT Y          106
                MCAP 1113
                -----
RD BKUP Y          106 09-02-15 16:09:53 GMT
USB BKP -          -      -      -
                -----
                TDM 1116 ( ACTV )
                C  LEVEL      TIME LAST BACKUP
                -----
Y          35 09-02-19 10:19:18 GMT
Y          106
                MCAP 1115
                -----
Y          106 09-02-15 16:09:53 GMT
Y          95 09-02-13 16:09:53 GMT

```

If the current partition of the active MASP is not coherent, contact the customer care center. Refer to [Customer Care Center](#) on page 4 for the contact information.

If the current partition of the active MASP is coherent, and removable media will be formatted, continue the procedure with [Step 3](#) on page 107.

If the current partition of the active MASP is coherent, and the USB credit card flash media will be formatted, continue the procedure by performing one of these substeps.

- a) If there is no USB credit card flash media in the USB credit card flash media drive in the active MASP, insert the USB credit card flash media that will be formatted into the USB credit card flash media drive in the active MASP. Continue the procedure with [Step 3](#) on page 107.
 - b) If the USB credit card flash media is in the USB credit card flash media drive in the active MASP, and the media in this drive will be formatted, continue the procedure with [Step 3](#) on page 107.
 - c) If the USB credit card flash media is in the USB credit card flash media drive in the active MASP, and the media in this drive will not be formatted, remove the USB credit card flash media from the USB credit card flash media drive on the active MASP. Insert the USB credit card flash media that will be formatted into this drive. Continue the procedure with [Step 3](#) on page 107.
3. Verify that measurement collection is on or off using the `rtrv-meas-sched` command.

This is an example of the possible output. The `COLLECT` field shows whether measurement collection is on or off. In this example, measurement collection is on.

```

rlghncxa03w 09-03-01 12:22:55 GMT EAGLE5 40.1.0
COLLECT      = on
GTWYLSFLTR   = both
-----
SYSTOT-STP   = off
SYSTOT-TT    = off
SYSTOT-STPLAN = on
COMP-LNKSET  = off
COMP-LINK     = on
GTWY-STP     = on
GTWY-LNKSET  = on
MTCD-STP     = on
MTCD-LINK    = on
MTCD-STPLAN  = on
MTCD-LNKSET  = on

```

If measurement collection is off, continue the procedure with [Step 5](#) on page 108.

If measurement collection is on, continue the procedure with [Step 4](#) on page 107.

4. Inhibit all measurements using the `chg-meas:collect=off` command.



CAUTION: Measurements must be inhibited or the `format-disk` command cannot be executed. The `chg-meas:collect=on` command should not be executed while the `format-disk` command is in progress. If possible, do not inhibit measurements at midnight since doing so can cause the loss of an entire day of measurements. When measurements are inhibited, measurement collection is stopped. For the period of time that measurements are inhibited, those measurements will be lost.

This message should appear.

```
rlghncxa03w 09-03-01 16:12:50 GMT EAGLE5 40.1.0
CHG-MEAS: MASP A - COMPLTD
```

5. Verify whether or not the Measurements Platform option is enabled (`PLATFORMENABLE = on`) using the `rtrv-measopts` command.

```
rlghncxa03w 09-03-01 16:02:05 GMT EAGLE5 40.1.0
PLATFORMENABLE = on
COLLECT15MIN = off
CLLIBASEDNAME = off
-----
SYSTOTSTP = off
SYSTOTT = off
```

Note: The `rtrv-measopts` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-measopts` command, see the `rtrv-measopts` command description in the *Commands Manual*.

If the Measurements Platform is enabled, continue the procedure with [Step 6](#) on page 108.

If the Measurements Platform is not enabled, continue the procedure with [Step 8](#) on page 109.

6. Display the status of the MCPMs in the database with the `rept-stat-meas` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 16:43:42 GMT EAGLE5 40.1.0

MEAS SS          PST      SST      AST
          IS-NR    Active    -----
          ALARM STATUS = No Alarms

CARD  VERSION    TYPE    PST      SST      AST
2107 P 101-009-000  EDSM    IS-NR    Active    -----
      IP Link A    IS-NR    Active    Available
2108 101-009-000  EDSM    IS-NR    Active    -----
      IP Link A    IS-NR    Active    Available
2111 101-009-000  EDSM    IS-NR    Active    -----
      IP Link A    IS-NR    Active    Available

CARD 2107 ALARM STATUS = No Alarms
CARD 2108 ALARM STATUS = No Alarms
CARD 2111 ALARM STATUS = No Alarms
```

7. Place all the MCPMs out of service using the `rmv-card` command, specifying the card location of the MCPM.

If the MCPM to be placed out of service is the last MCPM that is in service, the `force=yes` parameter must also be specified. For this example, enter these commands.

```
rmv-card:loc=2107
```

```
rmv-card:loc=2108
```

```
rmv-card:loc=2111:force=yes
```

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0  
Card has been inhibited.
```

8. Format the removable media or the USB credit card flash media by performing one of these substeps.

- a) To format removable media for system data, for this example, enter this command.

```
format-disk:type=system:loc=1113
```

If a check of the media for problems will be performed, specify the `low=yes` parameter with the `format-disk` command. If the `low=yes` parameter is not specified, a check of the media for problems will not be performed.

If the media contains system data, the `force=yes` parameter must be specified with the `format-disk` command. All data on the removable media will be lost.

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 09:44:08 GMT EAGLE5 40.1.0  
format-disk:type=system  
Command entered at terminal #3.  
;  
  
rlghncxa03w 09-03-01 09:44:08 GMT EAGLE5 40.1.0  
Format disk of system removable media started.  
;  
  
rlghncxa03w 09-03-01 09:44:08 GMT EAGLE5 40.1.0  
Format disk in progress.  
;  
  
rlghncxa03w 09-03-01 09:44:08 GMT EAGLE5 40.1.0  
Format disk in progress.  
;  
  
rlghncxa03w 09-03-01 09:44:08 GMT EAGLE5 40.1.0  
Format disk (removable media) format is complete.  
;  
  
rlghncxa03w 09-03-01 09:44:08 GMT EAGLE5 40.1.0  
Format disk of system removable media completed.  
Measurements collection may be turned on now if desired.
```

- b) To format removable media for measurements data, for this example, enter this command.

```
format-disk:type=meas:loc=1113
```

If a low level format of the media will be performed, specify the `low=yes` parameter with the `format-disk` command. If the `low=yes` parameter is not specified, a low level format of the media will not be performed.

If the media contains system data, the `force=yes` parameter must be specified with the `format-disk` command. All data on the removable media will be lost.

When this command has successfully completed, these messages should appear.

```

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
format-disk:type=meas
Command entered at terminal #3.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk of measurements removable media started.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk in progress.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk in progress.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk (removable media) format is complete.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk of measurements removable media completed.
Measurements collection may be turned on now if desired.

```

- c) To format the USB credit card flash media, the format parameter value must be the location of the E5-MCAP card of the active MASP. for this example, enter this command.

Note: The USB credit card flash media cannot be formatted for measurements data.

`format-disk:type=usb:loc=1113`

If a low level format of the media will be performed, specify the `low=yes` parameter with the `format-disk` command. If the `low=yes` parameter is not specified, a low level format of the USB credit card flash media will not be performed.

If the media contains system data, the `force=yes` parameter must be specified with the `format-disk` command. All data on the USB credit card flash media will be lost.

When this command has successfully completed, these messages should appear.

```

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
format-disk:type=usb
Command entered at terminal #3.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk of usb removable drive started.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk in progress.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk in progress.
;

rlghncxa03w 09-03-01 09:44:08 GMT  EAGLE5 40.1.0
Format disk (usb removable drive) format is complete.
;

```

```
rlghncxa03w 09-03-01 09:44:08 GMT EAGLE5 40.1.0
Format disk of usb removable drive completed.
Measurements collection may be turned on now if desired.
```

```
rlghncxa03w 09-03-01 09:44:08 GMT EAGLE5 40.1.0
format-disk:type=usb
Command entered at terminal #3.
;

rlghncxa03w 09-03-01 09:44:08 GMT EAGLE5 40.1.0
Format-disk of system removable media started.
;

rlghncxa03w 09-03-01 09:44:08 GMT EAGLE5 40.1.0
Format-disk (removable media) format in progress.
;

rlghncxa03w 09-03-01 09:44:08 GMT EAGLE5 40.1.0
Format-disk (removable media) format in progress.
;

rlghncxa03w 09-03-01 09:44:08 GMT EAGLE5 40.1.0
Format-disk (removable media) format is complete.
;

rlghncxa03w 09-03-01 09:44:08 GMT EAGLE5 40.1.0
Format-disk of system removable media completed.
Measurements collection may be turned on now if desired.
```

If [Step 4](#) on page 107 was not performed, continue the procedure with [Step 11](#) on page 112.

If [Step 4](#) on page 107 was performed, continue the procedure with [Step 9](#) on page 111.

9. Turn measurements on using the `chg-meas:collect=on` command.

This message should appear.

```
rlghncxa03w 09-03-01 16:12:50 GMT EAGLE5 40.1.0
CHG-MEAS: MASP A - COMPLTD
```

10. Verify that measurement collection is on using the `rtrv-meas-sched` command, shown by the `COLLECT = on` field in the output.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 12:22:55 GMT EAGLE5 40.1.0
COLLECT          = on
GTWYLSFLTR       = both
-----
SYSTOT-STP       = off
SYSTOT-TT        = off
SYSTOT-STPLAN    = on
COMP-LNKSET      = off
COMP-LINK        = on
GTWY-STP         = on
GTWY-LNKSET      = on
MTCd-STP         = on
MTCd-LINK        = on
MTCd-STPLAN      = on
MTCd-LNKSET      = on
```

If [Step 7](#) on page 108 was not performed, do not perform [Step 11](#) on page 112 and [Step 12](#) on page 112. This procedure is finished.

If [Step 7](#) on page 108 was performed, continue the procedure with [Step 11](#) on page 112.

11. Place the MCPMs back into service using the `rst-card` specifying the location of each MCPM.

For this example, enter these commands.

```
rst-card: loc=2107
```

```
rst-card: loc=2108
```

```
rst-card: loc=2111
```

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 21:20:37 GMT EAGLE5 40.1.0
Card has been allowed.
```

12. Display the status of the MCPMs in the database with the `rept-stat-meas` command.

This is an example of the possible output.

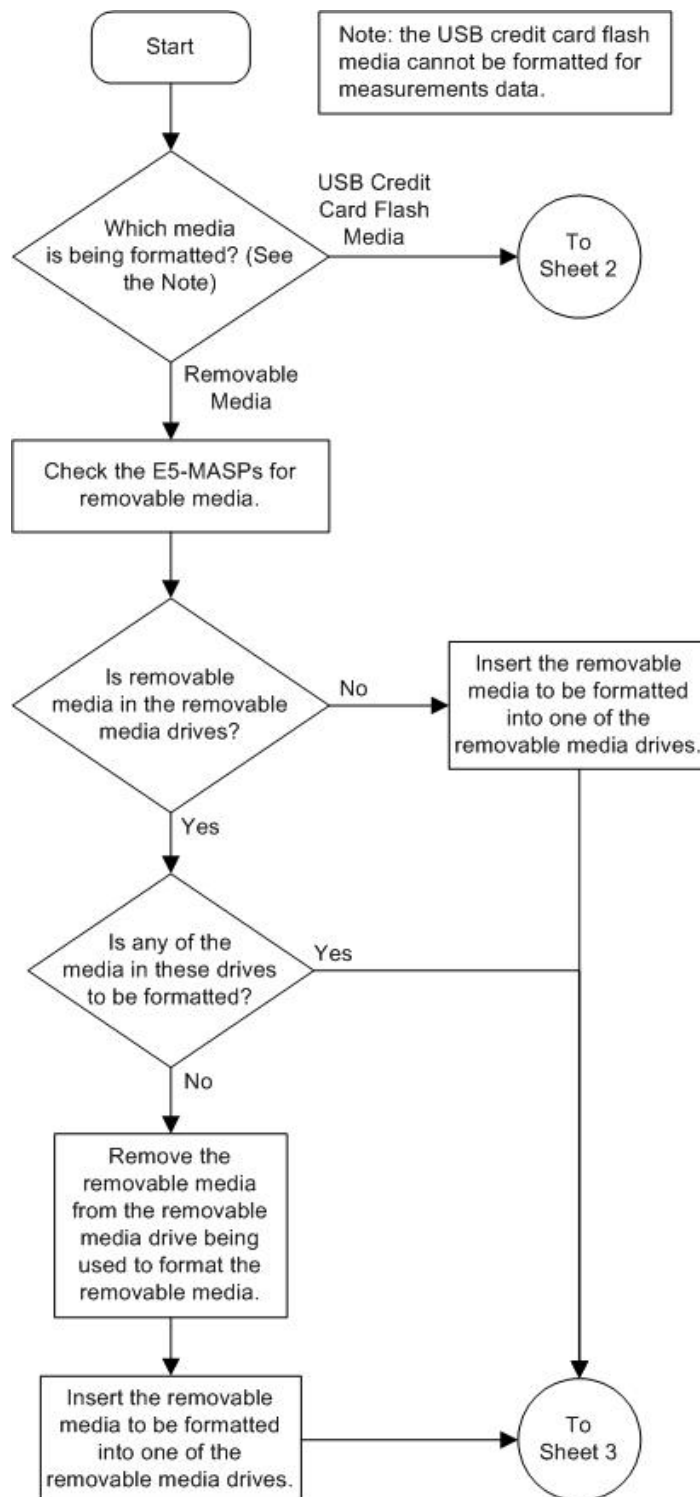
```
rlghncxa03w 09-03-01 16:43:42 GMT EAGLE5 40.1.0

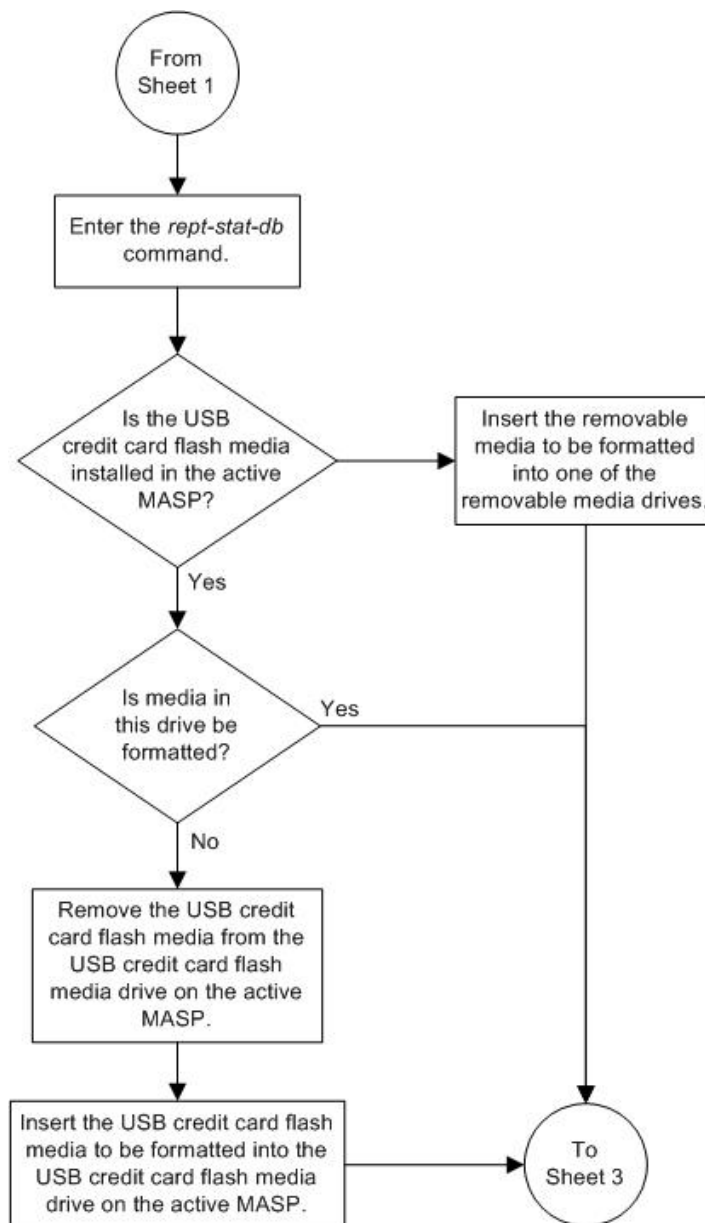
MEAS SS          PST      SST      AST
          IS-NR    Active    -----
          ALARM STATUS = No Alarms

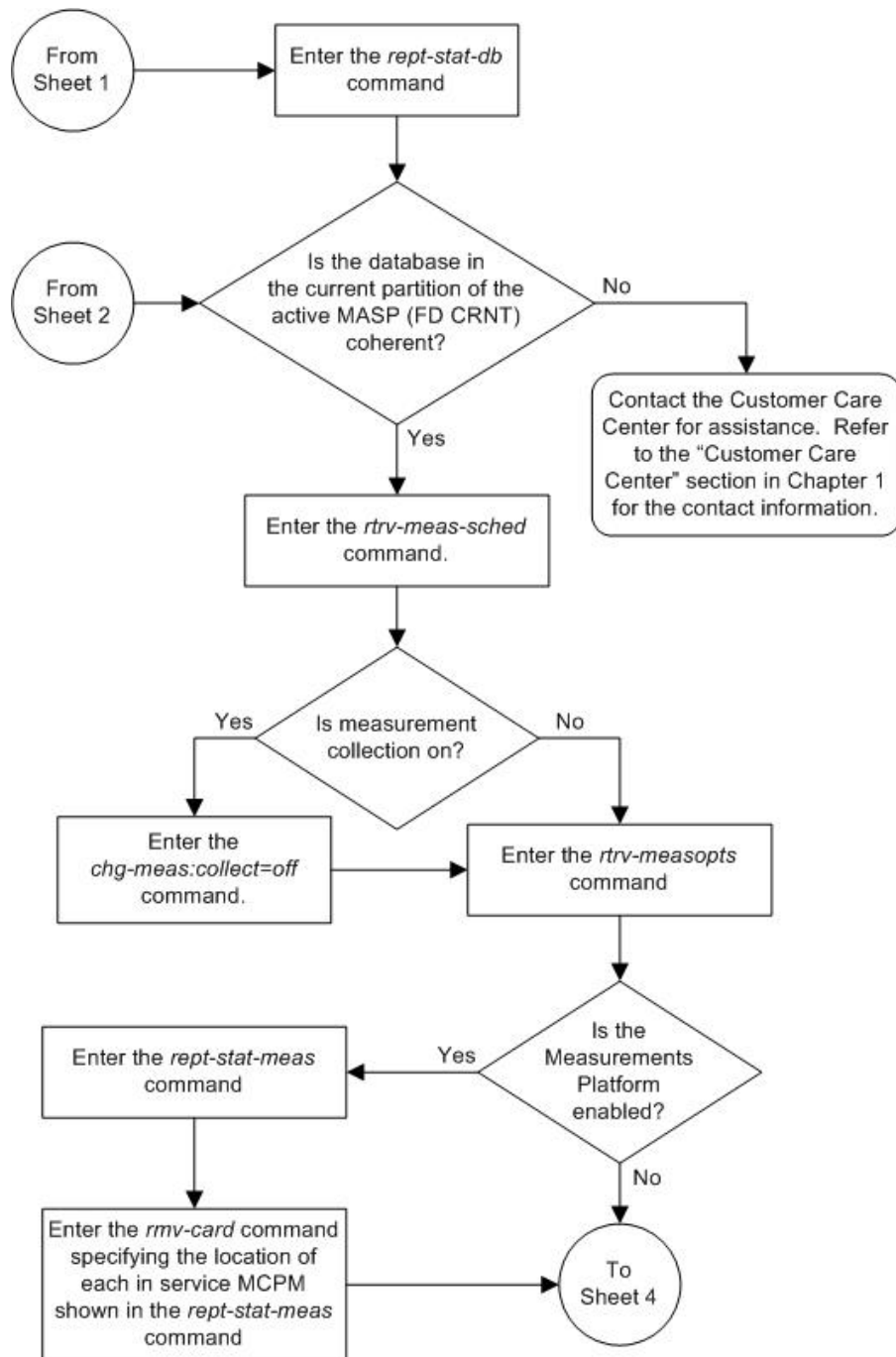
CARD  VERSION    TYPE    PST      SST      AST
2107 P 101-009-000 EDSM    IS-NR    Active    -----
      IP Link A    IS-NR    Active    Available
2108 101-009-000 EDSM    IS-NR    Active    -----
      IP Link A    IS-NR    Active    Available
2111 101-009-000 EDSM    IS-NR    Active    -----
      IP Link A    IS-NR    Active    Available

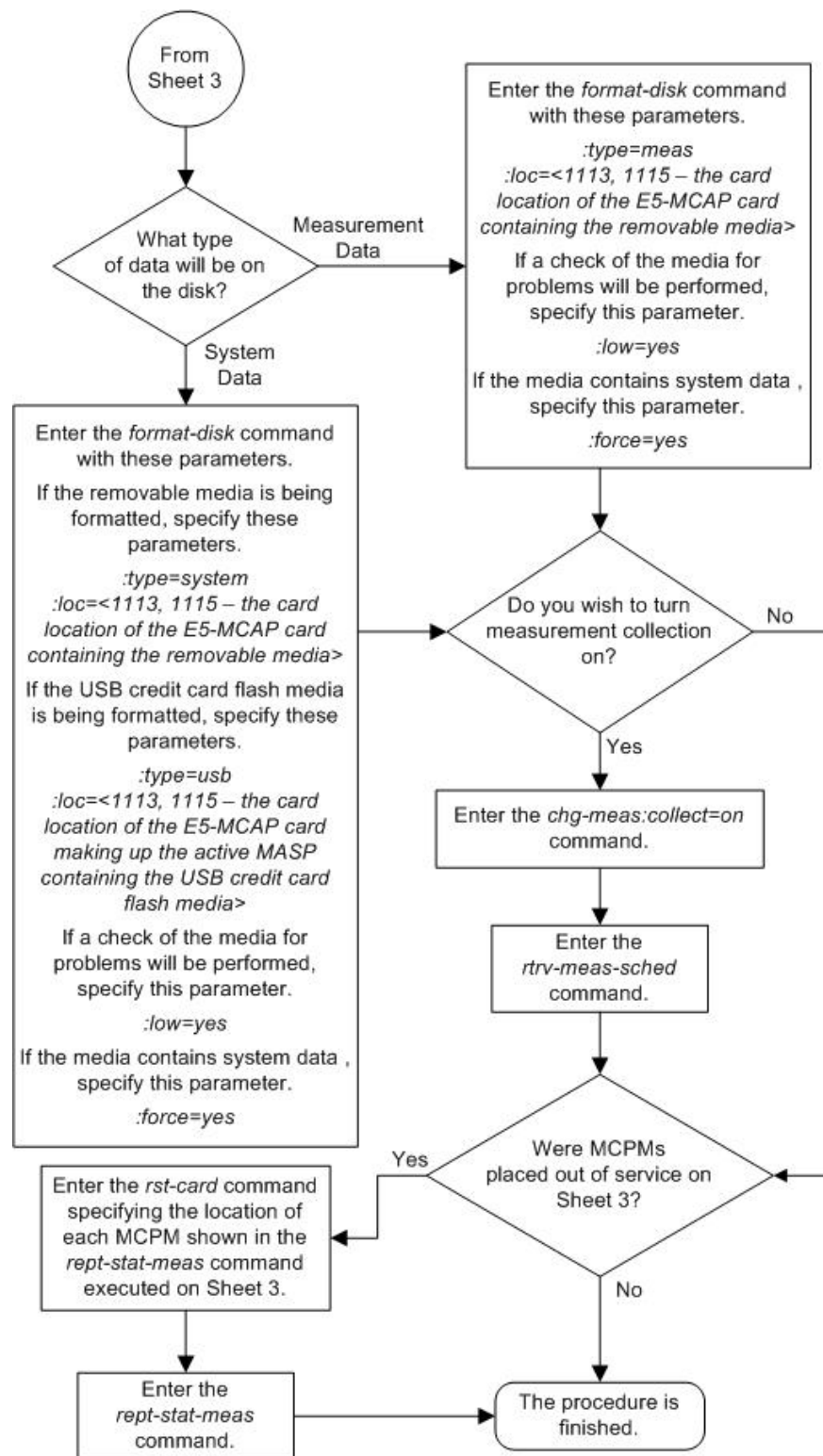
CARD 2107 ALARM STATUS = No Alarms
CARD 2108 ALARM STATUS = No Alarms
CARD 2111 ALARM STATUS = No Alarms
```

Figure 22: Formatting Removable Media









Chapter 3

GPL Management Procedures

Topics:

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Chapter 3, GPL Management Procedures, describes the procedures used for managing the system data (GPLs) on the EAGLE 5 ISS.

Introduction

A GPL is the software that is loaded onto a card that allows the various features in the EAGLE 5 ISS to work. The EAGLE 5 ISS currently uses these GPLs:

- ATMHC – The application GPL used for high-speed ANSI and E1 ATM signaling links that are assigned to E5-ATM cards.
- ATMANSI– The application GPL used for high-speed ANSI ATM signaling links that are assigned to LIMATM cards.
- ATMITU– The application GPL used for high-speed E1 ATM signaling links that are assigned to LIME1ATM cards.
- BLBIOS – A flash GPL containing the BIOS ROM image on the HC MIMs.
- BLCPLD – A flash GPL containing the bit files for the CPLD on the HC MIM , E5-E1T1, E5-STC, E5-SLAN, E5-SM4G, E5-ENET , E5-IPSM, and E5-ATM cards.
- BLDIAG6 – A flash GPL containing the diagnostic code on HC MIM, E5-E1T1, E5-STC, E5-SLAN, E5-SM4G, E5-ENET, E5-IPSM, and E5-ATM cards.
- BLBEPM – A flash GPL containing the BIOS ROM image on E5-E1T1, E5-STC, E5-SLAN, E5-ENET , E5-IPSM, and E5-ATM cards.
- BLMCAP – A flash GPL containing a tar image with all the code for the E5-MCAP cards.
- BLROM1 – A flash GPL containing the boot loader code for the VxWorks operating system on the HC MIMs.
- BLBSMG – A flash GPL containing the BIOS ROM image on E5-SM4G cards.
- BLVXW6 – A flash GPL containing the VxWorks operating system on HC MIM, E5-E1T1, E5-STC, E5-SLAN, E5-SM4G, E5-ENET, E5-IPSM, and E5-ATM cards.
- BPHCAP – The communication GPL used in place of the IMT GPL on the LIMATM and E1 ATM.
- BPHCAPT – The communication GPL used in place of the IMT GPL on the newer versions of the LIMATM and E1 ATM.
- BPDCM – The communication GPL used in place of the IMT GPL on the Database Communications Module (DCM), Database Services Module (DSM), and General Purpose Services Module (GPSM-II).
- BPDCM2 – The communication GPL used in place of the IMT GPL on the General Purpose Services Module (GPSM-II).
- BPHMUX – The communication GPL used on the High Speed Multiplexer (HMUX) card.
- BPMPL – The communication GPL used in place of the IMT GPL on the Multi-Port LIM (MPL).
- BPMPLT – The communication GPL used in place of the IMT GPL on the Multi-Port LIM-T (MPLT) and the E1/T1 MIM.
- EOAM – The application GPL used by the GPSM-II card for enhanced OAM functions.
- EROUTE – The application GPL used on the STC (Sentinel-Transport Card) for the EAGLE 5 Integrated Monitoring Support feature.
- ERTHC - The application GPL used on the E5-STC card for the EAGLE 5 Integrated Monitoring Support feature.
- GLS– The application GPL used for the gateway screening feature.
- GLSHC– The application GPL used for the gateway screening feature on E5-TSMs.
- HIPR – The communication GPL used on the High-Speed IMT Packet Router (HIPR) card.
- IMT – The communication GPL that operates the IMT bus on the TSM.

- IMTPCI – The communication GPL that operates the IMT bus on HC MIM, E5-E1T1, E5-STC, E5-SLAN, E5-SM4G, E5-ENET, E5-IPSM, and E5-ATM cards.
- IPGHC – The application GPL used by the E5-ENET card to support TCP/IP point-to-multipoint connectivity for both ANSI and ITU point codes.
- IPGWI – The application GPL used for TCP/IP point-to-multipoint connectivity within an ITU-I or ITU-N network.
- IPLHC – The application GPL used by the E5-ENET card for TCP/IP point-to-point connectivity for both ANSI and ITU point codes.
- IPLIM – The application GPL used for TCP/IP point-to-point ANSI connectivity.
- IPLIMI – The application GPL used for TCP/IP point-to-point ITU connectivity.
- IPS – The application GPL used on the IPSMs for the IP User Interface and FTP Retrieve and Replace features.
- IPSTG – The application GPL used for the IP Signaling Gateway M2PA and M3UA signaling links.
- IPSHC – The application GPL used on the E5-IPSM cards for the IP User Interface and FTP Retrieve and Replace features.
- MCP – The application GPL used on the MCPM (Measurement Collection & Polling Module) for the Measurements Platform feature.
- OAMHC – The application GPL used by the E5-MCAP card for enhanced OAM functions.
- PLDPMC1 – A flash GPL used on HC MIMs or E5-E1T1 cards for E1 or T1 signaling links and used on E5-ENET cards for IP signaling links..
- SCCPHC – The application GPL used on E5-SM4G cards for the global title translation features.
- SLANHC – The application GPL used on E5-SLAN cards for the STPLAN feature.
- SS7EPM – The application GPL used by the E5-E1T1 cards to support E1 and T1 signaling links.
- SS7HC – The application GPL used by the HC MIMs to support E1 and T1 signaling links.
- SS7IPGW – The application GPL used for TCP/IP point-to-multipoint connectivity within an ANSI network.
- SS7ML – The application GPL used on the Multi-Port LIM (MPL or MPLT) for SS7 signaling links and on the E1/T1MIM for E1 and T1 signaling links.
- UTILITY – The application GPL used by the factory for testing and has no use in the field.
- VSCCP – The application GPL used on DSMs for the global title translation features.
- VXWSLAN – The application GPL used by the DCM for the STPLAN feature.

Managing GPLs

Managing these GPLs consists of loading them onto the EAGLE 5 ISS from a removable cartridge (if the EAGLE 5 ISS contains legacy control cards), or from removable media (if the EAGLE 5 ISS contains E5-based control cards), downloading these GPLs to the appropriate cards in the EAGLE 5 ISS, then allowing the cards to run these GPLs. The GPLs can be in one of two states, trial and approved.

Note: Refer to [Maintenance and Administration Subsystem](#) on page 7 for more information about the control cards.

A trial GPL is a GPL that has not been approved for use and does not match the version number in the system release ID table. The trial GPL is the GPL that the EAGLE 5 ISS is not running.

The approved GPL is the GPL that the EAGLE 5 ISS should be running and has been approved for use. The approved GPL version number should match the version number of the GPL contained in the system release ID table.

The system release ID table contains the version numbers of the approved GPLs that the EAGLE 5 ISS should be running. The system release ID table is contained on the TDMs (Terminal Disk Modules) and on the removable cartridge or removable media containing the GPLs that are being loaded onto the EAGLE 5 ISS. The GPLs are loaded onto the EAGLE 5 ISS from a removable cartridge or removable media. To get the GPLs from the removable cartridge or removable media onto the EAGLE 5 ISS in the approved state, two commands are used, `chg-gpl` and `act-gpl`.

CHG-GPL Command

The `chg-gpl` command copies a GPL from the removable cartridge or removable media to the TDMs. The new GPL becomes the trial version on each of the TDMs. This command also copies the system release ID table from the removable cartridge or removable media to the TDMs. The `chg-gpl` command uses these parameters:

`gpl` – the GPL being loaded onto the EAGLE 5 ISS

`ver` – the version number of the GPL

`audit` – Specifies whether the active MASP system release version is to be audited every 90 seconds.

`src` – Specifies the source drive containing the GPL that is being copied. This parameter has two values.

- `remove` – the removable cartridge on the MDAL card or the removable media flash drive on the E5-MCAP card.
- `usb` – the credit card flash drive

If you are loading a GPL onto the EAGLE 5 ISS, the `gpl` and `ver` parameters must be specified with the `chg-gpl` command and a removable cartridge or removable media containing the GPL being loaded must be in the removable cartridge drive on the MDAL or the removable media drive on the E5-MCAP card of the active MASP.

The `audit` parameter is required only when turning the GPL auditing on or off.

ACT-GPL Command

The `act-gpl` command changes the state of the trial GPL from “trial” to “approved.” This is also referred to as activating the GPL. The state of the previously approved GPL is changed from “approved” to “trial.”

The version of the GPL shown in the `RELEASE` column of the `rtrv-gpl` output (the GPL version in the system release ID table) is updated to the new approved version when this command is performed.

The `act-gpl` command uses these parameters:

`gpl` – the GPL being loaded onto the EAGLE 5 ISS

`ver` – the version number of the GPL

All the GPLs can be activated with the `act-gpl` command except the UTILITY GPL.

Displaying GPL Information

Two commands can be used to display the GPL information in the database, `rept-stat-gpl` and `rtrv-gpl`. The `rept-stat-gpl` command shows the versions of the GPLs that are running

on the cards in the EAGLE 5 ISS. The `rt rv-gpl` command shows the versions of the GPLs contained on the fixed disks.

REPT-STAT-GPL Command

The `rept-stat-gpl` command output contains these five columns and displays this information:

- **GPL** – The GPLs contained on the TDMs (Terminal Disk Modules). The TDMs contain the fixed disks.
- **CARD** – The cards that are running the GPLs
- **RUNNING** – The version number of the GPLs the cards are running
- **APPROVED** – The version numbers of the approved GPLs
- **TRIAL** – The version numbers of the trial GPLs

The following is an example of the `rept-stat-gpl` command output.

GPL	CARD	RUNNING	APPROVED	TRIAL
SS7ML	1201	132-002-000	132-002-000	132-001-000

The example `rept-stat-gpl` output shows that the card in slot 1201 is running the SS7ML GPL, version number 132-002-000, which is also the approved version of the SS7ML GPL. The trial version number of the SS7ML GPL is 132-001-000.

You can display all the GPLs used by all the cards in the EAGLE 5 ISS except the communication GPLs, a specific GPL, or all application and communication GPLs used by all the cards in the EAGLE 5 ISS. The communication GPLs are the IMT, BPHCAP, BPHCAPT, BPDCM, BPMPL, BPMPLT, BPHMUX, BLMCAP, IMTPCI, and HIPR GPLs. The application GPLs are the other GPLs in the EAGLE 5 ISS.

If you specify the `rept-stat-gpl` command with no parameters, all the GPLs on all the cards in the EAGLE 5 ISS are displayed except for the communication GPLs, as shown in this example.

rlghncxa03w 09-05-01 07:01:08 GMT EAGLE5 41.0.0				
GPL	CARD	RUNNING	APPROVED	TRIAL
EOAM	1113	132-002-000	132-002-000	-----
EOAM	1115	132-002-000	132-002-000	-----
VSCCP	1103	132-001-000	132-001-000	132-001-000
SS7ML	1201	132-002-000	132-002-000	132-001-000
SS7ML	1202	132-002-000	132-002-000	132-001-000
SS7ML	1203	132-002-000	132-002-000	132-001-000
SS7ML	1204	132-002-000	132-002-000	132-001-000
SS7ML	1205	132-002-000	132-002-000	132-001-000
IPLIM	1303	132-001-000	132-001-000	132-001-000
ATMANSI	1305	132-001-000	132-001-000	132-001-000
SS7IPGW	1307	132-001-000	132-001-000	132-001-000
ATMANSI	1311	132-001-000	132-001-000	132-001-000
SS7IPGW	2101	132-002-000	132-002-000	132-003-000
VXWSLAN	2113	132-002-000	132-002-000	132-003-000
VXWSLAN	2205	132-002-000	132-002-000	132-003-000
VXWSLAN	2207	132-002-000	132-002-000	132-003-000
VXWSLAN	2213	132-002-000	132-002-000	132-003-000
IPLIM	2301	132-002-000	132-002-000	132-003-000
IPLIM	2303	132-002-000	132-002-000	132-003-000
IPLIM	2305	132-002-000	132-002-000	132-003-000
IPLIM	2307	132-002-000	132-002-000	132-003-000
EROUTE	2311	132-002-000	132-002-000	132-003-000
EROUTE	2313	132-002-000	132-002-000	132-003-000
EROUTE	2315	132-002-000	132-002-000	132-003-000
MCP	2317	132-002-000	132-002-000	132-003-000

```
MCP      3101      132-002-000      132-002-000      132-003-000
MCP      3103      132-002-000      132-002-000      132-003-000
Command Completed.
```

If a specific GPL, including the communication GPLs, is specified, then all the cards running that GPL are displayed. For example, if the `rept-stat-gpl:gpl=ss7ml` command is entered, then all cards running the SS7ML GPL are displayed as shown in the following example.

```
rlghncxa03w 09-05-01 07:01:08 GMT EAGLE5 41.0.0
GPL      CARD      RUNNING      APPROVED      TRIAL
SS7ML    1201      132-002-000      132-002-000      132-001-000
SS7ML    1202      132-002-000      132-002-000      132-001-000
SS7ML    1203      132-002-000      132-002-000      132-001-000
SS7ML    1204      132-002-000      132-002-000      132-001-000
SS7ML    1205      132-002-000      132-002-000      132-001-000
Command Completed
```

If a communication GPL (IMT, BPHCAP, BPHCAPT, BPDCM, BPMPL, BLMCAP, or BPMPLT) is specified with the `rept-stat-gpl` command, for example, `rept-stat-gpl:gpl=bpdcml`, then all cards running the communication GPL are displayed. In the following example, all the cards running the BPDCM GPL are displayed as the output for the `rept-stat-gpl:gpl=bpdcml` command.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
GPL      CARD      RUNNING      APPROVED      TRIAL
BPDCM    1303      132-002-000      132-002-000      132-003-000
BPDCM    1307      132-002-000      132-002-000      132-003-000
BPDCM    2101      132-002-000      132-002-000      132-003-000
BPDCM    2103      132-002-000      132-002-000      132-003-000
BPDCM    2105      132-002-000      132-002-000      132-003-000
BPDCM    2113      132-002-000      132-002-000      132-003-000
BPDCM    2205      132-002-000      132-002-000      132-003-000
BPDCM    2207      132-002-000      132-002-000      132-003-000
BPDCM    2213      132-002-000      132-002-000      132-003-000
BPDCM    2301      132-002-000      132-002-000      132-003-000
BPDCM    2303      132-002-000      132-002-000      132-003-000
BPDCM    2305      132-002-000      132-002-000      132-003-000
BPDCM    2307      132-002-000      132-002-000      132-003-000
BPDCM    2311      132-002-000      132-002-000      132-003-000
BPDCM    2313      132-002-000      132-002-000      132-003-000
BPDCM    2315      132-002-000      132-002-000      132-003-000
BPDCM    2317      132-002-000      132-002-000      132-003-000
BPDCM    3101      132-002-000      132-002-000      132-003-000
BPDCM    3103      132-002-000      132-002-000      132-003-000
Command Completed
```

If the `display=all` parameter is specified with the `rept-stat-gpl` command, then all GPLs, application and communication GPLs used by all the cards in the EAGLE 5 ISS are displayed as shown in these examples.

If legacy control cards are installed in the EAGLE 5 ISS, this is an example of the output.

```
rlghncxa03w 09-05-01 07:01:08 GMT EAGLE5 41.0.0
GPL      CARD      RUNNING      APPROVED      TRIAL
EOAM     1113      132-002-000      132-002-000      132-002-000
          BPDCL    132-001-000      132-001-000      132-001-003
EOAM     1115      132-002-000      132-002-000      132-002-000
          BPDCL    132-001-000      132-001-000      132-001-003
VSCCP    1103      132-001-000      132-001-000      132-001-000
          BPDCL    132-001-000      132-001-000      132-001-003
SS7ML    1201      132-002-000      132-002-000      132-001-000
          BPMPL    132-001-000      132-001-000      132-001-003
```


SS7ML	1202	132-002-000		132-002-000	132-001-000
	BPMP	132-001-000		132-001-000	132-001-003
SS7ML	1203	132-002-000		132-002-000	132-001-000
	BPMP	132-001-000		132-001-000	132-001-003
SS7ML	1204	132-002-000		132-002-000	132-001-000
	BPMP	132-001-000		132-001-000	132-001-003
SS7ML	1205	132-002-000		132-002-000	132-001-000
	BPMP	132-001-003	ALM	132-001-000	132-001-003
IPLIM	1303	132-001-000		132-001-000	132-001-000
	BPDCM	132-001-000		132-001-000	132-001-003
ATMANSI	1305	132-001-000		132-001-000	132-001-000
	BPHCAP	132-001-000		132-001-000	132-001-003
SS7IPGW	1307	132-001-000		132-001-000	132-001-000
	BPDCM	132-001-000		132-001-000	132-001-003
ATMANSI	1311	132-001-000		132-001-000	132-001-000
	BPHCAP	132-001-003	ALM	132-001-000	132-001-003
SS7IPGW	2101	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-003	ALM+	132-001-000	132-001-003
VXWSLAN	2113	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
VXWSLAN	2205	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
VXWSLAN	2207	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
VXWSLAN	2213	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
IPLIM	2301	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
IPLIM	2303	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
IPLIM	2305	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
IPLIM	2307	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
EROUTE	2311	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
EROUTE	2313	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
EROUTE	2315	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
MCP	2317	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
MCP	3101	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
MCP	3103	132-002-000		132-002-000	132-003-000
	BPDCM	132-001-000		132-001-000	132-001-003
BPHMUX	1109	132-001-000		132-001-000	132-001-003
BPHMUX	1110	132-001-000		132-001-000	132-001-003
BPHMUX	1209	132-001-000		132-001-000	132-001-003
BPHMUX	1210	132-001-000		132-001-000	132-001-003
BPHMUX	1309	132-001-000		132-001-000	132-001-003
BPHMUX	1310	132-001-000		132-001-000	132-001-003
BPHMUX	2109	132-001-000		132-001-000	132-001-003
BPHMUX	2110	132-001-000		132-001-000	132-001-003
BPHMUX	2209	132-001-000		132-001-000	132-001-003
BPHMUX	2210	132-001-000		132-001-000	132-001-003
BPHMUX	2309	132-001-000		132-001-000	132-001-003
BPHMUX	2310	132-001-000		132-001-000	132-001-003
BPHMUX	3109	132-001-000		132-001-000	132-001-003

BPHMUX	3110	132-001-000	132-001-000	132-001-003
Command Completed.				

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the output.

```

rlghncxa03w 09-05-01 07:01:08 GMT EAGLE5 41.0.0
GPL          CARD      RUNNING      APPROVED      TRIAL
OAMHC        1113      132-002-000      132-002-000      132-002-000
              BLMCAP      132-001-000      132-001-000      132-001-003
OAMHC        1115      132-002-000      132-002-000      132-002-000
              BLMCAP      132-001-000      132-001-000      132-001-003
VSCCP        1103      132-001-000      132-001-000      132-001-000
              BPDCM      132-001-000      132-001-000      132-001-003
SS7ML        1201      132-002-000      132-002-000      132-001-000
              BPMP      132-001-000      132-001-000      132-001-003
SS7ML        1202      132-002-000      132-002-000      132-001-000
              BPMP      132-001-000      132-001-000      132-001-003
SS7ML        1203      132-002-000      132-002-000      132-001-000
              BPMP      132-001-000      132-001-000      132-001-003
SS7ML        1204      132-002-000      132-002-000      132-001-000
              BPMP      132-001-000      132-001-000      132-001-003
SS7ML        1205      132-002-000      132-002-000      132-001-000
              BPMP      132-001-003      ALM      132-001-000      132-001-003
IPLIM        1303      132-001-000      132-001-000      132-001-000
              BPDCM      132-001-000      132-001-000      132-001-003
ATMANSI      1305      132-001-000      132-001-000      132-001-000
              BPHCAP      132-001-000      132-001-000      132-001-003
SS7IPGW      1307      132-001-000      132-001-000      132-001-000
              BPDCM      132-001-000      132-001-000      132-001-003
ATMANSI      1311      132-001-000      132-001-000      132-001-000
              BPHCAP      132-001-003      ALM      132-001-000      132-001-003
SS7IPGW      2101      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-003      ALM+      132-001-000      132-001-003
VXWSLAN      2113      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
VXWSLAN      2205      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
VXWSLAN      2207      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
VXWSLAN      2213      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
IPLIM        2301      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
IPLIM        2303      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
IPLIM        2305      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
IPLIM        2307      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
EROUTE       2311      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
EROUTE       2313      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
EROUTE       2315      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
MCP          2317      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
MCP          3101      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
MCP          3103      132-002-000      132-002-000      132-003-000
              BPDCM      132-001-000      132-001-000      132-001-003
BPHMUX       1109      132-001-000      132-001-000      132-001-003
BPHMUX       1110      132-001-000      132-001-000      132-001-003
BPHMUX       1209      132-001-000      132-001-000      132-001-003

```

```

BPHMUX 1210 132-001-000 132-001-000 132-001-003
BPHMUX 1309 132-001-000 132-001-000 132-001-003
BPHMUX 1310 132-001-000 132-001-000 132-001-003
BPHMUX 2109 132-001-000 132-001-000 132-001-003
BPHMUX 2110 132-001-000 132-001-000 132-001-003
BPHMUX 2209 132-001-000 132-001-000 132-001-003
BPHMUX 2210 132-001-000 132-001-000 132-001-003
BPHMUX 2309 132-001-000 132-001-000 132-001-003
BPHMUX 2310 132-001-000 132-001-000 132-001-003
BPHMUX 3109 132-001-000 132-001-000 132-001-003
BPHMUX 3110 132-001-000 132-001-000 132-001-003
Command Completed.

```

If the `loc` parameter is specified with the `rept-stat-gpl` command, all the GPLs running on the specified card are displayed. For HC MIMs, this includes all non-activated flash GPLs, as shown in the following example.

```

rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 39.0.0
  GPL Auditing ON

  GPL      CARD      RUNNING      APPROVED      TRIAL
  SS7HC    1203      132-001-000      132-001-000      132-001-000
           IMTPCI      132-001-000      132-001-000      132-001-000
           BLBIOS      132-001-000      132-001-000      132-001-000
           BLCPLD      132-001-000      132-001-000      132-001-000
           BLVXW6      132-001-000      132-001-000      132-001-000
           BLDIAG6      132-001-000      132-001-000      132-001-000
           BLROM1      132-001-000      132-001-000      132-001-000
           PLDPMC1      132-001-000      132-001-000      132-001-000

           IMTPCI      132-001-000      ACTIVE          INACTIVE
1)          SS7HC      132-002-000 * ----- (Note
           BLBIOS      132-001-000      132-001-000      132-003-000 * (Note
2)          SS7HC      132-001-000      132-001-000 * -----
           BLCPLD      132-001-000      132-001-000 * ----- (Note
           BLVXW6      132-002-000ALM      132-002-000 * -----
3)          SS7HC      132-003-000ALM+      132-002-000 * 132-003-000 (Note
4)          SS7HC      132-001-000 +      132-002-000 * 132-001-000 (Note
5)          SS7HC      132-001-000      132-001-000      -----
           PLDPMC1      132-001-000      132-001-000      -----
Command Completed.

```

Notes:

1. The IMTPCI GPL has been downloaded with the `init-flash` command. The card has reset and the IMTPCI GPL was activated normally with the `act-flash` command.
2. The BLBIOS GPL has been downloaded with the `init-flash` command, but the card has not been initialized. When the card is initialized again, the inactive version of the BLBIOS GPL will be loaded onto the card.
3. The BLVXW6 GPL has been downloaded with the `init-flash` command. The card has been reset. The BLVXW6 GPL was activated with the `act-flash` command, but the activated version of the BLVXW6 GPL is not the approved version of the BLVXW6 GPL on the TDM.
4. The BLDIAG6 GPL has been downloaded with the `init-flash` command. The card has been reset so the inactive version is running. This version of the BLDIAG6 GPL is not the approved version of the GPL, shown with the ALM indicator. This version of the BLDIAG6 GPL has not been activated, shown with the '+' indicator. The '*' next to the active version indicates that if the card is reset again, the card will be running the active version of the BLDIAG6 GPL.

5. The BLROM1 GPL has been downloaded with the `init - flash` command. The card has been reset, but the BLROM1 GPL has not been activated yet. This is the same condition as note 4, except that there is no alarm condition.

The following is an example of using the `loc` parameter with the `rept-stat-gpl` command with a card that is not a high-capacity card.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
  GPL Auditing  ON
```

GPL	CARD	RUNNING	APPROVED	TRIAL
ATMANSI	1217	132-001-000	132-001-000	132-001-000
	BPHCAP	132-001-000	132-001-000	132-001-000

Command Completed.

The `display=all`, `gpl`, and `loc` parameters cannot be specified in the same command.

If GPL auditing is on, a minor alarm is generated, and ALM is displayed for each GPL in the **RUNNING** column whose version does not match the version of the GPL shown in the system release ID table. The GPL versions in the system release ID table are shown in the **RELEASE** column of the `rtrv-gpl` command output.

If GPL auditing is off, the minor alarm is not generated, but ALM is displayed for each GPL whose version does not match the version of the GPL shown in the system release ID table. The detection, marking, and reporting of corrupt GPLs continues to be performed and is not affected by turning GPL auditing off.

If a GPL is not found, a version of "-----" is displayed.

If a card is inhibited, "-----" is displayed in the **RUNNING** column.

A plus (+) symbol appears in the output when any of the communication or flash GPLs are specified for the `rept-stat-gpl` command. The plus symbol indicates that the specified GPL currently running on the card has not yet been activated on the card.

RTRV-GPL Command

The `rtrv-gpl` command output contains these six columns and displays this information:

- **GPL** – The GPLs contained on the TDMs.
- **CARD** – The card location of the TDMs, either card locations 1114 or 1116
- **RELEASE** – The version number of the GPL contained in the system release ID table.
- **APPROVED** – The version numbers of the approved GPLs
- **TRIAL** – The version numbers of the trial GPLs
- **REMOVE TRIAL** – The version number of the GPLs contained on the removable cartridge or removable media. Entries in the **REMOVE TRIAL** column are shown only if the removable cartridge is inserted into the removable cartridge drive and only for the TDM that is associated with the active MASP on the legacy control cards or for the removable media inserted into each E5-MCAP card. If the removable cartridge is not in the removable cartridge drive, or if the removable media is not inserted in an E5-MCAP card, dashes are shown in the **REMOVE TRIAL** column. If legacy control cards are installed in the EAGLE 5 ISS, dashes are also shown in the **REMOVE TRIAL** column for the TDM that is associated with the standby MASP. If the credit card flash drive is inserted on the E5-MCAP card on the active MASP, the version number of the GPLs on the credit card flash drive are displayed. Dashes are displayed in the **RELEASE**, **APPROVED**, and **TRIAL** columns.

The following is an example of the `rtrv-gpl` command output if legacy control cards are installed in the EAGLE 5 ISS.

```
rlghncxa03w 09-05-01 07:01:08 GMT EAGLE5 41.0.0
GPL Auditing  ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
SS7ML    1114  132-002-000  132-002-000  132-001-000  132-003-000
SS7ML    1116  132-002-000  132-002-000  132-001-000  -----
```

The example `rtrv-gpl` output shows that the version number of the SS7ML GPL in the system release ID table on both TDMs is 132-002-000, which is also the approved version of the SS7ML GPL. The trial version of the SS7ML GPL is 132-001-000. A removable cartridge is in the removable cartridge drive on the MDAL that contains another version of the SS7ML GPL, version number 132-003-000. The GPL auditing function is on. The TDM in card slot 1114 is associated with the active MASP.

If E5-based control cards are installed in the EAGLE 5 ISS, and the credit card flash drive is installed in the E5-MCAP card of the active MASP (card location 1113), this is an example of the `rtrv-gpl` command output. In this example, removable media is installed in the E5-MCAP card of the active MASP (card location 1113), shown by the GPL version number in the REMOVE TRIAL column for card location 1114. Removable media is not installed in the E5-MCAP card of the standby MASP (card location 1115), shown by the dashes in the REMOVE TRIAL column for card location 1116.

```
rlghncxa03w 09-05-01 07:01:08 GMT EAGLE5 41.0.0
GPL Auditing  ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
SS7ML    1114  132-002-000  132-002-000  132-001-000  132-003-000
SS7ML    1116  132-002-000  132-002-000  132-001-000  -----
SS7ML    1113  -----      -----      -----      132-003-000
```

You can display all the GPLs in the EAGLE 5 ISS or a specific GPL in the EAGLE 5 ISS.

If you specify the `rtrv-gpl` command with no parameters, all the GPLs in the EAGLE 5 ISS are displayed as shown in this example. This is an example of the `rtrv-gpl` output when E5-based control cards are installed in the EAGLE 5 ISS.

```
rlghncxa03w 09-05-01 07:01:08 GMT EAGLE5 41.0.0
GPL Auditing  ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
EOAM     1114  132-003-000  132-003-000  132-002-000  132-003-000
EOAM     1116  132-003-000  132-003-000  132-002-000  132-003-000
EOAM     1115  -----      -----      -----      -----
GLS      1114  132-003-000  132-003-000  132-002-000  132-003-000
GLS      1116  132-003-000  132-003-000  132-002-000  132-003-000
GLS      1115  -----      -----      -----      -----
CDU      1114  162-001-000  162-001-000  162-000-000  162-001-000
CDU      1116  162-001-000  162-001-000  162-000-000  162-001-000
CDU      1115  -----      -----      -----      -----
IMT      1114  132-003-000  132-003-000  132-002-000  132-003-000
IMT      1116  132-003-000  132-003-000  132-002-000  132-003-000
IMT      1115  -----      -----      -----      -----
ATMANSI  1114  132-003-000  132-003-000  132-002-000  132-003-000
ATMANSI  1116  132-003-000  132-003-000  132-002-000  132-003-000
ATMANSI  1115  -----      -----      -----      -----
BPHCAP   1114  132-003-000  132-003-000  132-002-000  132-003-000
BPHCAP   1116  132-003-000  132-003-000  132-002-000  132-003-000
```

BPHCAP	1115	-----	-----	-----	-----
BPDCM	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM	1115	-----	-----	-----	-----
BLMCAP	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLMCAP	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLMCAP	1115	-----	-----	-----	-----
OAMHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
OAMHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
OAMHC	1115	-----	-----	-----	-----
VXWSLAN	1114	132-003-000	132-003-000	132-002-000	132-003-000
VXWSLAN	1116	132-003-000	132-003-000	132-002-000	132-003-000
VXWSLAN	1115	-----	-----	-----	-----
IPLIM	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPLIM	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPLIM	1115	-----	-----	-----	-----
IPLIMI	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPLIMI	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPLIMI	1115	-----	-----	-----	-----
SS7IPGW	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7IPGW	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7IPGW	1115	-----	-----	-----	-----
VSCCP	1114	132-003-000	132-003-000	132-002-000	132-003-000
VSCCP	1116	132-003-000	132-003-000	132-002-000	132-003-000
VSCCP	1115	-----	-----	-----	-----
ATMITU	1114	132-003-000	132-003-000	132-002-000	132-003-000
ATMITU	1116	132-003-000	132-003-000	132-002-000	132-003-000
ATMITU	1115	-----	-----	-----	-----
VCDU	1114	162-001-000	162-001-000	162-000-000	162-001-000
VCDU	1116	162-001-000	162-001-000	162-000-000	162-001-000
VCDU	1115	-----	-----	-----	-----
BPMPPL	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPMPPL	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPMPPL	1115	-----	-----	-----	-----
SS7ML	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7ML	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7ML	1115	-----	-----	-----	-----
BPHMUX	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPHMUX	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPHMUX	1115	-----	-----	-----	-----
IPGWI	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPGWI	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPGWI	1115	-----	-----	-----	-----
IPS	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPS	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPS	1115	-----	-----	-----	-----
BPDCM2	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM2	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPDCM2	1115	-----	-----	-----	-----
EROUTE	1114	132-003-000	132-003-000	132-002-000	132-003-000
EROUTE	1116	132-003-000	132-003-000	132-002-000	132-003-000
EROUTE	1115	-----	-----	-----	-----
BPMPPLT	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPMPPLT	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPMPPLT	1115	-----	-----	-----	-----
MCP	1114	132-003-000	132-003-000	132-002-000	132-003-000
MCP	1116	132-003-000	132-003-000	132-002-000	132-003-000
MCP	1115	-----	-----	-----	-----
BPHCAPT	1114	132-003-000	132-003-000	132-002-000	132-003-000
BPHCAPT	1116	132-003-000	132-003-000	132-002-000	132-003-000
BPHCAPT	1115	-----	-----	-----	-----
HIPR	1114	132-003-000	132-003-000	132-002-000	132-003-000
HIPR	1116	132-003-000	132-003-000	132-002-000	132-003-000
HIPR	1115	-----	-----	-----	-----
SS7HC	1114	132-003-000	132-003-000	132-002-000	132-003-000

SS7HC	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7HC	1115	-----	-----	-----	-----
BLBIO5	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLBIO5	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLBIO5	1115	-----	-----	-----	-----
BLCPLD	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLCPLD	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLCPLD	1115	-----	-----	-----	-----
GLSHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
GLSHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
GLSHC	1115	-----	-----	-----	-----
IMTPCI	1114	132-003-000	132-003-000	132-002-000	132-003-000
IMTPCI	1116	132-003-000	132-003-000	132-002-000	132-003-000
IMTPCI	1115	-----	-----	-----	-----
PLDPMC1	1114	132-003-000	132-003-000	132-002-000	132-003-000
PLDPMC1	1116	132-003-000	132-003-000	132-002-000	132-003-000
PLDPMC1	1115	-----	-----	-----	-----
IPLHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPLHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPLHC	1115	-----	-----	-----	-----
IPGHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPGHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPGHC	1115	-----	-----	-----	-----
SS7EPM	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7EPM	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7EPM	1115	-----	-----	-----	-----
BLBEPM	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLBEPM	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLBEPM	1115	-----	-----	-----	-----
BLVXW6	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLVXW6	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLVXW6	1115	-----	-----	-----	-----
BLDIAG6	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLDIAG6	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLDIAG6	1115	-----	-----	-----	-----
SCCPHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
SCCPHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
SCCPHC	1115	-----	-----	-----	-----
BLBSMG	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLBSMG	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLBSMG	1115	-----	-----	-----	-----
SLANHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
SLANHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
SLANHC	1115	-----	-----	-----	-----
ERTHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
ERTHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
ERTHC	1115	-----	-----	-----	-----
IPSHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPSHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPSHC	1115	-----	-----	-----	-----
ATMHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
ATMHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
ATMHC	1115	-----	-----	-----	-----
IPSG	1114	132-003-000	132-003-000	132-002-000	132-003-000
IPSG	1116	132-003-000	132-003-000	132-002-000	132-003-000
IPSG	1115	-----	-----	-----	-----
BLROM1	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLROM1	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLROM1	1115	-----	-----	-----	-----

In this example, removable media is installed in both MASPs and the credit card flash media is not installed in the active MASP. If legacy control cards are installed in the EAGLE 5 ISS, the entry for the credit card flash media (in this example, card location 1115) is not shown for each GPL

entry and the entry in the REMOVE TRIAL column for the standby MASP (card location 1114) contains dashes for each GPL entry.

If a specific GPL is specified, then only that GPL is displayed. For example, if the `rtrv-gpl:gpl=ss7ml` command is entered, then only the SS7ML GPL is displayed as shown in the following example.

```
rlghncxa03w 09-05-01 11:34:04 GMT EAGLE5 41.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
SS7ML	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7ML	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7ML	1115	-----	-----	-----	-----

If GPL auditing is on, a minor alarm is generated, and ALM is displayed for each approved GPL version that does not match the GPL version shown in the RELEASE column. If GPL auditing is off, the minor alarm is not generated, but ALM is displayed for each GPL version that does not match the GPL version shown in the RELEASE column. The detection, marking, and reporting of corrupt GPLs continues to be performed and is not affected by turning GPL auditing off. The GPL version shown in the RELEASE column is updated when the `act-gpl` command is performed.

If a GPL is not found, a version of "-----" is displayed.

Loading a GPL onto the System

This section gives a general overview as to how a GPL is loaded onto the EAGLE 5 ISS to be used by the applicable cards. The requirements and steps for each GPL are different and are detailed in the procedures contained in this chapter. The `rtrv-gpl` examples shown in this section are examples that are shown when E5-based control cards are installed in the EAGLE 5 ISS.

1. A removable cartridge containing the GPL being loaded onto the EAGLE 5 ISS is inserted into the removable cartridge drive on the MDAL card or removable media is inserted into the removable media drive on the E5-MCAP card of the active MASP. If a specific GPL is displayed with the `rtrv-gpl` command, for example the SS7ML GPL, the following would be displayed.

```
rlghncxa03w 09-05-01 11:34:04 GMT EAGLE5 41.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
SS7ML	1114	132-002-000	132-002-000	132-001-000	132-003-000
SS7ML	1116	132-002-000	132-002-000	132-001-000	132-003-000
SS7ML	1115	-----	-----	-----	-----

Displaying the SS7ML GPL with the `rept-stat-gpl` command would display all the cards running the SS7ML GPL, as shown in this example.

```
rlghncxa03w 09-05-01 07:01:08 GMT EAGLE5 41.0.0
GPL      CARD      RUNNING      APPROVED      TRIAL
SS7ML    1201      132-002-000    132-002-000    132-001-000
SS7ML    1202      132-002-000    132-002-000    132-001-000
SS7ML    1203      132-002-000    132-002-000    132-001-000
SS7ML    1205      132-002-000    132-002-000    132-001-000
Command Completed
```

2. When the `chg-gpl` command is executed, the specific GPL is copied from the removable cartridge or removable media to the fixed disks. The specific GPL and the version number of the GPL on the removable cartridge or removable media must be specified with the `chg-gpl`

command. The version number is found in the REMOVE TRIAL column of the `rtrv-gpl` output. For this example the `chg-gpl :gpl=ss7ansi:ver=132-003-000` command would be entered at the EAGLE 5 ISS terminal. The system release ID table contained on the removable cartridge is also copied to the fixed disks.

3. The new version of the GPL is now the trial version of the GPL as shown in the examples of the `rtrv-gpl` and `rept-stat-gpl` outputs.

`rtrv-gpl:gpl=ss7ml`

```
rlghncxa03w 09-05-01 11:34:04 GMT EAGLE5 41.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
SS7ML	1114	132-002-000	132-002-000	132-003-000	132-003-000
SS7ML	1116	132-002-000	132-002-000	132-003-000	132-003-000
SS7ML	1115	-----	-----	-----	-----

`rept-stat-gpl:gpl=ss7ml`

```
rlghncxa03w 09-05-01 11:40:26 GMT EAGLE5 41.0.0
GPL CARD RUNNING APPROVED TRIAL
SS7ML 1201 132-002-000 132-002-000 132-003-000
SS7ML 1202 132-002-000 132-002-000 132-003-000
SS7ML 1203 132-002-000 132-002-000 132-003-000
SS7ML 1205 132-002-000 132-002-000 132-003-000
Command Completed
```

4. To make the trial version of the GPL the approved version, the `act-gpl` command is executed after the GPL has been copied from the removable cartridge or removable media with the `chg-gpl` command (steps 1 to 3). The trial and approved versions of the specific GPL are swapped as shown in these `rtrv-gpl` and `rept-stat-gpl` output examples.

`rtrv-gpl:gpl=ss7ml`

```
rlghncxa03w 09-05-01 11:34:04 GMT EAGLE5 41.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
SS7ML	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7ML	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7ML	1115	-----	-----	-----	-----

The system release ID table is updated with the version of the GPL specified with the `act-gpl` command. This GPL version is shown in the RELEASE column of the `rtrv-gpl` output after the `act-gpl` command is performed.

The ALM indicator is not displayed in the `rtrv-gpl` output because the approved version of the GPL matches the version in the system release ID table.

`rept-stat-gpl:gpl=ss7ml`

```
rlghncxa03w 09-05-01 11:50:11 GMT EAGLE5 41.0.0
GPL CARD RUNNING APPROVED TRIAL
SS7ML 1201 132-002-000 ALM 132-003-000 132-002-000
SS7ML 1202 132-002-000 ALM 132-003-000 132-002-000
SS7ML 1203 132-002-000 ALM 132-003-000 132-002-000
```

```
SS7ML      1205      132-002-000 ALM      132-003-000      132-002-000
Command Completed
```

The ALM indicator is displayed for the cards that are running the version of the GPL that does not match the version in the system release ID table (shown in the `RELEASE` column of the `rtrv-gpl` output). In this example, the cards are running the trial version which does not match the version in the system release ID table.

5. To load the card with the new version of the GPL, the card must be inhibited with the `rmv-card` command, then placed back into service with the `rst-card` command. To load the approved version of the GPL onto the card, the `code=appr` parameter can be specified with the `rst-card` command. It is not necessary to specify the `code=appr` parameter to load the approved version of the GPL. Entering the `rst-card` command without the `code` parameter loads the approved version of the GPL onto the card.

If you wish to load the trial version of the GPL onto the card, the `code=trial` parameter must be specified with the `rst-card` command.

The following examples show the outputs of the `rtrv-gpl` and `rept-stat-gpl` commands after the card has been reloaded. The outputs will vary depending on whether or not the new version of the GPL has been made the approved version with the `act-gpl` command, and which version (trial or approved) of the GPL is loaded onto the card.

Example 1

The new GPL is the APPROVED version and the card 1201 was reloaded with the APPROVED version of the GPL. Card 1201 is now running the APPROVED and RELEASE versions of the GPL. The ALM indicator is not shown in the `rtrv-gpl` output and is not shown for card 1201 in `rept-stat-gpl` output. The ALM indicator is shown for cards 1202, 1203, and 1205 because they are not running the RELEASE version of the GPL.

RTRV-GPL Output

```
rlghncxa03w 09-05-01 11:34:04 GMT EAGLE5 41.0.0
GPL Auditing ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
SS7ML    1114  132-003-000  132-003-000    132-002-000  132-003-000
SS7ML    1116  132-003-000  132-003-000    132-002-000  132-003-000
SS7ML    1115  -----      -----      -----      -----
```

REPT-STAT-GPL Output

```
rlghncxa03w 09-05-01 11:50:11 GMT EAGLE5 41.0.0
GPL      CARD  RUNNING      APPROVED      TRIAL
SS7ML    1201  132-003-000    132-003-000    132-002-000
SS7ML    1202  132-002-000 ALM    132-003-000    132-002-000
SS7ML    1203  132-002-000 ALM    132-003-000    132-002-000
SS7ML    1205  132-002-000 ALM    132-003-000    132-002-000
Command Completed
```

Example 2

The new GPL is the APPROVED version and the card 1201 was reloaded with the TRIAL version of the GPL. Card 1201 is now running the TRIAL version of the GPL which is not the RELEASE version of the GPL. The ALM indicator is not shown in the `rtrv-gpl` output, but is not shown for all the cards in `rept-stat-gpl` output because they are not running the RELEASE version of the GPL.

RTRV-GPL Output

```

rlghncxa03w 09-05-01 11:34:04 GMT  EAGLE5 41.0.0
GPL Auditing  ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
SS7ML    1114  132-003-000  132-003-000  132-002-000  132-003-000
SS7ML    1116  132-003-000  132-003-000  132-002-000  132-003-000
SS7ML    1115  -----      -----      -----      -----

```

REPT-STAT-GPL Output

```

rlghncxa03w 09-05-01 11:50:11 GMT  EAGLE5 41.0.0
GPL      CARD  RUNNING      APPROVED      TRIAL
SS7ML    1201  132-002-000 ALM  132-003-000  132-002-000
SS7ML    1202  132-002-000 ALM  132-003-000  132-002-000
SS7ML    1203  132-002-000 ALM  132-003-000  132-002-000
SS7ML    1205  132-002-000 ALM  132-003-000  132-002-000
Command Completed

```

Example 3

The new GPL is the TRIAL version and the card 1201 was reloaded with the TRIAL version of the GPL. Card 1201 is now running the TRIAL version of the GPL, but not the RELEASE version of the GPL. The ALM indicator is not shown in the `rtrv-gpl` output because the RELEASE version of the GPL has not changed. The ALM indicator is shown for card 1201 in the `rept-stat-gpl` output because card 1201 is not running the RELEASE version of the GPL.

RTRV-GPL Output

```

rlghncxa03w 09-05-01 11:34:04 GMT  EAGLE5 41.0.0
GPL Auditing  ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
SS7ML    1114  132-002-000  132-002-000  132-003-000  132-003-000
SS7ML    1116  132-002-000  132-002-000  132-003-000  132-003-000
SS7ML    1115  -----      -----      -----      -----

```

REPT-STAT-GPL Output

```

rlghncxa03w 09-05-01 11:50:11 GMT  EAGLE5 41.0.0
GPL      CARD  RUNNING      APPROVED      TRIAL
SS7ML    1201  132-003-000 ALM  132-002-000  132-003-000
SS7ML    1202  132-002-000      132-002-000  132-003-000
SS7ML    1203  132-002-000      132-002-000  132-003-000
SS7ML    1205  132-002-000      132-002-000  132-003-000
Command Completed

```

Example 4

The new GPL is the TRIAL version and the card 1201 was reloaded with the APPROVED version of the GPL. Card 1201 is now running the APPROVED version of the GPL which is the RELEASE version of the GPL. The ALM indicator is not shown in the `rtrv-gpl` output, and for all the cards in `rept-stat-gpl` output because they are running the RELEASE version of the GPL.

RTRV-GPL Output

```

rlghncxa03w 09-05-01 11:34:04 GMT  EAGLE5 41.0.0
GPL Auditing  ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL

```

SS7ML	1114	132-002-000	132-002-000	132-003-000	132-003-000
SS7ML	1116	132-002-000	132-002-000	132-003-000	132-003-000
SS7ML	1115	-----	-----	-----	-----

REPT-STAT-GPL Output

```
rlghncxa03w 09-05-01 11:50:11 GMT EAGLE5 41.0.0
GPL          CARD    RUNNING      APPROVED      TRIAL
SS7ML       1201     132-002-000     132-002-000     132-003-000
SS7ML       1202     132-002-000     132-002-000     132-003-000
SS7ML       1203     132-002-000     132-002-000     132-003-000
SS7ML       1205     132-002-000     132-002-000     132-003-000
Command Completed
```

Updating the IMT GPL

This section presents the procedure for updating the IMT generic program load (GPL). There are two versions of GPLs used on the EAGLE 5 ISS, approved and trial versions.

The IMT GPL can be loaded on TSMs.

A removable cartridge or removable media that contains the IMT GPL to be loaded on to the EAGLE 5 ISS is required.

1. Verify the control cards that are installed in the EAGLE 5 ISS.

Refer to [Maintenance and Administration Subsystem](#) on page 7 for information about the control cards.

If legacy control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 2](#) on page 134.

If E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 5](#) on page 135.

2. Check the removable cartridge drive on the MDAL card for a removable cartridge.

If there is a removable cartridge in the drive, display the IMT GPLs on the fixed disk and on the removable cartridge using the `rtrv-gpl:gpl=imt` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
IMT	1114	132-001-000	132-001-000	-----	-----
IMT	1116	132-001-000	132-001-000	132-000-000	132-002-000

If the version of the IMT GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the cartridge and continue the procedure with [Step 3](#) on page 135. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

If the version of the IMT GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 136.

3. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).

To write protect a removable cartridge, refer to [MO Removable Cartridge Description](#) on page 17.

4. Insert the removable cartridge containing the IMT GPL into the removable cartridge drive on the MDAL card.

For more information on inserting the removable cartridge in the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19. After the removable cartridge has been inserted into the removable cartridge drive, repeat the `rt rv-gpl` command in [Step 2](#) on page 134 and verify the version of the IMT GPL on the removable cartridge.

5. Check the E5-MASPs for removable media.

If removable media is installed in both E5-MASPs, continue the procedure with [Step 7](#) on page 135.

If removable media is not installed in both E5-MASPs, continue the procedure with [Step 6](#) on page 135.

6. Verify the active MASP by entering the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:25:40 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY)                TDM 1116 ( ACTV )
      C  LEVEL    TIME LAST BACKUP    C  LEVEL    TIME LAST BACKUP
-----
FD BKUP Y          36 09-02-19 09:38:25 GMT Y          36 09-02-19 09:38:25 GMT
FD CRNT Y          39                      Y          39
      MCAP 1113                      MCAP 1115
-----
RD BKUP -          -          -          Y          36 09-02-19 09:27:17 GMT
USB BKP -          -          -          Y          3 09-02-07 01:11:22 GMT
```

If removable media is installed in the active MASP, continue the procedure with [Step 7](#) on page 135.

If removable media is not installed in the active MASP, insert the removable media in the removable media drive in the active MASP. For more information about inserting removable media in the removable media drive, refer to [Removable USB Drive](#) on page 20. After the removable media has been inserted in the removable media drive in the active MASP, continue the procedure with [Step 7](#) on page 135.

7. Display the IMT GPLs on the fixed disk and on the removable media using the `rt rv-gpl` command with the `gpl=imt` parameter.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
IMT      1114  132-001-000  132-001-000  132-000-000  132-000-000
```

IMT	1116	132-001-000	132-001-000	132-000-000	132-000-000
IMT	1115	-----	-----	-----	-----

If the version of the IMT GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the removable media from the active MASP.

Insert the removable media that contains the IMT GPL that is being updated into the removable media drive in the active MASP and repeat this step.

For more information about inserting removable media in the removable media drive, or removing removable media from the removable media drive, refer to [Removable USB Drive](#) on page 20.

If the version of the IMT GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 136.

8. Verify the IMT GPLs on the fixed disk and which cards are running the IMT GPLs using the `rept-stat-gpl:gpl=imt` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
GPL          CARD          RUNNING          APPROVED          TRIAL
IMT          1201          132-001-000          132-001-000          132-000-000
IMT          1202          132-001-000          132-001-000          132-000-000
IMT          1203          132-001-000          132-001-000          132-000-000
IMT          1205          132-001-000          132-001-000          132-000-000
IMT          1207          132-001-000          132-001-000          132-000-000
IMT          1211          132-001-000          132-001-000          132-000-000
IMT          1212          132-001-000          132-001-000          132-000-000
Command Completed.
```

9. Change the GPLs, using the `chg-gpl` command and specifying the value for the trial IMT GPL shown in the REMOVE TRIAL column in the output of the `rtrv-gpl` command used in [Step 2](#) on page 134 or [Step 7](#) on page 135.

For this example, enter this command.

```
chg-gpl:gpl=imt:ver=132-002-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
GPL Auditing  ON

IMT upload on 1114 completed
IMT upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

10. Activate the trial GPL, using the `act-gpl` command and specifying the value for the trial IMT GPL shown in [Step 9](#) on page 136.

For this example, enter the `act-gpl:gpl=imt:ver=132-002-000` command. These messages should appear.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
```

```
IMT activate on 1114 completed
IMT activate on 1116 completed
```

The `act-gpl:gpl=imt:ver=<IMT GPL version>` command makes the trial IMT GPL the approved IMT GPL on every card connected to the IMT bus. When the `act-gpl:gpl=imt:ver=<IMT GPL version>` command is entered, these messages are displayed on the terminal.

- UIM 1105 – REPT EVT:IMT GPL reloading – displayed after the `act-gpl:gpl=imt:ver=<IMT GPL version>` command is entered. The entry, `cards loaded:`, shows that one card out of the total number of cards connected to the IMT bus has been reloaded with the new approved IMT GPL. For this example, the EAGLE 5 ISS has 25 cards connected to the IMT bus.
- UAM 0014 – Card is present – displayed for each card connected to the IMT bus when the GPL version specified in the `act-gpl:gpl=imt:ver=<IMT GPL version>` command has been made the approved IMT GPL.
- UIM 1106 – REPT COND:IMT GPL reloading – displayed periodically to update the number of cards that have been reloaded, and when the `act-gpl:gpl=imt:ver=<IMT GPL version>` command has finished. The entry, `cards loaded:`, shows the number of cards that have been reloaded with the new approved IMT GPL since the previous UIM 1106 was issued or since UIM 1105 was issued. For this example, 5 of the 25 cards connected to the IMT bus have been reloaded with the new approved IMT GPL.

When UIM 1106 shows that the number of cards that have been reloaded with the new approved IMT GPL is equal to the number of cards connected to the IMT bus (for example, `cards loaded: 25 of 25`), the `act-gpl:gpl=imt:ver=<IMT GPL version>` command has finished.

This is an example of these messages and the order in which they appear on the terminal.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
0191.1105    SYSTEM          INFO    REPT EVT:IMT GPL reloading
           cards loaded:    1 of 25
           Report Date: 05-03-01 Time: 07:01:08
;

rlghncxa03w 09-03-01 07:01:09 GMT EAGLE5 40.1.0
0192.0014    CARD 1201 SS7ANSI      Card is present
;

rlghncxa03w 09-03-01 07:01:10 GMT EAGLE5 40.1.0
0193.0014    CARD 1202 SS7ANSI      Card is present
;

rlghncxa03w 09-03-01 07:01:11 GMT EAGLE5 40.1.0
0194.0014    CARD 1203 SS7ANSI      Card is present
;

rlghncxa03w 09-03-01 07:01:12 GMT EAGLE5 40.1.0
0195.0014    CARD 1204 SS7ANSI      Card is present
;

rlghncxa03w 09-03-01 07:01:12 GMT EAGLE5 40.1.0
0196.0014    CARD 1205 SS7ANSI      Card is present
;

rlghncxa03w 09-03-01 07:01:14 GMT EAGLE5 40.1.0
0197.1106    SYSTEM          INFO    REPT COND:IMT GPL reloading
           cards loaded:    5 of 25
           Report Date: 05-03-01 Time: 07:01:14
```

;

11. Load the approved IMT GPL on to specific cards using the `init-imt-gpl:code=appr` command specifying the location of one of the cards shown in [Step 8](#) on page 136.

For this example, the approved IMT GPL is loaded on to card 1201. Enter the `init-imt-gpl:loc=1201:code=appr` command. If you wish to load the approved IMT GPL to all cards in the EAGLE 5 ISS, enter the `init-imt-gpl:code=appr` command and do not specify the `loc` parameter.

**CAUTION**

The `init-imt-gpl` command places the specified card out of service, and should only be used during periods of low traffic. This command allows the trial IMT GPL to be loaded on the specified card, but will interrupt service on that card.

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
Initializing IMT GPL for card 1201.
;

rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
* 0192.0013 * CARD 1201 SS7ANSI      Card is isolated from the system
;

rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
0193.0014      CARD 1201 SS7ANSI      Card is present
;

rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
0194.0096      CARD 1201 SS7ANSI      Card has been reloaded
;
```

12. Verify the IMT GPLs on the cards using the `rept-stat-gpl:gpl=imt` command.

If any card is not running the version of the IMT GPL shown in the system release ID table, the indicator ALM is displayed next to the GPL version in the **RUNNING** column for that card in the `rept-stat-gpl` output. By performing the `act-gpl` command in [Step 10](#) on page 136, the system release ID table is updated with the new IMT GPL version number, and the new version of the IMT GPL is shown as the approved version in the `rept-stat-gpl` output.

For this example, card 1201 was loaded with the new approved version of the IMT GPL. This is an example of the possible output.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
GPL          CARD          RUNNING          APPROVED          TRIAL
IMT          1201          132-002-000          132-002-000          132-001-000
IMT          1202          132-001-000 ALM          132-002-000          132-001-000
IMT          1203          132-001-000 ALM          132-002-000          132-001-000
IMT          1205          132-001-000 ALM          132-002-000          132-001-000
IMT          1207          132-001-000 ALM          132-002-000          132-001-000
IMT          1211          132-001-000 ALM          132-002-000          132-001-000
IMT          1212          132-001-000 ALM          132-002-000          132-001-000
Command Completed.
```

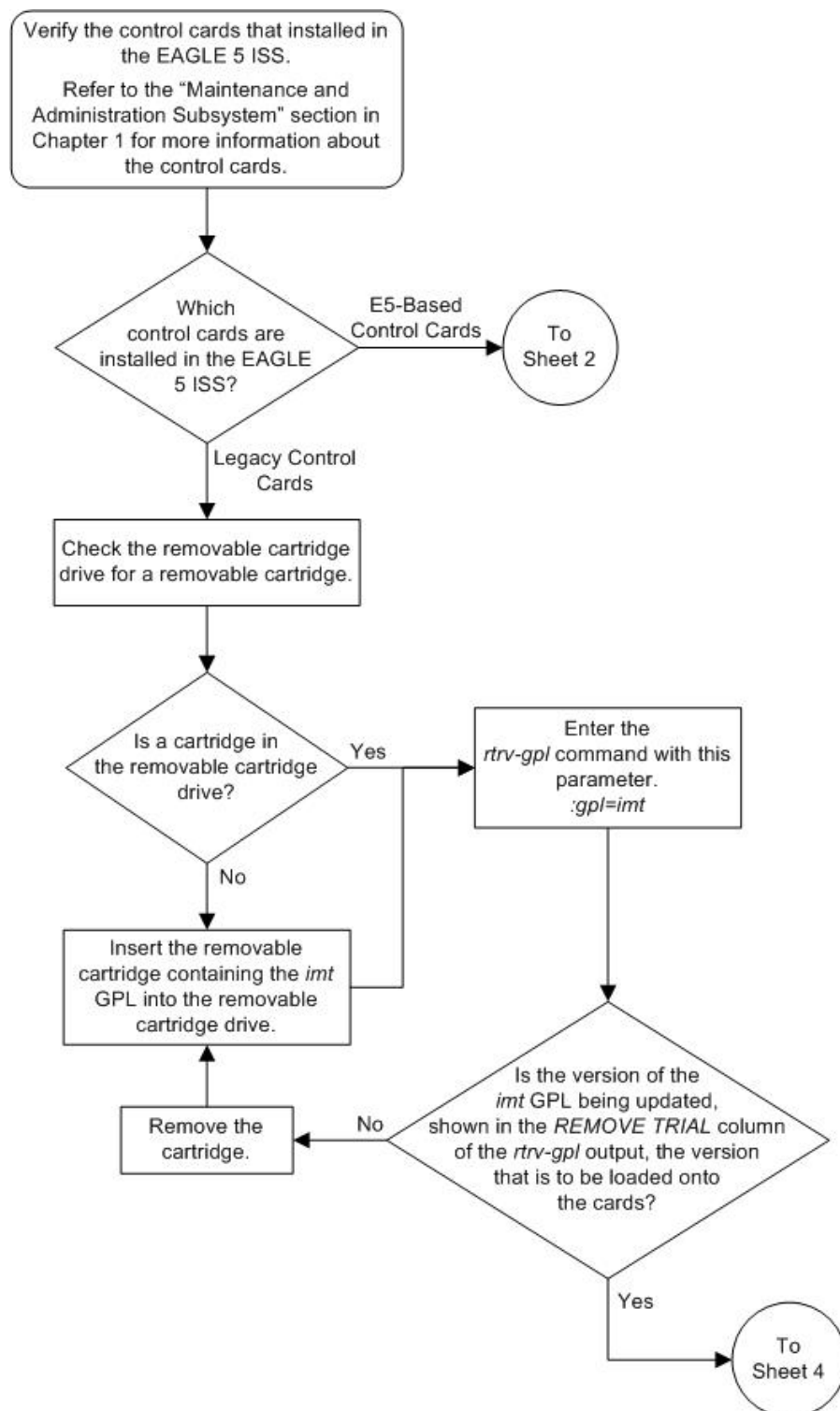
13. Continue the procedure by performing these actions.

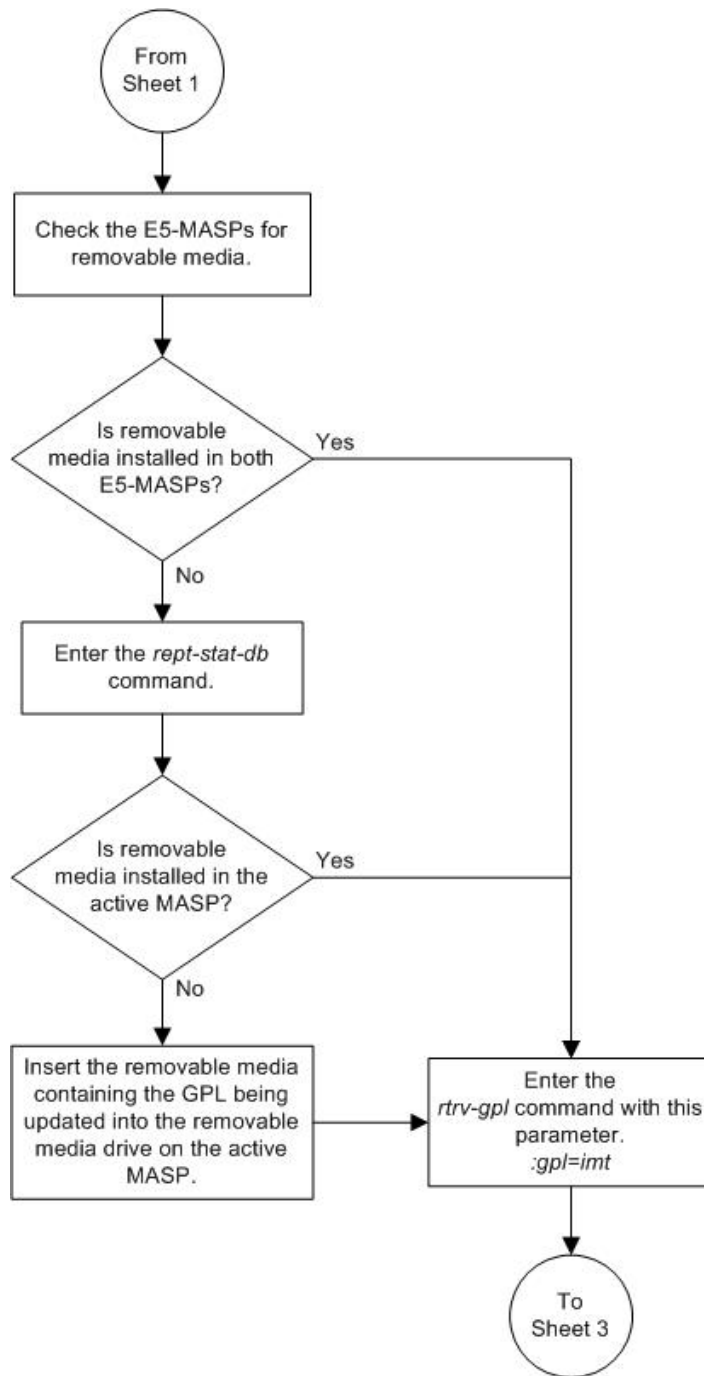
If legacy control cards are installed in the EAGLE 5 ISS, remove the removable cartridge from the removable cartridge drive on the MDAL card. For information about removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

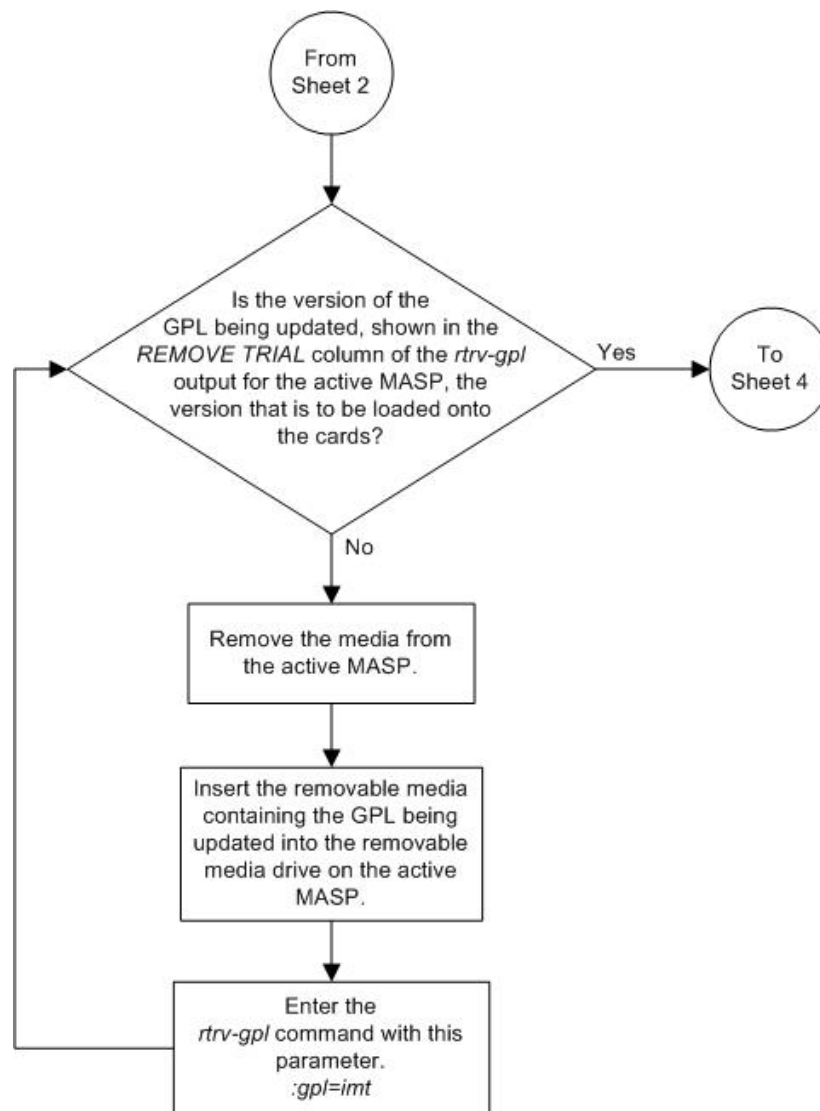
When the removable cartridge has been removed, or if E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure by performing one of these actions.

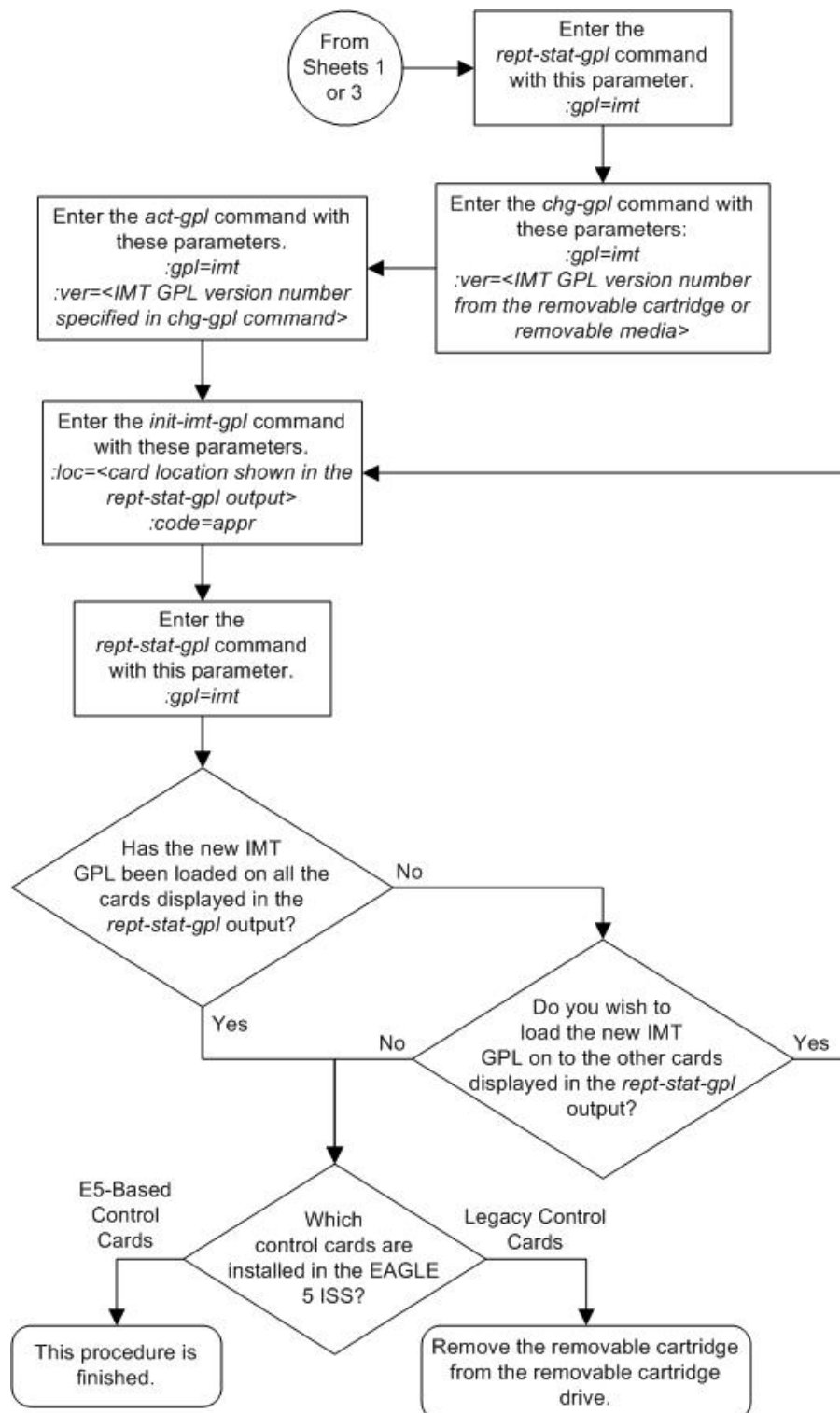
- If the new IMT GPL has been loaded onto all the cards shown in [Step 8](#) on page 136, or if you do not wish to load the new IMT GPL onto other cards, this procedure is finished.
- If you wish to load the new IMT GPL onto the other cards shown in [Step 8](#) on page 136, repeat this procedure from [Step 11](#) on page 138 for each card shown in [Step 8](#) on page 136.

Figure 23: Updating the IMT GPL









Updating the EOAM GPL

This section presents the procedure for loading the EOAM generic program load (GPL) on the GPSM-II card in card locations 1113 and 1115 as a trial version from a removable cartridge, then making the trial version of the EOAM GPL the approved version of the EOAM GPL. The GPSM-II card in card locations 1113 and 1115 is used in combination with the TDM to form the Maintenance and Administration Subsystem Processor (MASP).



CAUTION: This procedure can be performed only on EAGLE 5 ISSs that contain legacy control cards. Refer to [Maintenance and Administration Subsystem](#) on page 7 for more information about the control cards.

If any card is not running the version of the GPL shown in the RELEASE column of the `rtrv-gpl` output, the indicator ALM is displayed next to the GPL version in the RUNNING column of the `rept-stat-gpl` output, and next to the GPL version in the APPROVED column in the `rtrv-gpl` output.

If a new version of the EOAM GPL is being loaded on to the EAGLE 5 ISS, the removable cartridge that contains the new version of the EOAM GPL is required.

1. Verify the control cards that are installed in the EAGLE 5 ISS.

Refer to [Maintenance and Administration Subsystem](#) on page 7 for information about the control cards.

If legacy control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 2](#) on page 144.

If E5-based control cards are installed in the EAGLE 5 ISS, this procedure is finished. The EOAM GPL cannot be loaded onto E5-based control cards.

2. Check the removable cartridge drive on the MDAL card for a removable cartridge.

If there is a removable cartridge in the drive, display the EOAM GPLs on the fixed disk and on the removable cartridge using the `rtrv-gpl:gpl=eoam` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
EOAM	1114	132-002-000	132-002-000	132-001-000	132-003-000
EOAM	1116	132-002-000	132-002-000	132-001-000	-----

If the version of the EOAM GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the cartridge and continue the procedure with [Step 2](#) on page 144. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

If the version of the EOAM GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 4](#) on page 145.

3. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).

To write protect a removable cartridge, refer to [MO Removable Cartridge Description](#) on page 17.

4. Load the new version of the EOAM GPL using the `chg-gpl` command and specifying the value for the trial EOAM GPL shown in the REMOVE TRIAL column in the output of the `rtrv-gpl` output in [Step 2](#) on page 144.

For this example, enter this command.

```
chg-gpl:gpl=eoam:ver=123-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON

EOAM upload on 1114 completed
EOAM upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

5. Verify that the trial EOAM GPL has been made the approved GPL using the `rtrv-gpl:gpl=eoam` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
EOAM	1114	132-003-000	132-003-000	132-002-000	132-003-000
EOAM	1116	132-003-000	132-003-000	132-002-000	-----

6. Verify which cards are running the EOAM GPLs using the `rept-stat-gpl:gpl=eoam` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL CARD RUNNING APPROVED TRIAL
EOAM 1113 132-002-000 ALM 132-003-000 132-002-000
EOAM 1115 132-002-000 ALM 132-003-000 132-002-000
Command Completed
```

7. To load the EOAM GPL, it must be loaded on the standby MASP (GPSM-II) first.

To determine which MASP is active, enter the `rept-stat-db` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY)      TDM 1116 ( ACTV )
      C LEVEL    TIME LAST BACKUP      C LEVEL    TIME LAST BACKUP
      -----
FD BKUP  Y      35 05-03-01 10:19:18 GMT  Y      35 05-03-01 10:19:18 GMT
FD CRNT  Y      106                      Y      106
MDAL 1117
```

```
RD BKUP Y 106 05-02-31 20:27:53 GMT
```

The output of the `rept-stat-db` command shows which MASP is active with the indicator (`ACTV`) following the TDM card location. The indicator (`STDBY`) following the TDM card location shows which MASP is standby.

For this example, the MASP associated with TDM 1116 is active and the MASP associated with TDM 1114 is standby.

8. Display the terminal configuration in the database with the `rtrv-trm` command.

The OAP terminals are shown in the output with the entry `OAP` in the `TYPE` field. The SEAS terminals are shown in the output with the entry `SEAS` in the `TYPE` field. This is an example of the possible output. In this example, the OAP terminals are terminals 6 and 9, and the SEAS terminals are terminals 18 and 27. If no OAP and SEAS terminals are shown in the `rtrv-trm` command output, continue the procedure with [Step 12](#) on page 148.

```
r lghncxa03w 09-03-01 16:02:08 GMT EAGLE5 39.0.0
```

TRM	TYPE	COMM	FC	TMOUT	MXINV	DURAL
1	VT320	9600-7-E-1	SW	30	5	99:59:59
2	KSR	9600-7-E-1	HW	30	5	INDEF
3	PRINTER	4800-7-E-1	HW	30	0	00:00:00
4	VT320	2400-7-E-1	BOTH	30	5	00:30:00
5	VT320	9600-7-0-1	NONE	30	5	00:00:30
6	OAP	19200-7-E-1	SW	0	5	INDEF
7	PRINTER	9600-7-N-2	HW	30	5	00:30:00
8	KSR	19200-7-E-2	BOTH	30	5	00:30:00
9	OAP	19200-7-E-1	SW	0	5	INDEF
10	VT320	9600-7-E-1	HW	30	5	00:30:00
11	VT320	4800-7-E-1	HW	30	5	00:30:00
12	PRINTER	9600-7-E-1	HW	30	4	00:30:00
13	VT320	9600-7-0-1	NONE	30	5	00:30:00
14	VT320	9600-7-E-2	SW	30	8	00:30:00
15	VT320	9600-7-N-2	HW	30	5	00:30:00
16	VT320	9600-7-E-2	BOTH	30	3	00:30:00

TRM	TYPE	LOC	TMOUT	MXINV	DURAL	SECURE
17	TELNET	1201	60	5	00:30:00	yes
18	SEAS	1201	60	5	00:30:00	yes
19	TELNET	1201	60	5	00:30:00	yes
20	TELNET	1201	60	5	00:30:00	yes
21	TELNET	1201	60	5	00:30:00	yes
22	TELNET	1201	60	5	00:30:00	yes
23	TELNET	1201	60	5	00:30:00	yes
24	TELNET	1201	60	5	00:30:00	yes
25	TELNET	1203	60	5	00:30:00	yes
26	TELNET	1203	60	5	00:30:00	yes
27	SEAS	1203	60	5	00:30:00	yes
28	TELNET	1203	60	5	00:30:00	yes
29	TELNET	1203	60	5	00:30:00	yes
30	TELNET	1203	60	5	00:30:00	yes
31	TELNET	1203	60	5	00:30:00	yes
32	TELNET	1203	60	5	00:30:00	yes
33	TELNET	1205	60	5	00:30:00	yes
34	TELNET	1205	60	5	00:30:00	yes
35	TELNET	1205	60	5	00:30:00	yes
36	TELNET	1205	60	5	00:30:00	yes
37	TELNET	1205	60	5	00:30:00	yes
38	TELNET	1205	60	5	00:30:00	yes

39	TELNET	1205	60	5	00:30:00	yes
40	TELNET	1205	60	5	00:30:00	yes

Note: The `rtrv-trm` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-trm` command, see the `rtrv-trm` command description in the *Commands Manual*.

9. Display the status of the terminals with the `rept-stat-trm` command with the terminal number of the OAP or SEAS terminals.

If OAP terminals are shown in the `rtrv-trm` output in [Step 8](#) on page 146, for this example, enter these commands.

```
rept-stat-trm:trm=6
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM   PST           SST           AST
6     IS-NR         Active         -----
Command Completed.
```

```
rept-stat-trm:trm=9
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM   PST           SST           AST
9     IS-NR         Active         -----
Command Completed.
```

If SEAS terminals are shown in the `rtrv-trm` output in [Step 8](#) on page 146, for this example, enter these commands.

```
rept-stat-trm:trm=18
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM   PST           SST           AST
18    IS-NR         Active         -----
Command Completed.
```

```
rept-stat-trm:trm=27
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM   PST           SST           AST
27    IS-NR         Active         -----
Command Completed.
```

10. Place the OAP or SEAS terminals out of service using the `rmv-trm` command with the number of the terminal displayed in [Step 9](#) on page 147 whose state is not OOS-MT-DSBLD.

The `force=yes` parameter must be used when placing the last OAP or SEAS terminal out of service. For this example, enter these commands.

If OAP terminals are shown in the `rtrv-trm` output in [Step 8](#) on page 146, for this example, enter these commands.

```
rmv-trm:trm=6
```

```
rmv-trm:trm=9:force=yes
```

If SEAS terminals are shown in the `rtrv-trm` output in [Step 8](#) on page 146, for this example, enter these commands.

```
rmv-trm:trm=18
```

```
rmv-trm:trm=27:force=yes
```

If the status of the OAP and SEAS terminals shown in the PST field in [Step 9](#) on page 147 is OOS-MT-DSBLD (out-of-service maintenance disabled), the terminal is already out of service and the `rmv-trm` command does not need to be executed for that terminal.

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0  
Inhibit message sent to terminal  
  
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0  
Command Completed.
```

11. Change the terminal type of the OAP or SEAS terminals to NONE with the `chg-trm` command, the `type=none` parameter, and with the values of the OAP or SEAS terminals used in [Step 10](#) on page 147.

If OAP terminals are shown in the `rtrv-trm` output in [Step 8](#) on page 146, for this example, enter these commands.

```
chg-trm:trm=6:type=none
```

```
chg-trm:trm=9:type=none
```

If SEAS terminals are shown in the `rtrv-trm` output in [Step 8](#) on page 146, for this example, enter these commands.

```
chg-trm:trm=18:type=none
```

```
chg-trm:trm=27:type=none
```

This message should appear when these commands have successfully completed.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0  
CHG-TRM: MASP B - COMPLTD
```

12. Using the outputs of [Step 6](#) on page 145 and [Step 7](#) on page 145 as a guide, place the GPSM-II card making up the standby MASP out of service using the `rmv-card` command.

For this example, enter this command.

```
rmv-card:loc=1113
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0  
Card has been inhibited.
```

13. Put the card that was inhibited in [Step 12](#) on page 148 back into service using the `rst-card` command.

The `rst-card` command also loads the approved version of the EOAM GPL onto the card

For this example, enter this command.

```
rst-card:loc=1113
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Card has been allowed.
```

14. Verify the EOAM GPLs on the GPSM-II cards using the `rept-stat-gpl:gpl=eoam` command. If any card is not running the release version of the GPL, shown in the **RELEASE** column of the `rtrv-gpl` output in [Step 5](#) on page 145, the indicator **ALM** is displayed next to the GPL version in the **RUNNING** column of the `rept-stat-gpl` output. This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL      CARD  RUNNING      APPROVED      TRIAL
EOAM     1113   132-003-000      132-003-000    132-002-000
EOAM     1115   132-002-000 ALM    132-003-000    132-002-000
Command Completed
```

15. If you wish to load the new EOAM GPL onto the GPSM-II card making up the active MASP, enter the `init-card` command specifying the location of the GPSM-II card making up active MASP. For this example, enter the `init-card:loc=1115` command. This message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Init Card command issued to card 1115
```

After this step has been performed, or if you did not wish to load the new version of the EOAM GPL onto the other GPSM-II card, continue this procedure with either [Step 16](#) on page 149 or [Step 18](#) on page 150 based on the following conditions:

- If OAP and SEAS terminals were not shown in the `rtrv-trm` command output in [Step 8](#) on page 146, continue the procedure with [Step 18](#) on page 150.
- If OAP and SEAS terminals were shown in the `rtrv-trm` command output in [Step 8](#) on page 146, continue the procedure with [Step 16](#) on page 149.

16. Change the terminal type of the terminals that were changed to **NONE** in [Step 11](#) on page 148 to the terminal type **OAP** or **SEAS** with the `chg-trm` command and either the `type=oap` (for OAP terminals) or `type=seas` (for SEAS terminals) parameter.

The terminal type is shown in the **TYPE** field in the `rtrv-trm` command output in [Step 8](#) on page 146.

If OAP terminals were changed in [Step 11](#) on page 148, for this example, enter these commands.

```
chg-trm:trm=6:type=oap
```

```
chg-trm:trm=9:type=oap
```

If SEAS terminals were changed in [Step 11](#) on page 148, for this example, enter these commands.

```
chg-trm:trm=18:type=seas
```

```
chg-trm:trm=27:type=seas
```

This message should appear when these commands have successfully completed.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
CHG-TRM: MASP B - COMPLTD
```

17. Put the OAP and SEAS terminals back into service using the `rst - trm` command with the number of the terminals specified in [Step 16](#) on page 149.

For this example, enter these commands.

```
rst-trm:trm=6
```

```
rst-trm:trm=9
```

```
rst-trm:trm=18
```

```
rst-trm:trm=27
```

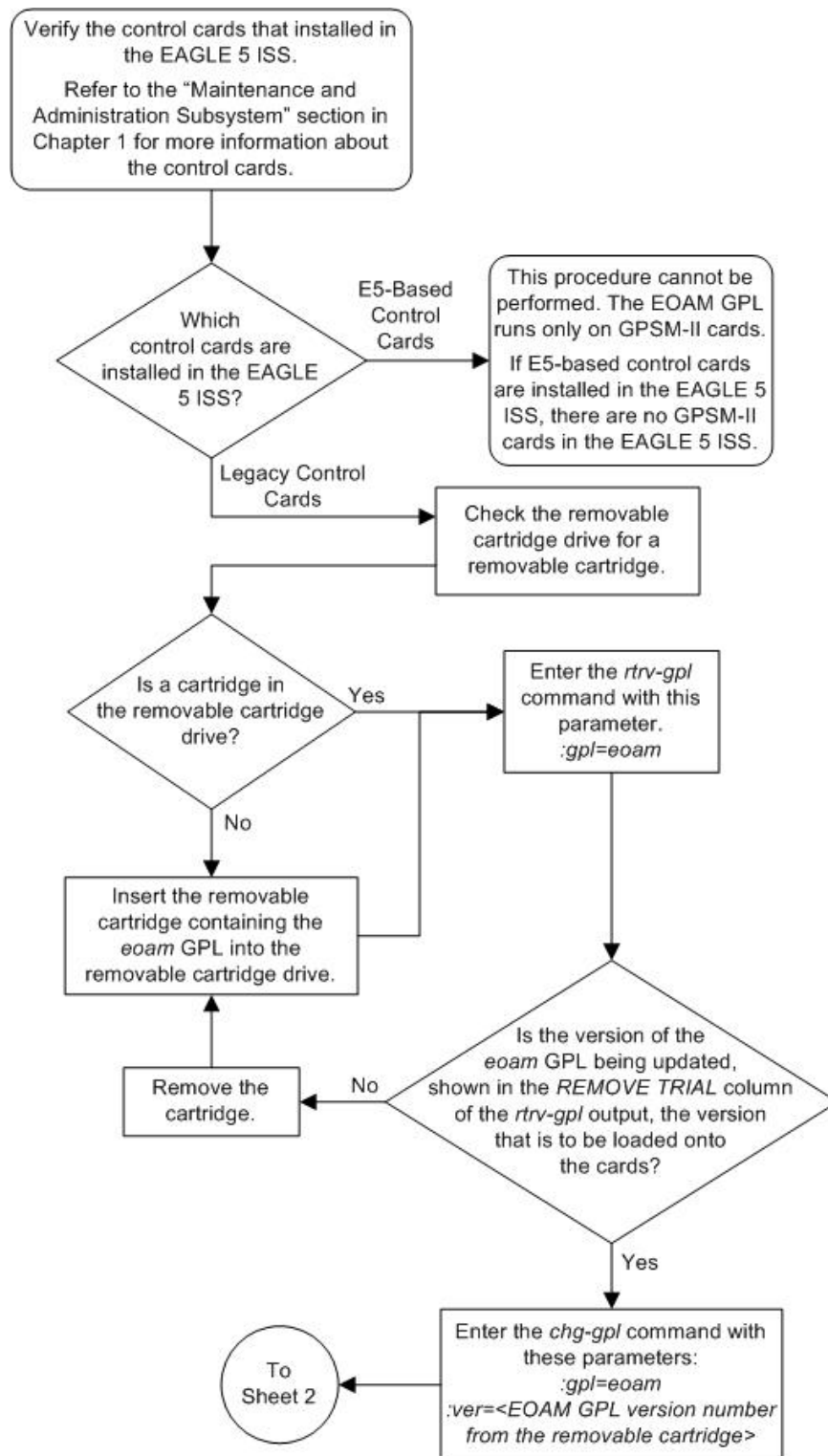
This message should appear when each command has successfully completed.

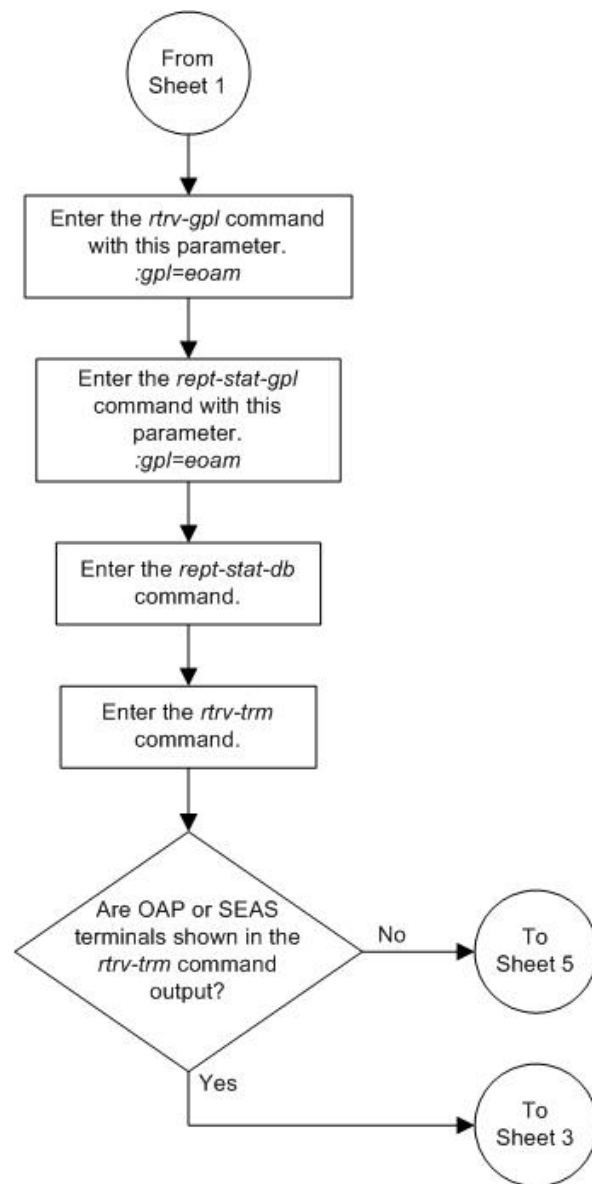
```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0  
Allow message sent to terminal  
  
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0  
Command Completed.
```

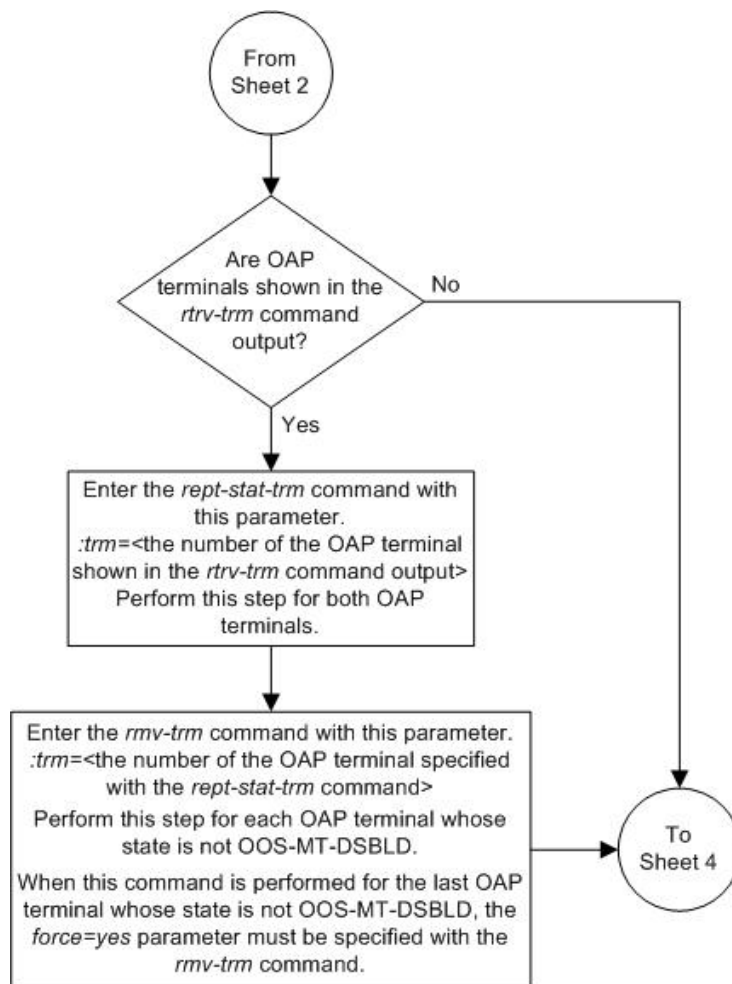
18. Remove the removable cartridge from the removable cartridge drive on the MDAL card.

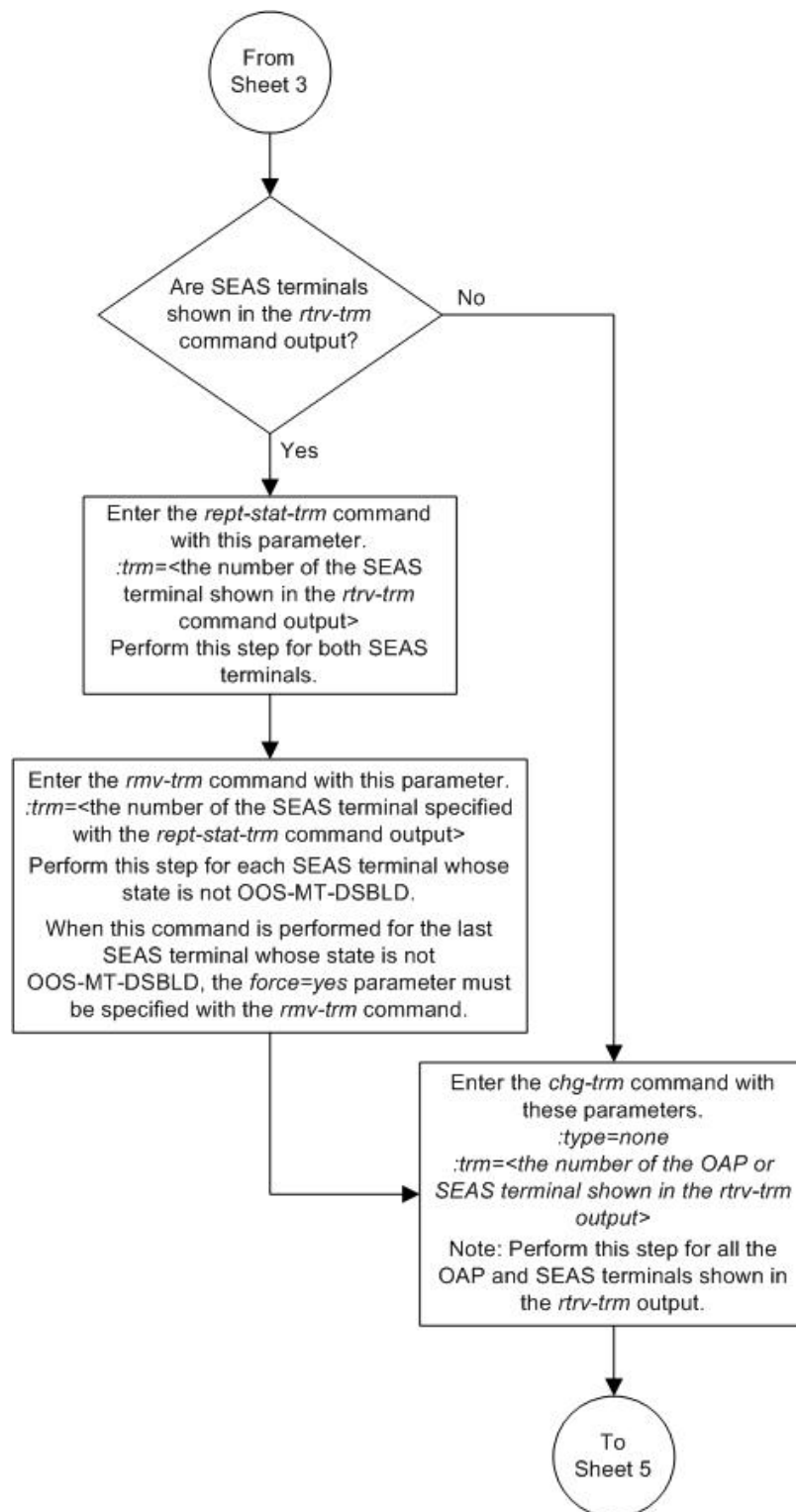
For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

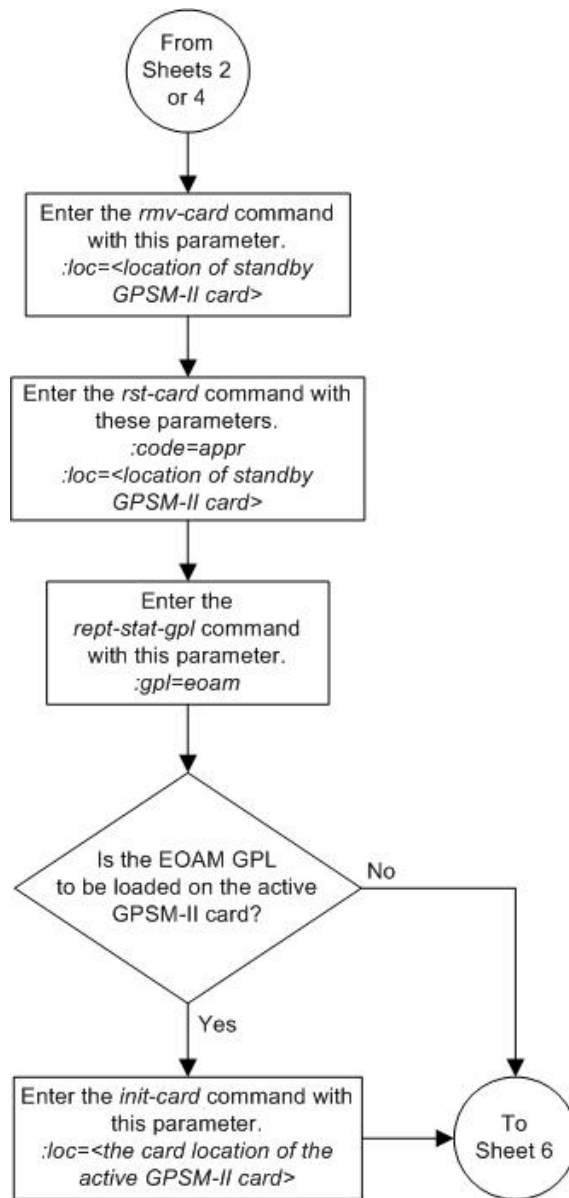
Figure 24: Updating the EOAM GPL

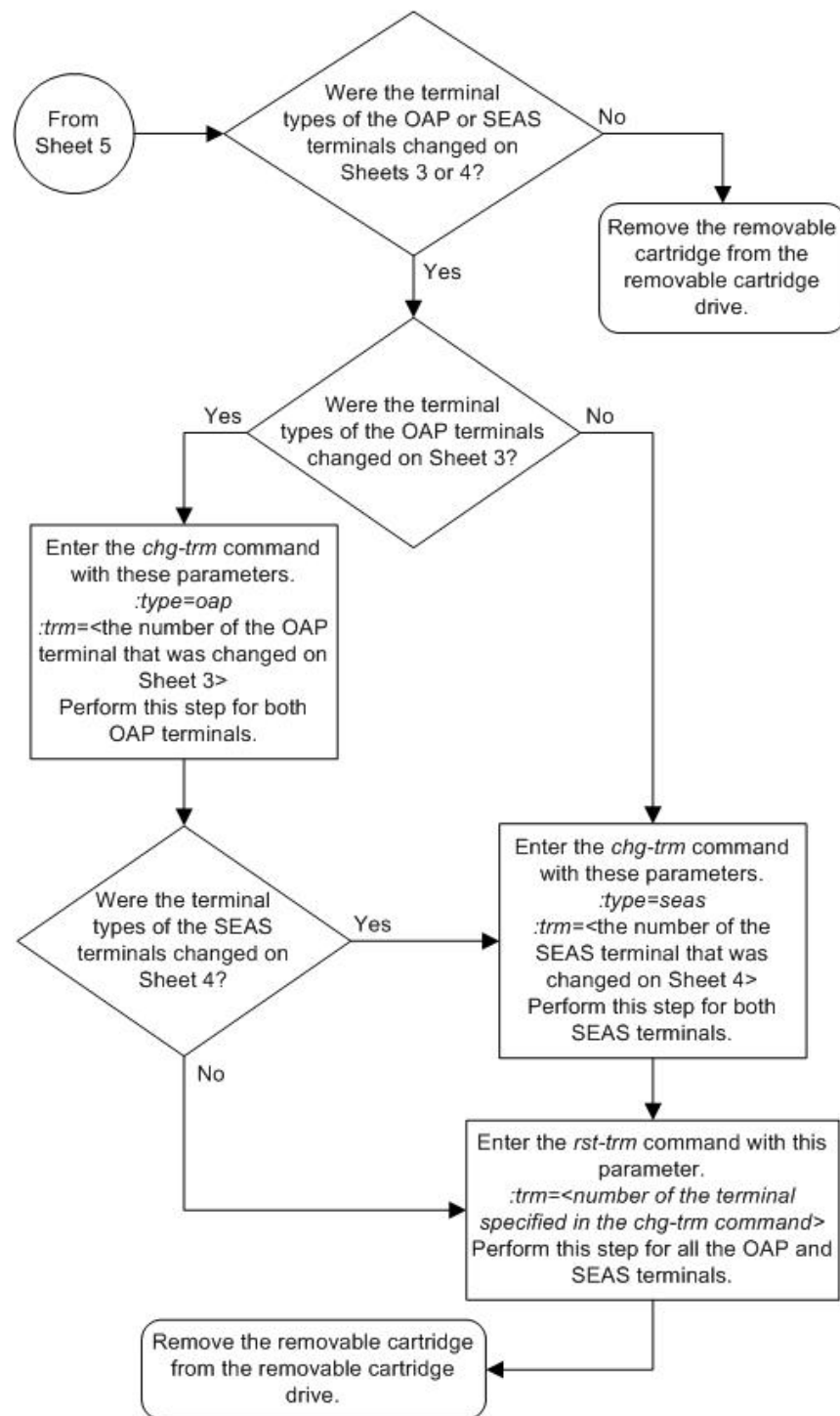












Updating the BLMCAP and OAMHC GPLs

This procedure updates the BLMCAP and OAMHC GPLs on the E5-MCAP cards in card locations 1113 and 1115 as a trial version from the removable media, then making the trial version of these GPLs the approved version of these GPLs. The E5-MCAP card in card locations 1113 and 1115 is used in combination with the TDM to form the Maintenance and Administration Subsystem Processor (MASP).

The BLMCAP GPL is updated using the `chg-gpl`, `act-gpl`, and `flash-card` commands.

The OAMHC GPL is updated using the `chg-gpl` command.



CAUTION

CAUTION: This procedure can be performed only on EAGLE 5 ISSs that contain E5-based control cards. Refer to [Maintenance and Administration Subsystem](#) on page 7 for more information about the control cards.

If any card is not running the version of the GPL shown in the `RELEASE` column of the `rtv-gpl` output, the indicator `ALM` is displayed next to the GPL version in the `RUNNING` column of the `rept-stat-gpl` output, and next to the GPL version in the `APPROVED` column in the `rtv-gpl` output.

Removable media containing the BLMCAP and OAMHC GPLs that are being updated is required.

1. Verify the control cards that are installed in the EAGLE 5 ISS.

Refer to [Maintenance and Administration Subsystem](#) on page 7 for information about the control cards.

If E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 2](#) on page 157.

If legacy control cards are installed in the EAGLE 5 ISS, this procedure is finished. The BLMCAP and OAMHC GPLs cannot be loaded onto legacy control cards.

2. Check the E5-MASPs for removable media.

If removable media is installed in one of the E5-MASPs, continue the procedure with [Step 4](#) on page 158.

If removable media is not installed in either E5-MASPs, continue the procedure with [Step 3](#) on page 157.

3. Verify the active MASP by entering the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:25:40 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY)      TDM 1116 ( ACTV )
      C  LEVEL    TIME LAST BACKUP      C  LEVEL    TIME LAST BACKUP
-----
FD BKUP Y        36 09-02-19 09:38:25 GMT Y        36 09-02-19 09:38:25 GMT
FD CRNT Y        39                      Y        39
      MCAP 1113                      MCAP 1115
      - - - - -                      - - - - -
```

RD BKUP	-	-	-	-	Y	36	09-02-19	09:27:17	GMT
USB BKP	-	-	-	-	Y	3	09-02-07	01:11:22	GMT

If removable media is installed in the active MASP, continue the procedure with [Step 4](#) on page 158.

If removable media is not installed in the active MASP, insert the removable media in the removable media drive in the active MASP. For more information about inserting removable media in the removable media drive, refer to [Removable USB Drive](#) on page 20. After the removable media has been inserted in the removable media drive in the active MASP, continue the procedure with [Step 4](#) on page 158.

4. Display the BLMCAP and OAM HC GPLs on the fixed disk and on the removable media using the `rtrv-gpl` command with the `gpl` parameter value equal to the GPL being updated. Perform these substeps.

- a) Display the BLMCAP GPL by entering this command.

```
rtrv-gpl:gpl=blmcap
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
BLMCAP	1114	132-002-000	132-002-000	132-001-000	132-003-000
BLMCAP	1116	132-002-000	132-002-000	132-001-000	132-003-000
BLMCAP	1115	-----	-----	-----	-----

- b) Display the OAMHC GPL by entering this command.

```
rtrv-gpl:gpl=oamhc
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
OAMHC	1114	132-002-000	132-002-000	132-001-000	132-003-000
OAMHC	1116	132-002-000	132-002-000	132-001-000	132-003-000
OAMHC	1115	-----	-----	-----	-----

If the version of either GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the removable media from the active MASP.

Insert the removable media that contains the GPLs that are being updated into the removable media drive in the active MASP. If [Step 3](#) on page 157 was performed, repeat this step. If [Step 3](#) on page 157 was not performed, repeat this procedure from [Step 3](#) on page 157.

For more information about inserting removable media in the removable media drive, or removing removable media from the removable media drive, refer to [Removable USB Drive](#) on page 20.

If the versions of the GPLs shown in the REMOVE TRIAL column of the `rtrv-gpl` output are the versions that are to be loaded onto the cards, continue the procedure with [Step 5](#) on page 159.

5. Change the BLMCAP and OAMHC GPLs using the `chg-gpl` command and specifying the value for the trial BLMCAP and OAMHC GPLs shown in the REMOVE TRIAL column in the output of the `rtrv-gpl` command (in [Step 4](#) on page 158). Perform these substeps.

- a) For the BLMCAP GPL in this example, enter this command.

```
chg-gpl:gpl=blmcap:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON

BLMCAP upload on 1114 completed
BLMCAP upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

- b) For the OAMHC GPL in this example, enter this command.

```
chg-gpl:gpl=oamhc:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON

OAMHC upload on 1114 completed
OAMHC upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

6. Activate the trial BLMCAP GPL, using the `act-gpl` command and specifying the name and version of the trial BLMCAP GPL specified in Substep a in [Step 5](#) on page 159. Enter this command.

```
act-gpl:gpl=blmcap:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BLMCAP activate on 1114 completed
BLMCAP activate on 1116 completed
```

7. Verify that the trial BLMCAP and OAM HC GPLs have been made the approved GPLs using the `rtrv-gpl` command. Perform these substeps.

- a) For the BLMCAP GPL, enter the `rtrv-gpl:gpl=blmcap` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
BLMCAP	1114	132-003-000	132-003-000	132-002-000	132-003-000
BLMCAP	1116	132-003-000	132-003-000	132-002-000	132-003-000
BLMCAP	1115	-----	-----	-----	-----

- b) For the OAMHC GPL, enter the `rtrv-gpl:gpl=oamhc` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
OAMHC	1114	132-003-000	132-003-000	132-002-000	132-003-000
OAMHC	1116	132-003-000	132-003-000	132-002-000	132-003-000
OAMHC	1115	-----	-----	-----	-----

8. Verify the GPLs that are running on the E5-MCAP cards by performing these substeps.
 - a) For the BLMCAP GPL, enter the `rept-stat-gpl:gpl=blmcap` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RUNNING	APPROVED	TRIAL
BLMCAP	1113	132-002-000 ALM	132-003-000	132-002-000
BLMCAP	1115	132-002-000 ALM	132-003-000	132-002-000

Command Completed

The `flash-card` command will load only the BLMCAP GPLs whose approved versions are different from the versions that the card is running. The version of the BLMCAP GPL that the card is running is shown in the **RUNNING** column in the `rept-stat-gpl` output. The approved version of the BLMCAP GPL is shown in the **APPROVED** column of the `rept-stat-gpl` output. If the running and approved versions of a BLMCAP GPL are the same, the `flash-card` command will not load that BLMCAP GPL.

- b) For the OAMHC GPL, enter the `rept-stat-gpl:gpl=oamhc` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL CARD RUNNING APPROVED TRIAL
OAMHC 1113 132-002-000 ALM 132-003-000 132-002-000
OAMHC 1115 132-002-000 ALM 132-003-000 132-002-000
Command Completed
```

9. Display the terminal configuration in the database with the `rtrv-trm` command.

All the OAP and SEAS terminals must be placed out of service in order to load the BLMCAP and OAMHC GPLs onto the E5-MCAP cards. The OAP terminals are shown in the output with the entry **OAP** in the **TYPE** field. The SEAS terminals are shown in the output with the entry **SEAS** in the **TYPE** field. This is an example of the possible output. In this example, the OAP terminals are terminals 6 and 9, and the SEAS terminals are terminals 18 and 27.

```
rlghncxa03w 07-05-01 16:02:08 GMT EAGLE5 40.1.0
```

TRM	TYPE	COMM	FC	TMOUT	MXINV	DURAL
1	VT320	9600-7-E-1	SW	30	5	99:59:59
2	KSR	9600-7-E-1	HW	30	5	INDEF
3	PRINTER	4800-7-E-1	HW	30	0	00:00:00
4	VT320	2400-7-E-1	BOTH	30	5	00:30:00
5	VT320	9600-7-0-1	NONE	30	5	00:00:30
6	OAP	19200-7-E-1	SW	0	5	INDEF
7	PRINTER	9600-7-N-2	HW	30	5	00:30:00
8	KSR	19200-7-E-2	BOTH	30	5	00:30:00
9	OAP	19200-7-E-1	SW	0	5	INDEF

10	VT320	9600-7-E-1	HW	30	5	00:30:00
11	VT320	4800-7-E-1	HW	30	5	00:30:00
12	PRINTER	9600-7-E-1	HW	30	4	00:30:00
13	VT320	9600-7-0-1	NONE	30	5	00:30:00
14	VT320	9600-7-E-2	SW	30	8	00:30:00
15	VT320	9600-7-N-2	HW	30	5	00:30:00
16	VT320	9600-7-E-2	BOTH	30	3	00:30:00

TRM	TYPE	LOC	TMOUT	MXINV	DURAL
17	TELNET	1303	60	5	00:30:00
18	SEAS	1201	60	5	00:30:00
19	TELNET	1303	60	5	00:30:00
20	TELNET	1303	60	5	00:30:00
21	TELNET	1303	60	5	00:30:00
22	TELNET	1303	60	5	00:30:00
23	TELNET	1303	60	5	00:30:00
24	TELNET	1303	60	5	00:30:00
25	TELNET	1203	60	5	00:30:00
26	TELNET	1203	60	5	00:30:00
27	SEAS	1203	60	5	00:30:00
28	TELNET	1203	60	5	00:30:00
39	TELNET	1203	60	5	00:30:00
30	TELNET	1203	60	5	00:30:00
31	TELNET	1203	60	5	00:30:00
32	TELNET	1203	60	5	00:30:00
33	TELNET	1208	60	5	00:30:00
34	TELNET	1208	60	5	00:30:00
35	TELNET	1208	60	5	00:30:00
36	TELNET	1208	60	5	00:30:00
37	TELNET	1208	60	5	00:30:00
38	TELNET	1208	60	5	00:30:00
39	TELNET	1208	60	5	00:30:00
40	TELNET	1208	60	5	00:30:00

Note: The `rtrv-trm` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-trm` command, see the `rtrv-trm` command description in the *Commands Manual*.

If OAP or SEAS terminals are shown in the `rtrv-trm` command output, continue the procedure with [Step 10](#) on page 161.

If no OAP and SEAS terminals are not shown in the `rtrv-trm` command output, continue the procedure with by performing one of these steps.

- If the `rept-stat-db` command in [Step 3](#) on page 157 was not performed, continue the procedure with [Step 13](#) on page 163.
- If the `rept-stat-db` command in [Step 3](#) on page 157 was performed, continue the procedure with [Step 14](#) on page 163.

10. Display the status of the terminals with the `rept-stat-trm` command with the terminal number of the OAP or SEAS terminals.

If OAP terminals are shown in the `rtrv-trm` output in [Step 9](#) on page 160, for this example, enter these commands.

```
rept-stat-trm:trm=6
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM    PST          SST          AST
```

```
6      IS-NR      Active      -----
Command Completed.
```

```
rept-stat-trm:trm=9
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM  PST      SST      AST
9      IS-NR      Active      -----
Command Completed.
```

If SEAS terminals are shown in the `rtrv-trm` output in [Step 9](#) on page 160, for this example, enter these commands.

```
rept-stat-trm:trm=18
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM  PST      SST      AST
18     IS-NR      Active      -----
Command Completed.
```

```
rept-stat-trm:trm=27
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM  PST      SST      AST
27     IS-NR      Active      -----
Command Completed.
```

11. Place the OAP or SEAS terminals out of service using the `rmv-trm` command with the number of the terminal displayed in [Step 10](#) on page 161 whose state is not OOS-MT-DSBLD.

The `force=yes` parameter must be used when placing the last OAP or SEAS terminal out of service. For this example, enter these commands.

If OAP terminals are shown in the `rtrv-trm` output in [Step 9](#) on page 160, for this example, enter these commands.

```
rmv-trm:trm=6
```

```
rmv-trm:trm=9:force=yes
```

If SEAS terminals are shown in the `rtrv-trm` output in [Step 9](#) on page 160, for this example, enter these commands.

```
rmv-trm:trm=18
```

```
rmv-trm:trm=27:force=yes
```

If the status of the OAP and SEAS terminals shown in the `PST` field in [Step 10](#) on page 161 is OOS-MT-DSBLD (out-of-service maintenance disabled), the terminal is already out of service and the `rmv-trm` command does not need to be executed for that terminal.

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Inhibit message sent to terminal
```



```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Command Completed.
```

12. Change the terminal type of the OAP or SEAS terminals to NONE with the `chg-trm` command, the `type=none` parameter, and with the values of the OAP or SEAS terminals used in [Step 11](#) on page 162.

If OAP terminals are shown in the `rtrv-trm` output in [Step 9](#) on page 160, for this example, enter these commands.

```
chg-trm:trm=6:type=none
```

```
chg-trm:trm=9:type=none
```

If SEAS terminals are shown in the `rtrv-trm` output in [Step 9](#) on page 160, for this example, enter these commands.

```
chg-trm:trm=18:type=none
```

```
chg-trm:trm=27:type=none
```

This message should appear when these commands have successfully completed.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
CHG-TRM: MASP B - COMPLTD
```

Continue the procedure with by performing one of these steps.

- If the `rept-stat-db` command in [Step 3](#) on page 157 was not performed, continue the procedure with [Step 13](#) on page 163.
- If the `rept-stat-db` command in [Step 3](#) on page 157 was performed, continue the procedure with [Step 14](#) on page 163.

13. To load the BLMCAP and OAMHC GPLs, they must be loaded on the standby MASP (E5-MCAP) first.

To determine which MASP is active, enter the `rept-stat-db` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:25:40 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY)
      C  LEVEL    TIME LAST BACKUP
      -  - - - -
FD BKUP Y        36 09-02-19 09:38:25 GMT
FD CRNT Y        39
      MCAP 1113
      -  - - - -
RD BKUP -        -        -        -
USB BKP -        -        -        -
      TDM 1116 ( ACTV )
      C  LEVEL    TIME LAST BACKUP
      -  - - - -
Y        36 09-02-19 09:38:25 GMT
Y        39
      MCAP 1115
      -  - - - -
Y        36 09-02-19 09:27:17 GMT
Y        3 09-02-07 01:11:22 GMT
```

The output of the `rept-stat-db` command shows which MASP is active with the indicator (ACTV) following the TDM card location. The indicator (STDBY) following the TDM card location shows which MASP is standby.

For this example, the MASP associated with TDM 1116 is active and the MASP associated with TDM 1114 is standby.

14. Using the outputs of [Step 8](#) on page 160 and either [Step 3](#) on page 157 or [Step 13](#) on page 163 as a guide, place the the E5-MCAP card making up the standby MASP card out of service using the `rmv-card` command.

For this example, enter this command.

```
rmv-card:loc=1113
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Card has been inhibited.
```

15. Load the approved version of the BLMCAP GPLs onto the card inhibited in [Step 14](#) on page 163 using the `flash-card` command with the `code=appr` parameter.

The `flash-card` command will load only those BLMCAP GPLs whose approved versions are different from the versions that the card is running. The version of the BLMCAP GPL that the card is running is shown in the `RUNNING` column in the `rept-stat-gpl` output. The approved version of the BLMCAP GPL is shown in the `APPROVED` column of the `rept-stat-gpl` output. If the running and approved versions of an BLMCAP GPL are the same, the `flash-card` command will not load that BLMCAP GPL.

For this example, enter this command.

```
flash-card:code=appr:loc=1113
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLMCAP on card 1113.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLMCAP complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLMCAP on card 1113.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLMCAP complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

The E5-MCAP card specified in the `flash-card` command will be re-initialized when the BLMCAP GPL download is complete.

16. Put the card that was taken out of service in [Step 14](#) on page 163 back into service using the `rst-card` command.

The `rst-card` command also loads the approved version of the BLMCAP and OAMHC GPLs onto the card.

For this example, enter this command.

```
rst-card:loc=1113
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Card has been allowed.
```

17. Verify that the BLMCAP and OAMHC GPLs from [Step 15](#) on page 164 have been loaded and that the card has returned to its in-service normal (IS-NR) state using the `rept-stat-card` command.

For this example, enter this command.

```
rept-stat-card:loc=1113
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD    VERSION    TYPE    GPL      PST      SST      AST
1113    132-003-000  E5MCAP OAMHC    IS-NR    Active   -----
ALARM STATUS      = No Alarms.
BLMCAP  GPL version = 132-003-000
IMT BUS A         = Conn
IMT BUS B         = Conn
CURRENT TEMPERATURE = 30C ( 86F)
PEAK TEMPERATURE:  = 33C ( 92F)      [02-01-05 07:18]
Command Completed.
```

Note: If the versions of the BLMCAP or OAMHC GPLs shown in the `rept-stat-card` command output are not the versions specified in [Step 6](#) on page 159, contact the Customer Care Center. Refer to [Customer Care Center](#) on page 4 for the contact information. The reminder of this procedure should not be performed.

18. To load the new BLMCAP and OAMHC GPLs onto the E5-MCAP card making up the active MASP, enter the `init-card` command specifying the location of the E5-MCAP card making up active MASP. For this example, enter the `init-card:loc=1115` command. This message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Init Card command issued to card 1115
```

After this step has been performed, repeat steps [Step 14](#) on page 163, [Step 15](#) on page 164, [Step 16](#) on page 164, and [Step 17](#) on page 164 using the card location specified in this step as the `loc` parameter value in these steps. After these steps have been performed, continue the procedure with either [Step 19](#) on page 165 or [Step 21](#) on page 166 based on the following conditions:

- If OAP and SEAS terminals were not shown in the `rtrv-trm` command output in [Step 9](#) on page 160, continue the procedure with [Step 21](#) on page 166.
- If OAP and SEAS terminals were shown in the `rtrv-trm` command output in [Step 9](#) on page 160, continue the procedure with [Step 19](#) on page 165.

19. Change the terminal type of the terminals that were changed to `NONE` in [Step 12](#) on page 163 to the terminal type `OAP` or `SEAS` with the `chg-trm` command and either the `type=oap` (for `OAP` terminals) or `type=seas` (for `SEAS` terminals) parameter.

The terminal type is shown in the `TYPE` field in the `rtrv-trm` command output in [Step 9](#) on page 160.

If `OAP` terminals were changed in [Step 12](#) on page 163, for this example, enter these commands.

```
chg-trm:trm=6:type=oap
```

```
chg-trm:trm=9:type=oap
```

If `SEAS` terminals were changed in [Step 12](#) on page 163, for this example, enter these commands.

```
chg-trm:trm=18:type=seas
```

```
chg-trm:trm=27:type=seas
```

This message should appear when these commands have successfully completed.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
CHG-TRM: MASP B - COMPLTD
```

20. Put the OAP and SEAS terminals back into service using the `rst-trm` command with the number of the terminals specified in [Step 19](#) on page 165.

```
rst-trm:trm=6
```

```
rst-trm:trm=9
```

```
rst-trm:trm=18
```

```
rst-trm:trm=27
```

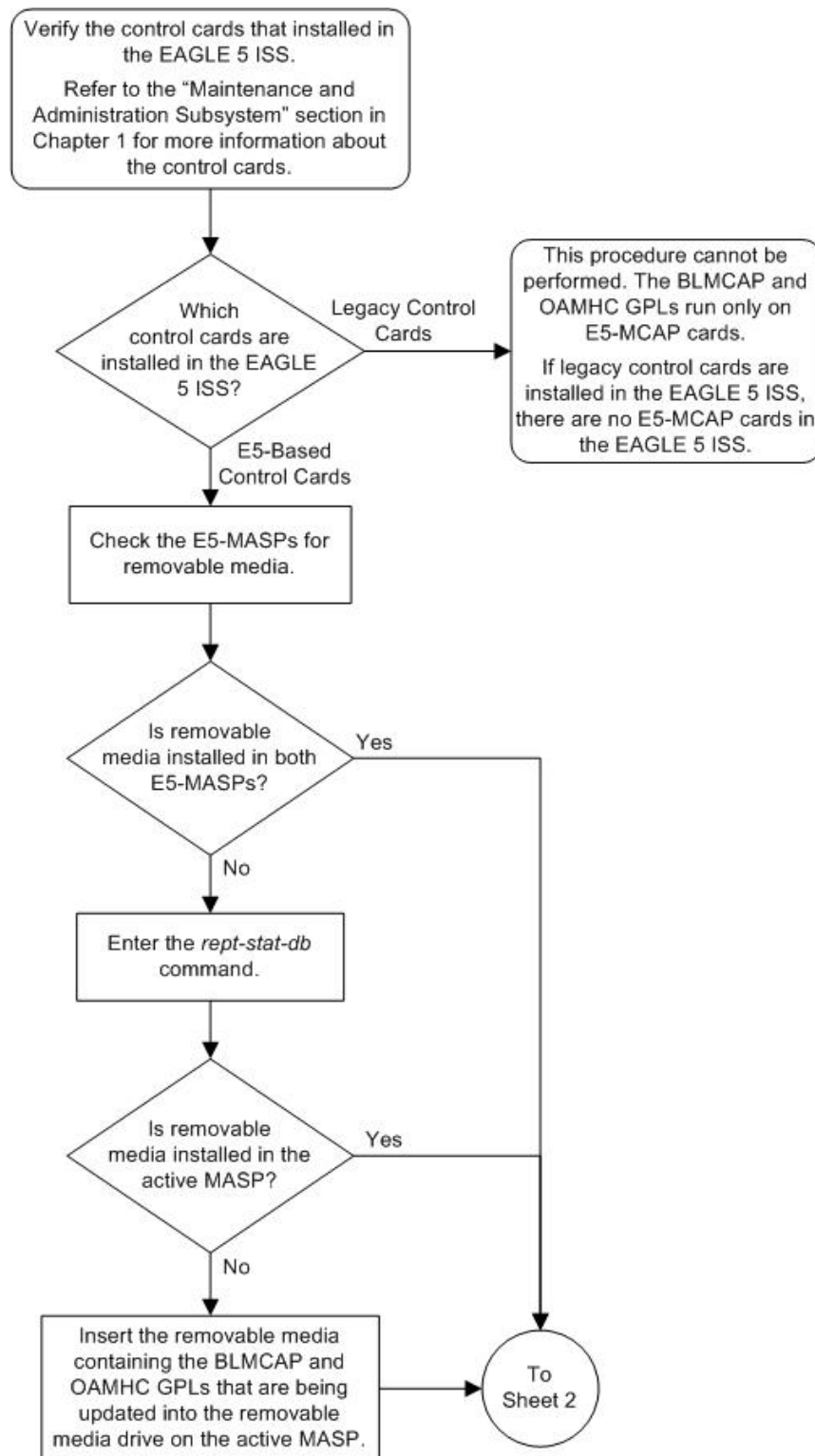
This message should appear when each of these commands have successfully completed.

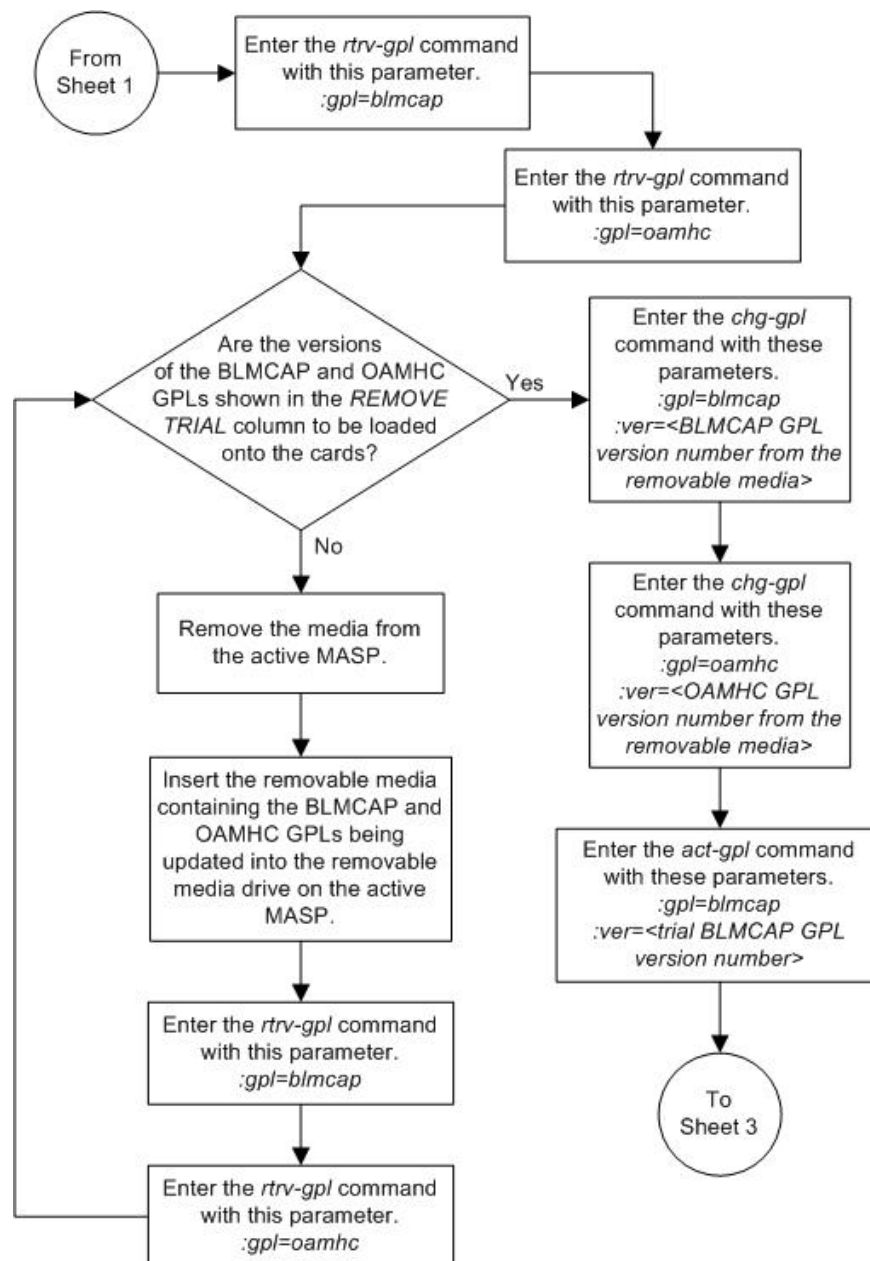
```
rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
Allow message sent to terminal
```

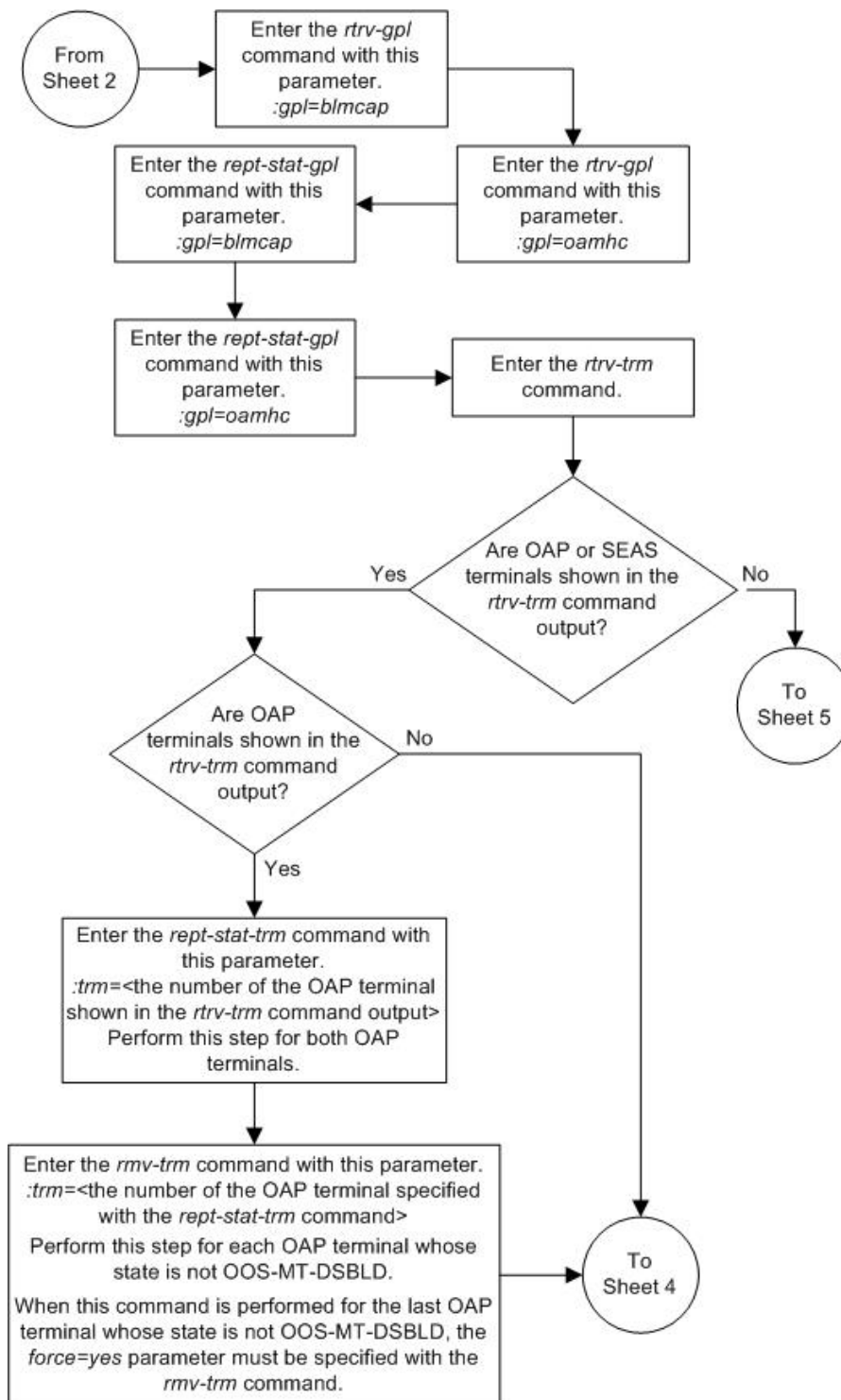
```
rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
Command Completed.
```

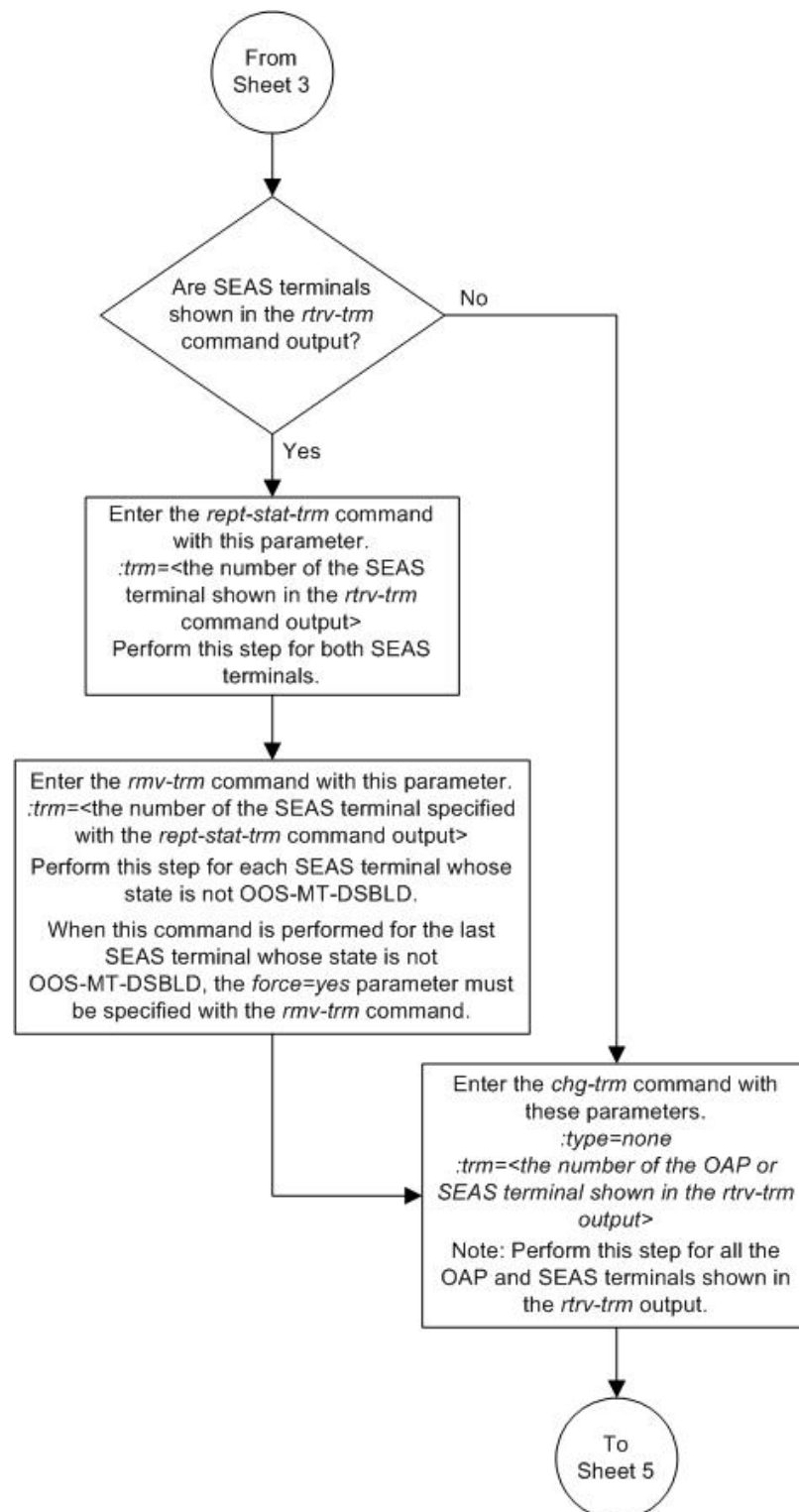
21. This procedure is finished.

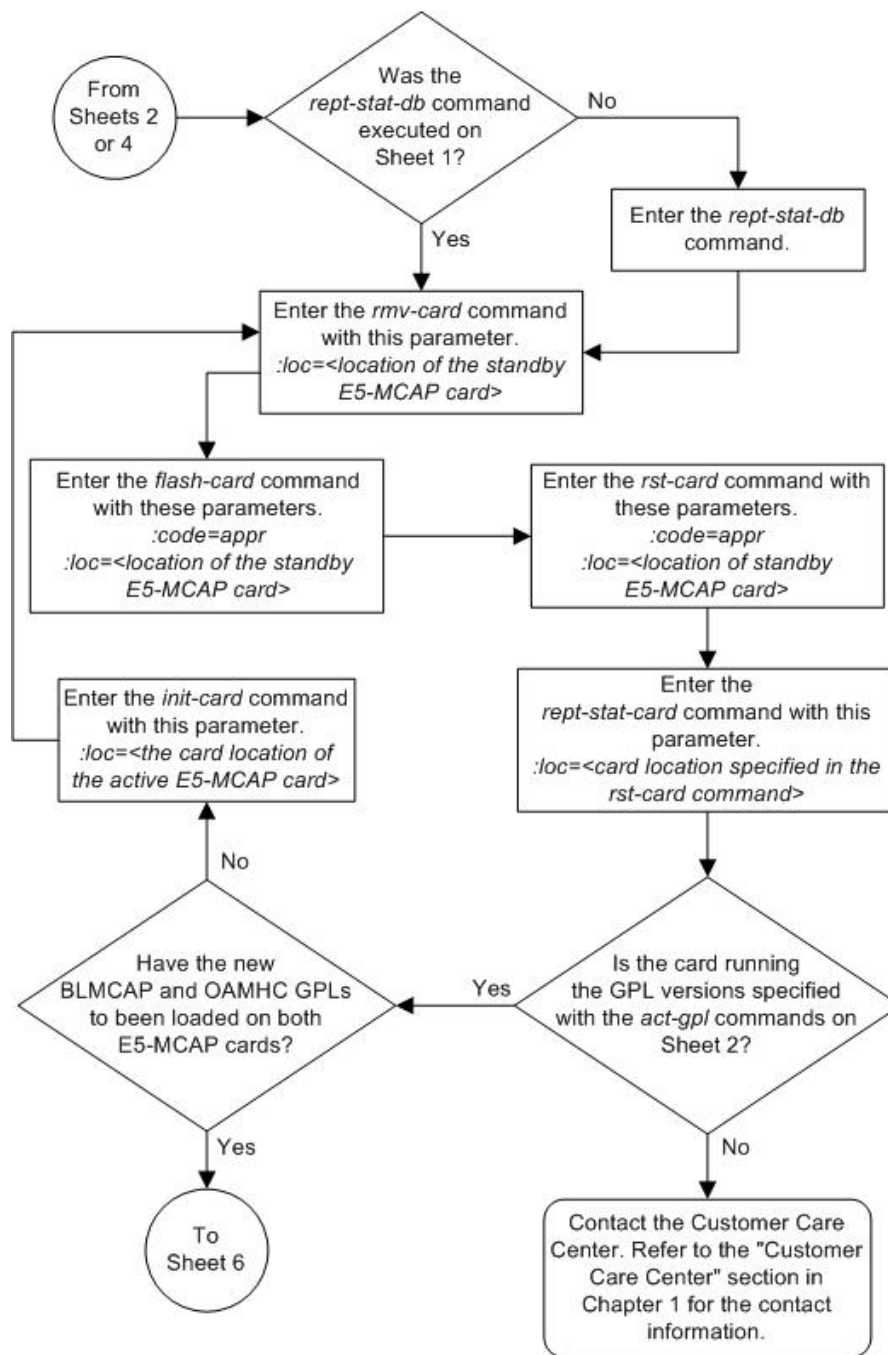
Figure 25: Updating the BLMCAP and OAMHC GPLs

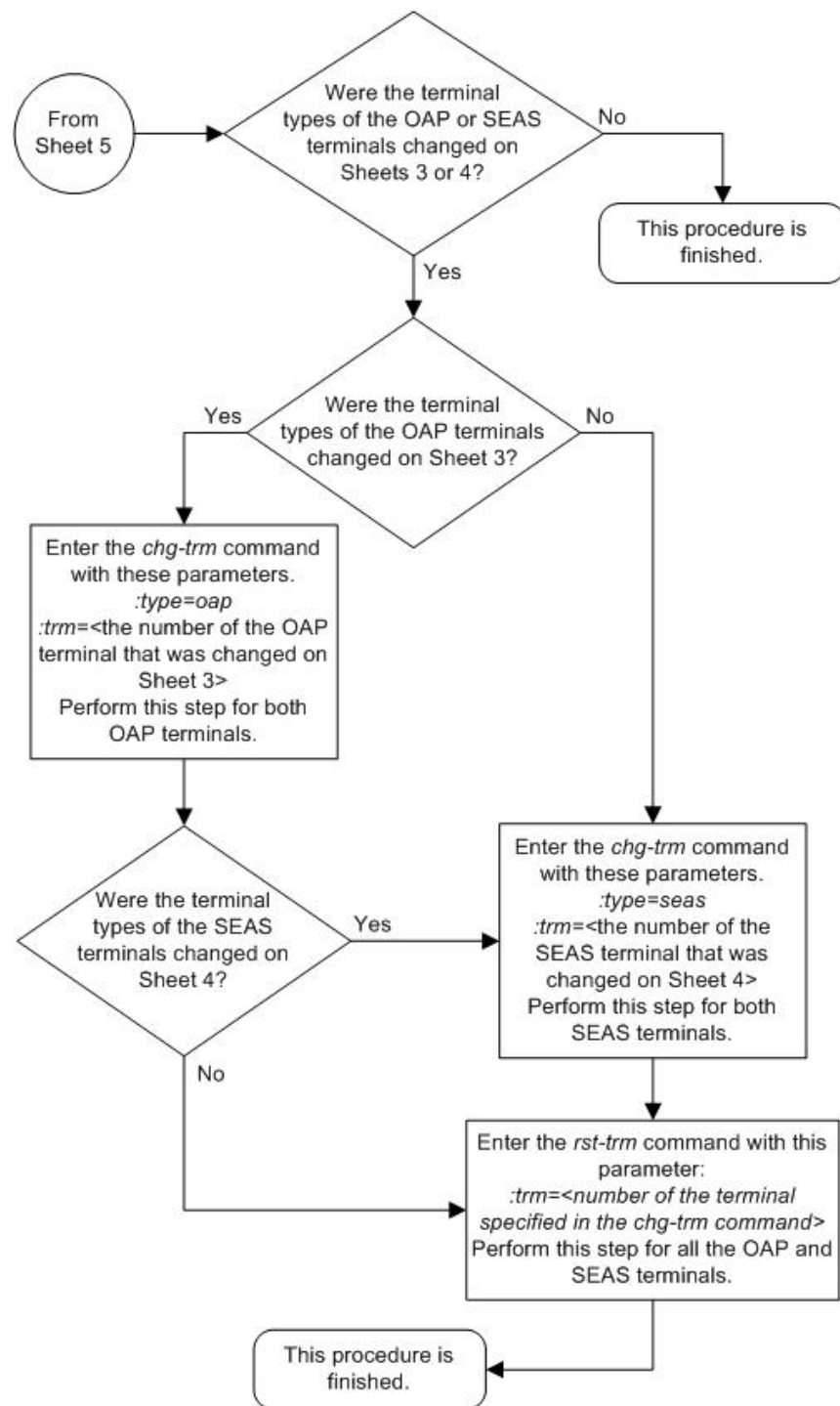












Updating the Signaling Link and Data Link GPLs

This procedure is used to update these GPLs: SS7ML, SS7IPGW, IPLIM, IPLIMI, IPGWI, ATMANSI, ATMITU, VXWSLAN, SLANHC, SS7HC, SS7EPM, IPLHC, IPGHC, ATMHC, and IPSG. These names are used as the value of the `gpl` parameter of the `chg-gpl`, `act-gpl`, `rept-stat-gpl`, and `rtrv-gpl` commands.

Signaling links are assigned to cards running these GPLs: SS7ML, SS7IPGW, IPLIM, IPLIMI, IPGWI, ATMANSI, ATMITU, SS7HC, SS7EPM, IPLHC, IPGHC, ATMHC, and IPSG. The signaling link GPLs are assigned to the card types shown in [Table 2: SS7 LIM Card Types](#) on page 173.

Table 2: SS7 LIM Card Types

GPL	Card Type
ss7ml	limds0, lime1, limch, limt1
atmansi, atmhc	limatm (cards running the atmhc GPL must be E5-ATM cards)
atmitu, atmhc	lime1atm (cards running the atmhc GPL must be E5-ATM cards)
ss7ipgw, iplim, iplimi, ipgwi, iplhc, ipghc, ipsg	dcm (cards running the iplhc, ipghc, or ipsg GPLs must be E5-ENET cards)
ss7hc	lime1, limt1 (these cards must be HC MIMs)
ss7epm	lime1, limt1 (these cards must be E5-E1T1 cards)

Data links are assigned to cards running either the VXWSLAN or SLANHC GPLs. The data link GPLs are assigned to the card types shown in [Table 3: Data Link Card Types](#) on page 173.

Table 3: Data Link Card Types

GPL	Card Type
vxwslan	dcm
slanhc	dcm (these cards must be E5-SLAN cards)

The card types shown in [Table 2: SS7 LIM Card Types](#) on page 173 and [Table 3: Data Link Card Types](#) on page 173 are the values used for the `type` parameter of the `ent-card` command.

The cards running the SS7ML GPL are the Multi-port LIM (MPL) and the E1/T1 MIM. These cards are both single-slot cards that can support eight signaling links. The `rtrv-card` output shows

these cards running either the `ss7ansi` or `ccs7itu` applications, but the `rept-stat-card` and `rept-stat-gpl` output shows that these cards are actually running the SS7ML GPL.

The cards running the SS7HC GPL are HC MIMs which are dual-slot cards that can support up to 64 signaling links. The HC MIMs are either LIM-E1 or LIM-T1 cards. The `rtrv-card` output shows these cards running either the `SS7ANSI` or `CCS7ITU` applications, but the `rept-stat-card` and `rept-stat-gpl` output shows that these cards are actually running the SS7ML GPL.

The cards running the SS7EPM GPL are E5-E1T1 cards which are single-slot cards that can support up to 32 signaling links. The E5-E1T1 cards are either LIM-E1 or LIM-T1 cards. The `rtrv-card` output shows these cards running either the `SS7ANSI` or `CCS7ITU` applications, but the `rept-stat-card` and `rept-stat-gpl` output shows that these cards are actually running the SS7EPM GPL.

The cards running the IPLHC and IPGHC GPLs are E5-ENET cards supporting IP signaling links. The IPLHC GPL allows the E5-ENET card to support IPLIM (ANSI IPLIM) or IPLIMI (ITU IPLIM) signaling links. The `rtrv-card` output shows this card running either the IPLIM or IPLIMI applications, but the `rept-stat-card` and `rept-stat-gpl` output shows that these cards are actually running the IPLHC GPL. The IPGHC GPL allows the E5-ENET card to support SS7IPGW (ANSI IP Gateway) or IPGWI (ITU IP Gateway) signaling links. The `rtrv-card` output shows this card running either the `SS7IPGW` or `IPGWI` applications, but the `rept-stat-card` and `rept-stat-gpl` output shows that these cards are actually running the IPGHC GPL.

The cards running the ATMHC GPL are cards that can contain the ATM high-speed signaling links on E5-ATM cards. The `rtrv-card` output shows these cards running either the `ATMANSI` or `ATMITU` applications, but the `rept-stat-card` and `rept-stat-gpl` output shows that these cards are actually running the ATMHC GPL.

The cards running the VXWSLAN and SLANHC GPLs are the STPLAN cards supporting the STPLAN feature. DCMs run the VXWSLAN GPL and E5-SLAN cards run the SLANHC GPL. The `rtrv-card` output shows these cards running the STPLAN application, but the `rept-stat-card` and `rept-stat-gpl` output shows that these cards are actually running the VXWSLAN or SLANHC GPLs.

If the GPL is being updated to a new version, a removable cartridge or removable media containing the GPL being updated is required.

If any card is not running the version of the GPL shown in the `RELEASE` column of the `rtrv-gpl` output, the indicator `ALM` is displayed next to the GPL version in the `RUNNING` column of the `rept-stat-gpl` output, and next to the GPL version in the `APPROVED` column in the `rtrv-gpl` output.

Canceling the **REPT-STAT-SLK** and **RTRV-SLK** Commands

Because the `rept-stat-slk` and `rtrv-slk` commands used in this procedure can output information for a long period of time, the `rept-stat-slk` and `rtrv-slk` commands can be canceled and the output to the terminal stopped. There are three ways that the `rept-stat-slk` and `rtrv-slk` commands can be canceled.

- Press the F9 function key on the keyboard at the terminal where the `rept-stat-slk` or `rtrv-slk` commands were entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rept-stat-slk` or `rtrv-slk` commands were entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rept-stat-slk` or `rtrv-slk` commands were entered, from another terminal other than the terminal where the `rept-stat-slk` or `rtrv-slk` commands were entered. To enter the `canc-cmd:trm=<xx>`

command, the terminal must allow Security Administration commands to be entered from it and the user must be allowed to enter Security Administration commands. The terminal's permissions can be verified with the `rtrv-secu-trm` command. The user's permissions can be verified with the `rtrv-user` or `rtrv-secu-user` commands.

For more information about the `canc-cmd` command, go to the *Commands Manual*.

1. Verify the control cards that are installed in the EAGLE 5 ISS.

Refer to [Maintenance and Administration Subsystem](#) on page 7 for information about the control cards.

If legacy control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 2](#) on page 175.

If E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 5](#) on page 176.

2. Check the removable cartridge drive on the MDAL card for a removable cartridge.

If there is a removable cartridge in the drive, display the GPLs on the fixed disk and on the removable cartridge using the `rtrv-gpl` command with the `gpl` parameter value equal to the GPL being updated. These are examples of the possible output.

```
rtrv-gpl:gpl=ss7ml
```

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
SS7ML    1114   132-002-000   132-002-000   132-001-000 132-003-000
SS7ML    1116   132-002-000   132-002-000   132-001-000 -----
```

```
rtrv-gpl:gpl=vxwslan
```

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
VXWSLAN  1114   132-002-000   132-002-000   132-001-000 132-003-000
VXWSLAN  1116   132-002-000   132-002-000   132-001-000 -----
```

If the version of the GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the cartridge and continue the procedure with [Step 3](#) on page 175. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

If the version of the GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 177.

3. Make sure the removable cartridge containing the new software is "write protected" (NOT write enabled).

To write protect a removable cartridge, refer to [MO Removable Cartridge Description](#) on page 17.

4. Insert the removable cartridge containing the GPL being updated into the removable cartridge drive on the MDAL card.

For more information on inserting the removable cartridge in the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19. After the removable cartridge has been

inserted into the removable cartridge drive, repeat the `rtrv-gpl` command in [Step 2](#) on page 175 and verify the version of the GPL on the removable cartridge that you wish to update.

5. Check the E5-MASPs for removable media.

If removable media is installed in both E5-MASPs, continue the procedure with [Step 7](#) on page 176.

If removable media is not installed in both E5-MASPs, continue the procedure with [Step 6](#) on page 176.

6. Verify the active MASP by entering the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:25:40 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY)
      C  LEVEL      TIME LAST BACKUP
      -  - - - - -
FD BKUP Y          36 09-02-19 09:38:25 GMT
FD CRNT Y          39
      MCAP 1113
      -  - - - - -
RD BKUP -          -      -      -
USB BKP -          -      -      -
      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP
      -  - - - - -
Y          36 09-02-19 09:38:25 GMT
Y          39
      MCAP 1115
      -  - - - - -
Y          36 09-02-19 09:27:17 GMT
Y          3 09-02-07 01:11:22 GMT
```

If removable media is installed in the active MASP, continue the procedure with [Step 7](#) on page 176.

If removable media is not installed in the active MASP, insert the removable media in the removable media drive in the active MASP. For more information about inserting removable media in the removable media drive, refer to [Removable USB Drive](#) on page 20. After the removable media has been inserted in the removable media drive in the active MASP, continue the procedure with [Step 7](#) on page 176.

7. Display the GPLs on the fixed disk and on the removable cartridge using the `rtrv-gpl` command with the `gpl` parameter value equal to the GPL being updated. These are examples of the possible output.

`rtrv-gpl:gpl=ss7ml`

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
SS7ML    1114  132-002-000  132-002-000  132-001-000  132-003-000
SS7ML    1116  132-002-000  132-002-000  132-001-000  132-003-000
SS7ML    1115  -----      -----      -----      -----
```

`rtrv-gpl:gpl=vxwslan`

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
VXWSLAN  1114  132-002-000  132-002-000  132-001-000  132-003-000
```

VXWSLAN	1116	132-002-000	132-002-000	132-001-000	132-003-000
VXWSLAN	1115	-----	-----	-----	-----

If the version of the GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the removable media from the active MASP.

Insert the removable media that contains the GPL that is being updated into the removable media drive in the active MASP and repeat this step.

For more information about inserting removable media in the removable media drive, or removing removable media from the removable media drive, refer to [Removable USB Drive](#) on page 20.

If the version of the GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 177.

- Change the GPLs, using the `chg-gpl` command and specifying the value for the trial GPL shown in the REMOVE TRIAL column in the output of the `rtrv-gpl` command used in [Step 2](#) on page 175 or [Step 7](#) on page 176.

For this example, enter these commands.

```
chg-gpl:gpl=ss7ml:ver=123-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON

SS7ML upload on 1114 completed
SS7ML upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=vxws lan:ver=123-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON

VXWSLAN upload on 1114 completed
VXWSLAN upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

- Activate the trial GPL, using the `act-gpl` command and specifying the value for the trial GPL shown in [Step 8](#) on page 177.

For this example, enter this command.

```
act-gpl:gpl=ss7ml:ver=123-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
SS7ML activate on 1114 completed
SS7ML activate on 1116 completed
```

```
act-gpl:gpl=vxws lan:ver=123-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
VXWSLAN activate on 1114 completed
VXWSLAN activate on 1116 completed
```

10. Verify that the trial GPL has been made the approved GPL using the `rtrv-gpl` command with the `gpl` parameter value specified in [Step 8](#) on page 177 and [Step 9](#) on page 177.

For this example, enter these commands.

```
rtrv-gpl:gpl=ss7ml
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
SS7ML	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7ML	1116	132-003-000	132-003-000	132-002-000	-----

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
SS7ML	1114	132-003-000	132-003-000	132-002-000	132-003-000
SS7ML	1116	132-003-000	132-003-000	132-002-000	132-003-000
SS7ML	1115	-----	-----	-----	-----

```
rtrv-gpl:gpl=vxws lan
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
VXWSLAN	1114	132-003-000	132-003-000	132-002-000	132-003-000
VXWSLAN	1116	132-003-000	132-003-000	132-002-000	-----

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
VXWSLAN	1114	132-003-000	132-003-000	132-002-000	132-003-000
VXWSLAN	1116	132-003-000	132-003-000	132-002-000	132-003-000
VXWSLAN	1115	-----	-----	-----	-----

11. Verify which cards are running the GPL using the `rept-stat-gpl` command with the `gpl` parameter value specified in [Step 10](#) on page 178.

For this example, enter these commands.

```
rept-stat-gpl:gpl=ss7ml
```


This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL      CARD      RUNNING      APPROVED      TRIAL
SS7ML    1201      132-002-000 ALM      132-003-000      132-002-000
SS7ML    1204      132-002-000 ALM      132-003-000      132-002-000
SS7ML    1211      132-002-000 ALM      132-003-000      132-002-000
SS7ML    1215      132-002-000 ALM      132-003-000      132-002-000
SS7ML    1307      132-002-000 ALM      132-003-000      132-002-000
SS7ML    2111      132-002-000 ALM      132-003-000      132-002-000
SS7ML    2112      132-002-000 ALM      132-003-000      132-002-000
SS7ML    2115      132-002-000 ALM      132-003-000      132-002-000
SS7ML    2116      132-002-000 ALM      132-003-000      132-002-000
Command Completed
```

```
rept-stat-gpl:gpl=vxwslan
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL      CARD      RUNNING      APPROVED      TRIAL
VXWSLAN  2105      132-002-000 ALM      132-003-000      132-002-000
VXWSLAN  2113      132-002-000 ALM      132-003-000      132-002-000
VXWSLAN  2301      132-002-000 ALM      132-003-000      132-002-000
Command Completed
```

Continue the procedure by performing one of these steps.

- If one of these GPLs is being updated: SS7ML, SS7IPGW, IPLIM, IPLIMI, IPGWI, ATMANSI, ATMITU, SS7HC, SS7EPM, IPLHC, IPGHC, ATMHC, or IPSEG, continue the procedure with [Step 12](#) on page 179.
- If one of these GPLs is being updated: VXWSLAN or SLANHC, continue the procedure with [Step 14](#) on page 180.

12. Display the signaling links associated with the cards shown in [Step 11](#) on page 178.

Enter the `rtrv-slk` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 21:16:37 GMT EAGLE5 40.1.0
```

LOC	LINK	LSN	SLC	TYPE	L2T SET	BPS	L1 MODE	TSET	ECM	PCR N1	PCR N2
1201	A	lsnmp11	0	LIMDS0	2	56000	---	---	BASIC	---	----
1201	B	lsnmp12	0	LIMDS0	3	56000	---	---	PCR	76	3800
1201	A1	lsnmp13	0	LIMDS0	2	56000	---	---	PCR	120	5034
1201	B1	lsnmp14	0	LIMDS0	1	56000	---	---	BASIC	---	----
1204	A	lsnmp11	1	LIMDS0	2	56000	---	---	BASIC	---	----
1204	B	lsnmp12	1	LIMDS0	3	56000	---	---	PCR	76	3800
1204	A2	lsnmp13	1	LIMDS0	2	56000	---	---	PCR	120	5034
1204	B2	lsnmp15	0	LIMDS0	3	56000	---	---	PCR	76	3800
1211	A	lsnmp11	2	LIMDS0	2	56000	---	---	BASIC	---	----
1211	B	lsnmp13	2	LIMDS0	2	56000	---	---	PCR	120	5034
1211	A3	lsnmp15	1	LIMDS0	3	56000	---	---	PCR	76	3800
1211	B3	lsnmp16	0	LIMDS0	1	56000	---	---	PCR	120	5034
1215	A1	lsnmp17	0	LIMDS0	1	56000	---	---	BASIC	---	----
1215	B2	lsnmp11	3	LIMDS0	2	56000	---	---	BASIC	---	----
1215	A3	lsnmp16	1	LIMDS0	1	56000	---	---	PCR	120	5034
1215	B3	lsnmp17	1	LIMDS0	1	56000	---	---	BASIC	---	----
1307	A	lsnmp16	2	LIMDS0	1	56000	---	---	PCR	120	5034
1307	B2	lsnmp17	2	LIMDS0	1	56000	---	---	BASIC	---	----
1307	A3	lsnmp16	3	LIMDS0	1	56000	---	---	PCR	120	5034
1307	B3	lsnmp17	3	LIMDS0	1	56000	---	---	BASIC	---	----

LOC	LINK	LSN	SLC	TYPE	LP SET	BPS	ATM TSEL	VCI	VPI	LL
1302	A	atm1302a	5	LIMATM	3	1544000	INTERNAL	35	15	0
1305	A	atm1305a	5	LIMATM	5	1544000	LINE	5	0	2

LOC	LINK	LSN	SLC	TYPE	LP SET	BPS	ATM TSEL	VCI	VPI	CRC4	SI	SN
2101	A	atmitu1	0	LIME1ATM	5	2.048M	LINE	150	2	ON	1	20
2105	A	atmitu1	1	LIME1ATM	5	2.048M	LINE	35	15	ON	2	15

LOC	LINK	LSN	SLC	TYPE	L2T SET	BPS	ECM	PCR N1	PCR N2	E1 LOC	E1 PORT	TS
2111	A	lsne145	0	LIME1	1	56000	BASIC	---	-----	2111	2	10
2112	A	lsne145	1	LIMCH	1	56000	BASIC	---	-----	2111	1	14
2112	A2	lsne145	2	LIMCH	1	56000	BASIC	---	-----	2111	1	20

LOC	LINK	LSN	SLC	TYPE	L2T SET	BPS	ECM	PCR N1	PCR N2	T1 LOC	T1 PORT	TS
2115	A	lsnt145	0	LIMT1	1	56000	BASIC	---	-----	2115	2	3
2116	A	lsnt145	1	LIMCH	1	56000	BASIC	---	-----	2115	1	11
2116	A2	lsnt145	2	LIMCH	1	56000	BASIC	---	-----	2115	1	19

SLK table is (30 of 1200) 3% full.

13. Using the outputs of [Step 11](#) on page 178 and [Step 12](#) on page 179 as a guide, select a card to load the approved GPL onto.

Deactivate the SS7 signaling links on that card using the `dact - slk` command. For this example, enter these commands.

```
dact - slk: loc=1201: link=a
```

```
dact - slk: loc=1201: link=b
```

```
dact - slk: loc=1201: link=a1
```

```
dact - slk: loc=1201: link=b1
```



CAUTION

CAUTION: These command examples place the SS7 signaling links on card 1201 out of service. This will interrupt service on the SS7 signaling links on card 1201 and allow the approved GPL to be loaded on to card 1201.

Do not deactivate all the SS7 signaling links in the EAGLE 5 ISS at the same time. Doing so will take all the SS7 signaling links out of service and isolate the EAGLE 5 ISS from the network.

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:45:18 GMT EAGLE5 40.1.0
Deactivate SLK message sent to card
```

Continue the procedure with [Step 16](#) on page 181.

14. Display the data links, and their status, associated with the cards shown in [Step 11](#) on page 178.

Enter the `rept - stat - dlk` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 17:00:36 GMT EAGLE5 40.1.0
DLK    PST          SST          AST
2105   IS-NR        Avail        ---
2113   IS-NR        Avail        ---
```

```
2301  IS-NR      Avail      ---
Command Completed.
```

15. Deactivate the TCP/IP data link on the card (shown in [Step 14](#) on page 180) that you wish to load the trial GPL onto, using the `canc-dlk` command.

For this example, enter this command.

```
canc-dlk:loc=2105
```



CAUTION

CAUTION: This command example places the TCP/IP data link on card 2105 out of service. This will interrupt service on the TCP/IP data link on card 2105 and allow the trial GPL to be loaded on to card 2105.

Do not deactivate all the TCP/IP data links in the EAGLE 5 ISS at the same time. Doing so will take all the TCP/IP data links out of service and cause the STPLAN feature to be disabled.

If there is only one TCP/IP data link in the EAGLE 5 ISS, placing the card out of service will cause the STPLAN feature to be disabled.

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:45:18 GMT  EAGLE5 40.1.0
Deactivate Link message sent to card.
Command Completed.
```

16. Place the card specified in either [Step 13](#) on page 180 or [Step 15](#) on page 181 out of service using the `rmv-card` command.

If the card contains the last signaling link in a linkset, the `force=yes` parameter must be specified. For this example, enter this command.

```
rmv-card:loc=1201:force=yes
```

```
rmv-card:loc=2105
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT  EAGLE5 40.1.0
Card has been inhibited.
```

17. Put the cards that were inhibited in [Step 16](#) on page 181 back into service using the `rst-card` command.

The `rst-card` command also loads the approved version of the GPL onto the card.

For this example, enter this command.

```
rst-card:loc=1201
```

```
rst-card:loc=2105
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT  EAGLE5 40.1.0
Card has been allowed.
```

18. Verify the GPLs on the cards using the `rept-stat-gpl` command with the `gpl` parameter value specified in [Step 11](#) on page 178.

If any card is not running the release version of the GPL, shown in the **RELEASE** column of the **rtrv-gpl** output in [Step 10](#) on page 178, the indicator **ALM** is displayed next to the GPL version in the **RUNNING** column of the **rept-stat-gpl** output. For this example, enter these commands.

```
rept-stat-gpl:gpl=ss7ml
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL          CARD    RUNNING          APPROVED      TRIAL
SS7ML        1201     132-003-000      132-003-000    132-002-000
SS7ML        1204     132-002-000 ALM  132-003-000    132-002-000
SS7ML        1211     132-002-000 ALM  132-003-000    132-002-000
SS7ML        1215     132-002-000 ALM  132-003-000    132-002-000
SS7ML        1307     132-002-000 ALM  132-003-000    132-002-000
SS7ML        2111     132-002-000 ALM  132-003-000    132-002-000
SS7ML        2112     132-002-000 ALM  132-003-000    132-002-000
SS7ML        2115     132-002-000 ALM  132-003-000    132-002-000
SS7ML        2116     132-002-000 ALM  132-003-000    132-002-000
Command Completed
```

```
rept-stat-gpl:gpl=vxwslan
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL          CARD    RUNNING          APPROVED      TRIAL
VXWSLAN      2105     132-003-000      132-003-000    132-002-000
VXWSLAN      2113     132-002-000 ALM  132-003-000    132-002-000
VXWSLAN      2301     132-002-000 ALM  132-003-000    132-002-000
Command Completed
```

Continue the procedure by performing one of these steps.

- If one of these GPLs is being updated: SS7ML, SS7IPGW, IPLIM, IPLIMI, IPGWI, ATMANSI, ATMITU, SS7HC, SS7EPM, IPLHC, IPGHC, ATMHC, or IPGS, continue the procedure with [Step 19](#) on page 182.
- If one of these GPLs is being updated: VXWSLAN or SLANHC, continue the procedure with [Step 21](#) on page 183.

19. Place the signaling links that were deactivated in [Step 13](#) on page 180 back into service using the **act-slk** command.

For this example, enter these commands.

```
act-slk:loc=1201:link=a
```

```
act-slk:loc=1201:link=b
```

```
act-slk:loc=1201:link=a1
```

```
act-slk:loc=1201:link=b1
```

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:55:49 GMT EAGLE5 40.1.0
Activate SLK message sent to card
```

20. Verify that the signaling links activated in [Step 19](#) on page 182 are back in service using the **rept-stat-slk** command with the card location and signaling link.

For this example, enter these commands.

```
rept-stat-slk:loc=1201:link=a
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 13:06:25 GMT EAGLE5 40.1.0
SLK      LSN      CLLI      PST      SST      AST
1201,A   lsnmpl1   ----- IS-NR      Avail     ----
  ALARM STATUS      = No Alarms.
  UNAVAIL REASON    = --
```

```
rept-stat-slk:loc=1201:link=b
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 13:06:25 GMT EAGLE5 40.1.0
SLK      LSN      CLLI      PST      SST      AST
1201,B   lsnmpl2   ----- IS-NR      Avail     ----
  ALARM STATUS      = No Alarms.
  UNAVAIL REASON    = --
```

```
rept-stat-slk:loc=1201:link=a1
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 13:06:25 GMT EAGLE5 40.1.0
SLK      LSN      CLLI      PST      SST      AST
1201,A1  lsnmpl3   ----- IS-NR      Avail     ----
  ALARM STATUS      = No Alarms.
  UNAVAIL REASON    = --
```

```
rept-stat-slk:loc=1201:link=b1
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 13:06:25 GMT EAGLE5 40.1.0
SLK      LSN      CLLI      PST      SST      AST
1201,B1  lsnmpl4   ----- IS-NR      Avail     ----
  ALARM STATUS      = No Alarms.
  UNAVAIL REASON    = --
Command Completed.
```

Continue the procedure with [Step 23](#) on page 184.

21. Place the TCP/IP data link that was deactivated in [Step 15](#) on page 181 back into service using the `act-dlk` command.

For this example, enter this command.

```
act-dlk:loc=2105
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:55:49 GMT EAGLE5 40.1.0
Activate Link message sent to card.
```

22. Verify that the TCP/IP data links activated in [Step 21](#) on page 183 are back in service with the `rept-stat-dlk` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 12:57:50 GMT EAGLE5 40.1.0
```

DLK	PST	SST	AST
2105	IS-NR	Avail	---
2113	IS-NR	Avail	---
2301	IS-NR	Avail	---

Command Completed.

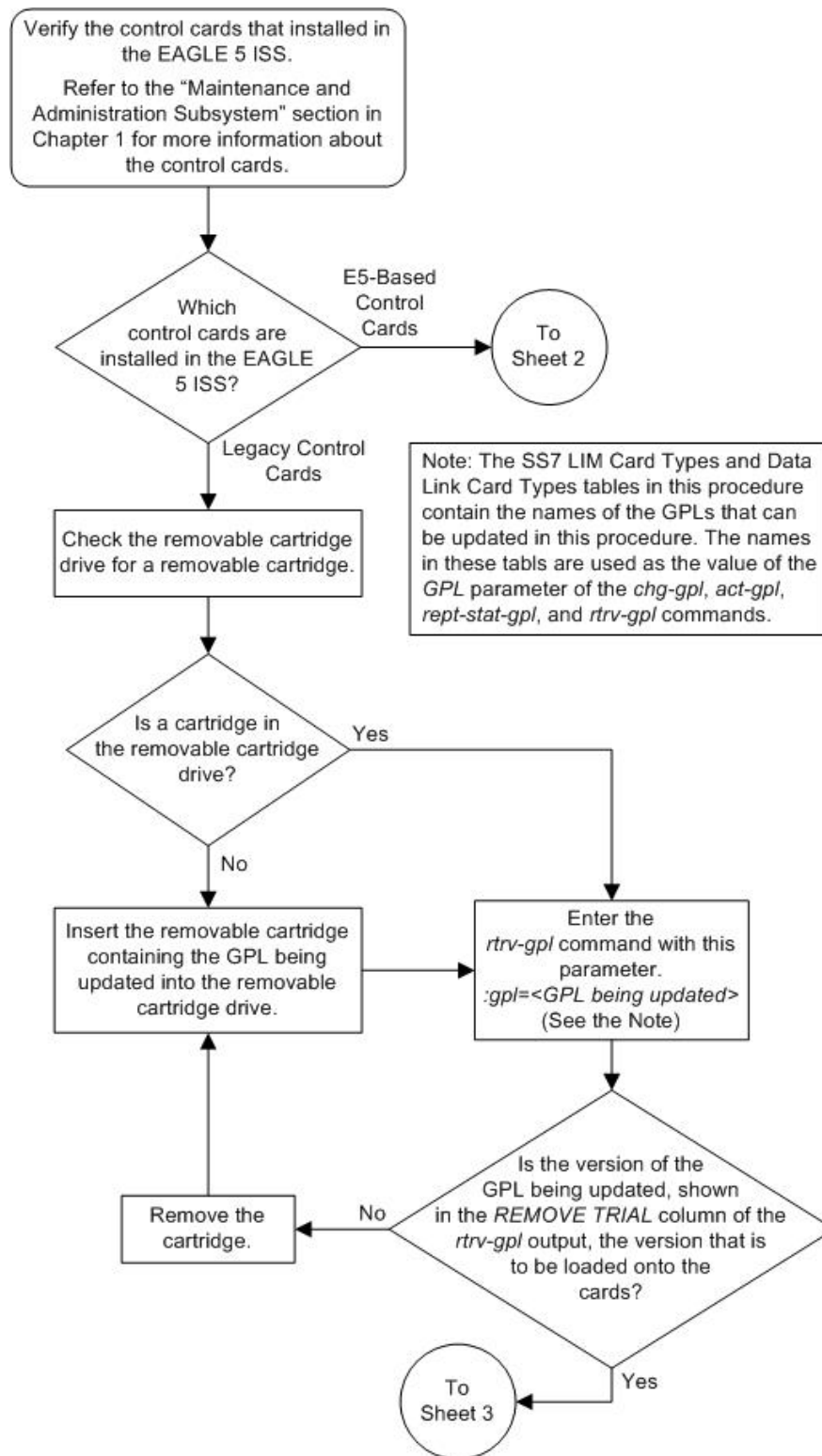
23. Continue the procedure by performing these actions.

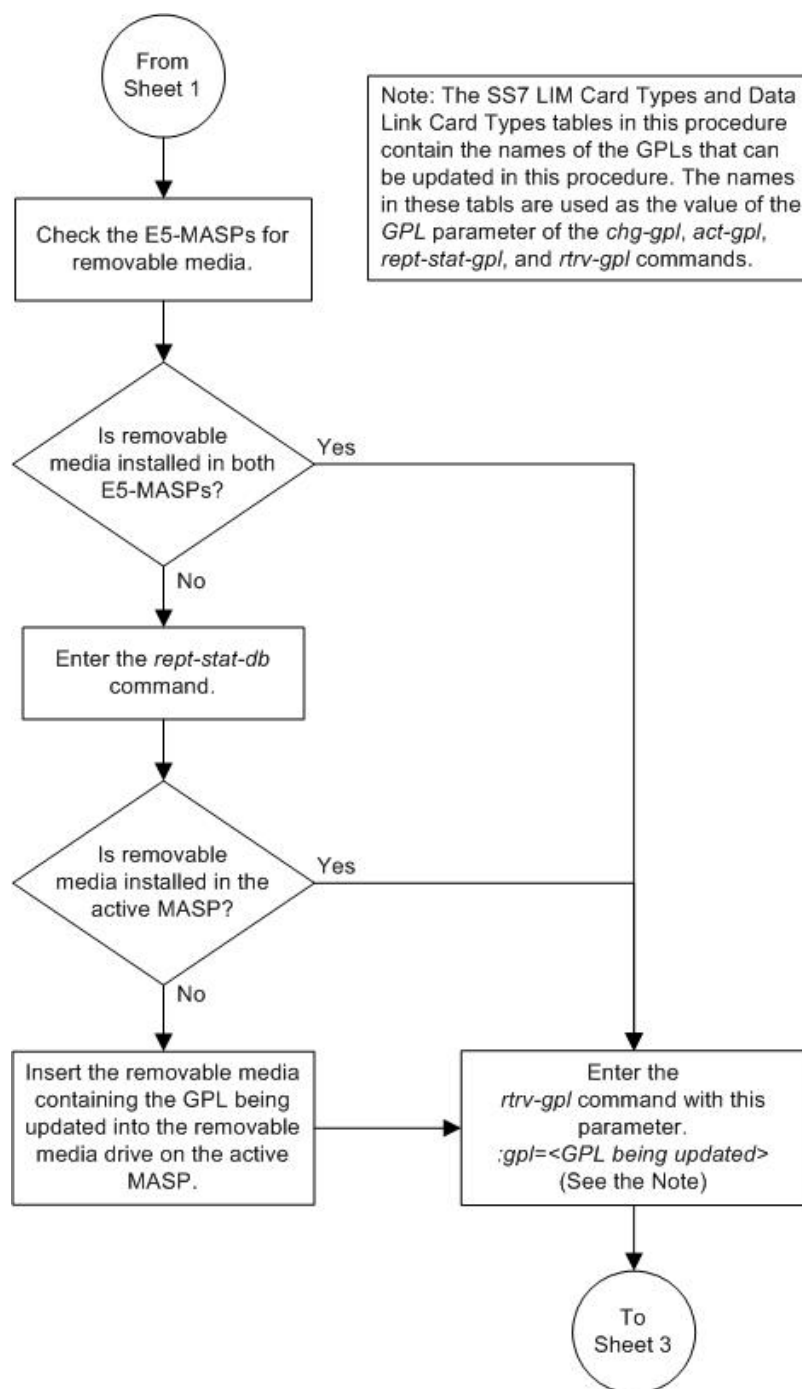
If legacy control cards are installed in the EAGLE 5 ISS, remove the removable cartridge from the removable cartridge drive on the MDAL card. For information about removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

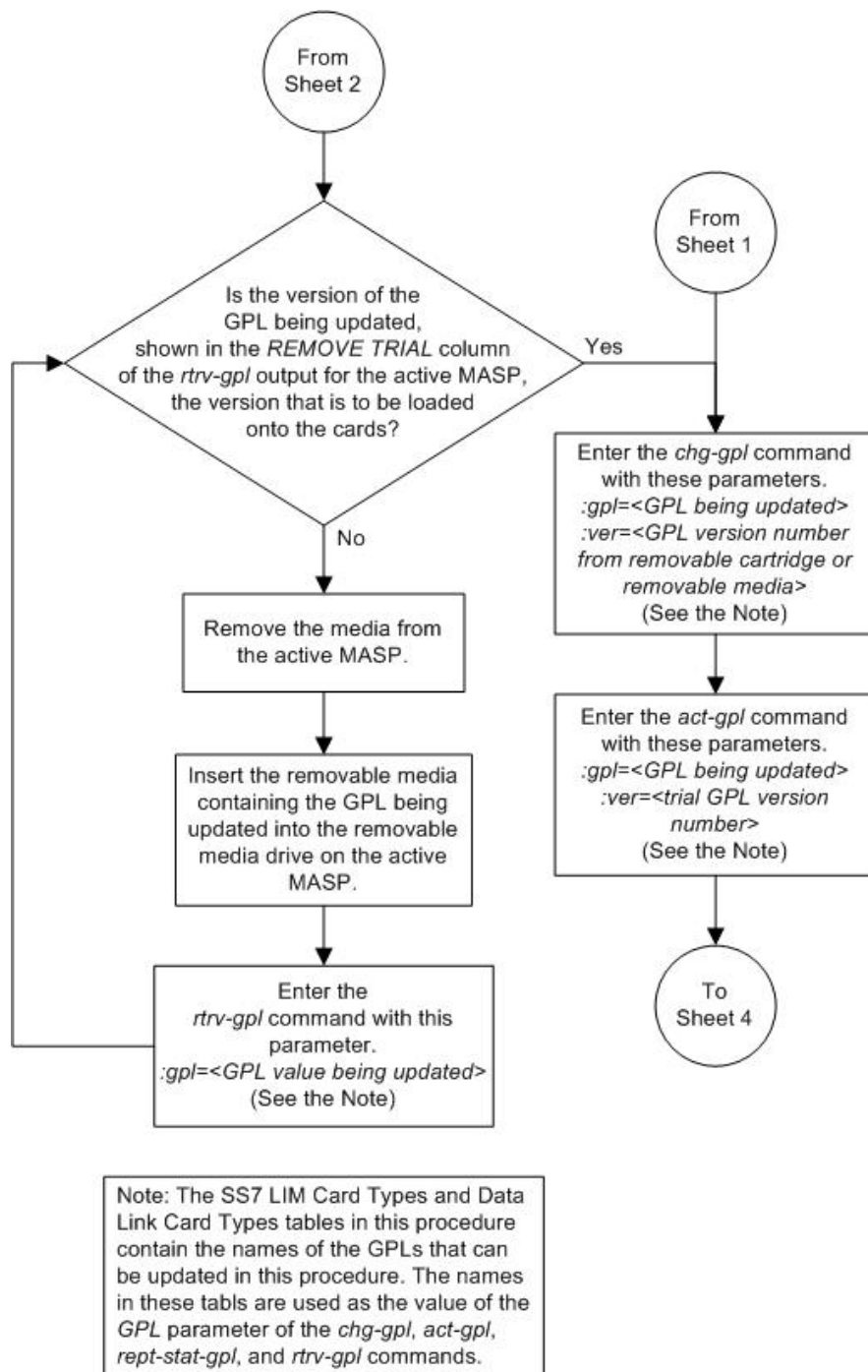
When the removable cartridge has been removed, or if E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure by performing one of these actions.

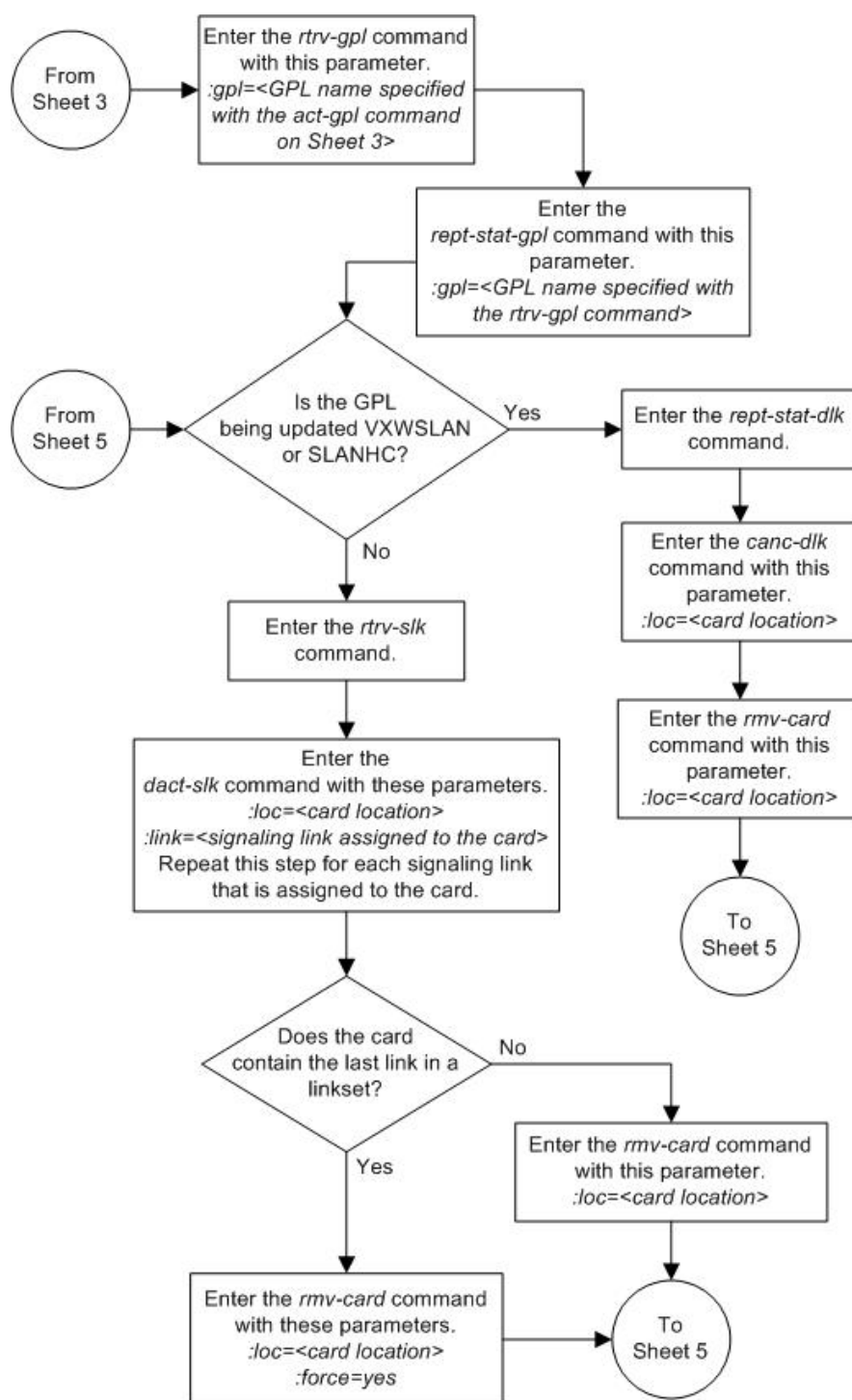
- If you wish to load the new GPL onto the other cards shown in [Step 11](#) on page 178, repeat this procedure from either [Step 13](#) on page 180 or [Step 15](#) on page 181 for each card shown in [Step 11](#) on page 178.
- If the new GPL will not be loaded onto other cards but other GPLs will be updated, repeat this procedure from [Step 1](#) on page 175.
- If the new GPL will not be loaded onto other cards and no other GPLs are being updated, then this procedure is finished.

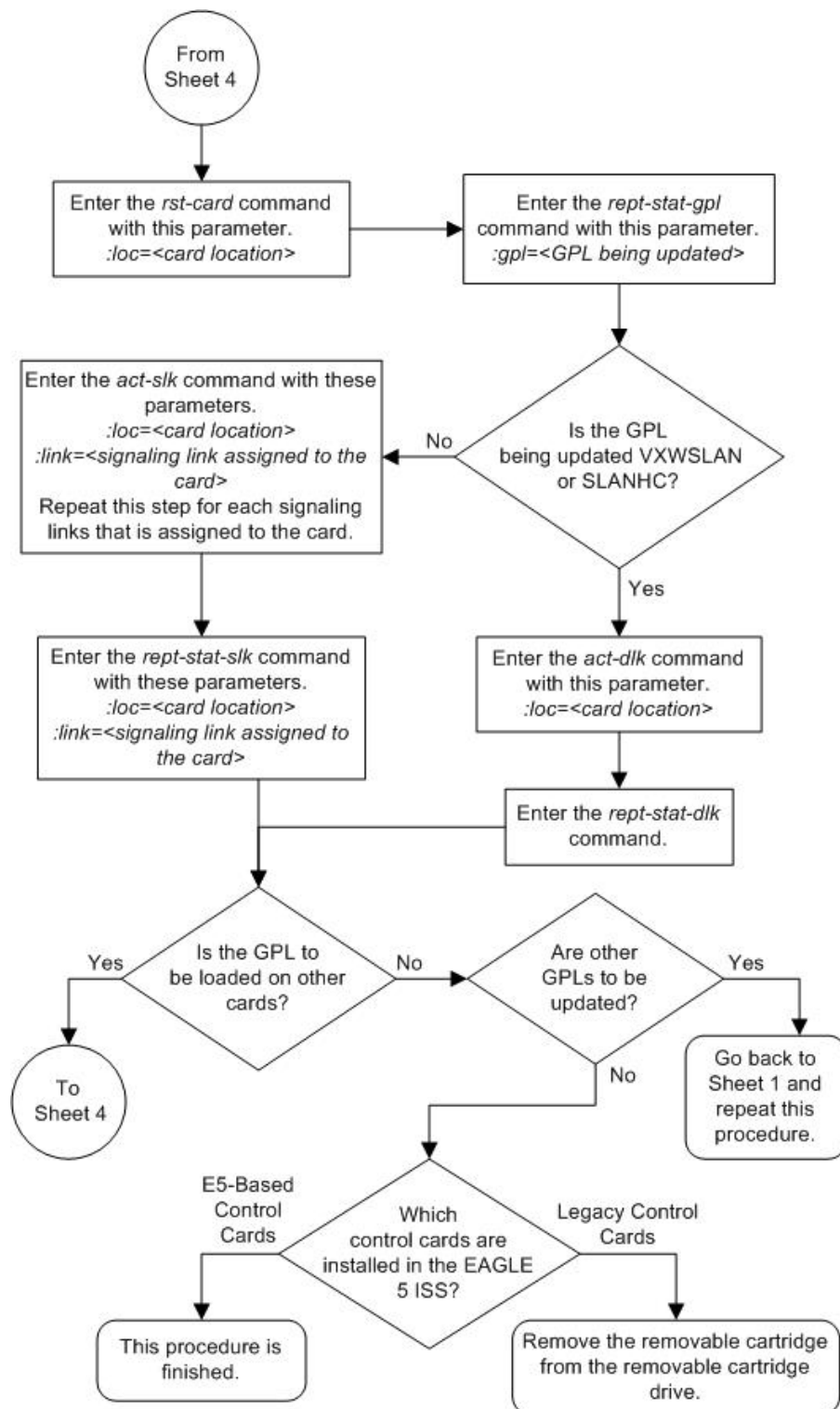
Figure 26: Updating the Signaling Link and Data Link GPLs











Updating the Service GPLs

This procedure is used to update these GPLs: VSCCP, GLS, EROUTE, MCP, IPS, SCCPHC, ERTHV, and IPSHC. These names are used as the value of the `gpl` parameter of the `chg-gpl`, `act-gpl`, `rept-stat-gpl`, and `rtrv-gpl` commands.

These GPLs are assigned to the card types shown in [Table 4: Service GPL Card Types](#) on page 190.

Table 4: Service GPL Card Types

GPL	Card Type
gls	tsm
vsccp	dsm (these cards must be DSMs)
eroute	stc (these cards must be single-slot or dual-slot STCs)
mcp	mcpm
ips	ipsm
sccphc	dsm (these cards must be E5-SM4G cards)
erthc	stc (these cards must be E5-STC cards)
iphsc	ipsm (these cards must be E5-IPSM cards)
glshc	tsm (these cards must be E5-TSM cards)

The card types shown in [Table 4: Service GPL Card Types](#) on page 190 are the values used for the `type` parameter of the `ent-card` command.

If the GPL is being updated to a new version, a removable cartridge containing the GPL being updated is required.

If any card is not running the version of the GPL shown in the `RELEASE` column of the `rtrv-gpl` output, the indicator `ALM` is displayed next to the GPL version in the `RUNNING` column of the `rept-stat-gpl` output, and next to the GPL version in the `APPROVED` column in the `rtrv-gpl` output.

1. Verify the control cards that are installed in the EAGLE 5 ISS.

Refer to [Maintenance and Administration Subsystem](#) on page 7 for information about the control cards.

If legacy control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 2](#) on page 191.

If E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 5](#) on page 191.

2. Check the removable cartridge drive on the MDAL card for a removable cartridge.

If there is a removable cartridge in the drive, display the GPLs on the fixed disk and on the removable cartridge using the `rtrv-gpl` command with the `gpl` parameter value equal to the GPL being updated. This is an example of the possible output.

```
rtrv-gpl:gpl=vscpp
```

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
VSCCP	1114	132-002-000	132-002-000	132-001-000	132-003-000
VSCCP	1116	132-002-000	132-002-000	132-001-000	-----

If the version of the GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the cartridge and continue the procedure with [Step 3](#) on page 191. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

If the version of the GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 192.

3. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).

To write protect a removable cartridge, refer to [MO Removable Cartridge Description](#) on page 17.

4. Insert the removable cartridge containing the GPL being updated into the removable cartridge drive on the MDAL card.

For more information on inserting the removable cartridge in the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19. After the removable cartridge has been inserted into the removable cartridge drive, repeat the `rtrv-gpl` command in [Step 2](#) on page 191 and verify the version of the GPL on the removable cartridge that you wish to update.

5. Check the E5-MASPs for removable media.

If removable media is installed in both E5-MASPs, continue the procedure with [Step 7](#) on page 192.

If removable media is not installed in both E5-MASPs, continue the procedure with [Step 6](#) on page 191.

6. Verify the active MASP by entering the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:25:40 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY)
      C  LEVEL    TIME LAST BACKUP
      -  - - - -
FD BKUP Y        36 09-02-19 09:38:25 GMT
FD CRNT Y        39
      MCAP 1113
      -  - - - -
      TDM 1116 ( ACTV )
      C  LEVEL    TIME LAST BACKUP
      -  - - - -
Y        36 09-02-19 09:38:25 GMT
Y        39
      MCAP 1115
      -  - - - -
```

RD BKUP	-	-	-	-	Y	36	09-02-19	09:27:17	GMT
USB BKP	-	-	-	-	Y	3	09-02-07	01:11:22	GMT

If removable media is installed in the active MASP, continue the procedure with [Step 7](#) on page 192.

If removable media is not installed in the active MASP, insert the removable media in the removable media drive in the active MASP. For more information about inserting removable media in the removable media drive, refer to [Removable USB Drive](#) on page 20. After the removable media has been inserted in the removable media drive in the active MASP, continue the procedure with [Step 7](#) on page 192.

7. Display the GPLs on the fixed disk and on the removable cartridge using the `rtrv-gpl` command with the `gpl` parameter value equal to the GPL being updated. These are examples of the possible output.

`rtrv-gpl:gpl=vsccp`

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
VSCCP	1114	132-002-000	132-002-000	132-001-000	132-003-000
VSCCP	1116	132-002-000	132-002-000	132-001-000	132-003-000
VSCCP	1115	-----	-----	-----	-----

If the version of the GPL shown in the **REMOVE TRIAL** column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the removable media from the active MASP.

Insert the removable media that contains the GPL that is being updated into the removable media drive in the active MASP and repeat this step.

For more information about inserting removable media in the removable media drive, or removing removable media from the removable media drive, refer to [Removable USB Drive](#) on page 20.

If the version of the GPL shown in the **REMOVE TRIAL** column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 192.

8. Change the GPLs, using the `chg-gpl` command and specifying the value for the trial GPL shown in the **REMOVE TRIAL** column in the output of the `rtrv-gpl` command used in [Step 2](#) on page 191.

For this example, enter this command.

`chg-gpl:gpl=vsccp:ver=132-003-000`

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

VSCCP upload on 1114 completed
VSCCP upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed

9. Activate the trial GPL, using the `act-gpl` command and specifying the value for the trial GPL shown in [Step 8](#) on page 192.

For this example, enter this command.

```
act-gpl:gpl=vsccp:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
VSCCP activate on 1114 completed
VSCCP activate on 1116 completed
```

10. Verify that the trial GPL has been made the approved GPL using the `rtrv-gpl` command with the `gpl` parameter value specified in [Step 8](#) on page 192 and [Step 9](#) on page 192.

For this example, enter this command.

```
rtrv-gpl:gpl=vsccp
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
VSCCP	1114	132-003-000	132-003-000	132-002-000	132-003-000
VSCCP	1116	132-003-000	132-003-000	132-002-000	-----

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
VSCCP	1114	132-003-000	132-003-000	132-002-000	132-003-000
VSCCP	1116	132-003-000	132-003-000	132-002-000	132-003-000
VSCCP	1115	-----	-----	-----	-----

11. Verify which cards are running the GPL using the `rept-stat-gpl` command with the `gpl` parameter value specified in [Step 10](#) on page 193.

For this example, enter this command.

```
rept-stat-gpl:gpl=vsccp
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
```

GPL	CARD	RUNNING	APPROVED	TRIAL
VSCCP	1101	132-002-000 ALM	132-003-000	132-002-000
VSCCP	1102	132-002-000 ALM	132-003-000	132-002-000
VSCCP	1103	132-002-000 ALM	132-003-000	132-002-000

Command Completed

If the GLS or GLSHC GPL is being loaded onto the cards, continue the procedure with [Step 20](#) on page 198.

If the GPL that is being loaded onto the card is not GLS or GLSHC, continue the procedure with [Step 12](#) on page 193.

12. [Step 13](#) on page 194 through [Step 19](#) on page 197 are performed based on the GPL being updated (shown in the `rept-stat-gpl` output in [Step 11](#) on page 193).

The following list shows the steps that are performed for the GPL being updated.

- VSCCP, SCCPHC – Perform [Step 13](#) on page 194, then continue the procedure with [Step 20](#) on page 198.
- MCP – Perform [Step 14](#) on page 194, then continue the procedure with [Step 20](#) on page 198.
- EROUTE, ERTHC – Perform [Step 15](#) on page 194, then continue the procedure with [Step 20](#) on page 198.
- IPS, IPSHC – Continue the procedure with [Step 16](#) on page 195.

13. Display the status of the service modules by entering the `rept-stat-sccp` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 09:57:31 GMT EAGLE5 40.1.0
```

CARD	VERSION	PST	SST	AST	MSU USAGE	CPU USAGE
1101	132-002-001	IS-NR	Active	-----	47%	81%
1102	132-002-001	IS-NR	Active	-----	34%	50%
1103	132-002-001	IS-NR	Active	-----	21%	29%

SCCP Service Average MSU Capacity = 36% Average CPU Capacity = 56%
Command Completed.

Continue the procedure with [Step 20](#) on page 198.

Note: The `rept-stat-sccp` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rept-stat-sccp` command, see the `rept-stat-sccp` command description in the *Commands Manual*.

14. Display the status of the MCPMs in the database by entering the `rept-stat-meas` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 16:43:42 GMT EAGLE5 40.1.0
```

MEAS	SS	ALARM STATUS	PST IS-NR	SST Active	AST -----
CARD 2107 ALARM STATUS = No Alarms					
2107	P	132-002-000	EDSM	IS-NR	Active
	IP Link A			IS-NR	Active
2108		132-200-000	EDSM	IS-NR	Active
	IP Link A			IS-NR	Active
2111		132-002-000	EDSM	IS-NR	Active
	IP Link A			IS-NR	Active

CARD 2107 ALARM STATUS = No Alarms
CARD 2108 ALARM STATUS = No Alarms
CARD 2111 ALARM STATUS = No Alarms

Continue the procedure with [Step 20](#) on page 198.

15. Display the status of the STC cards using the `rept-stat-mon` command.

This is an example of the possible output.

```
rlghncxa03w 09-02-01 09:12:36 GMT EAGLE5 40.1.0
```



```

EROUTE SUBSYSTEM REPORT IS-NR      Active      -----
STC Cards Configured= 8  Cards IS-NR= 8
EISCOPY BIT = ON
System Threshold = 80% Total Capacity
System Peak EROUTE Load:      8000 Buffers/Sec
System Total EROUTE Capacity:  9600 Buffers/Sec

SYSTEM ALARM STATUS = No Alarms.

CARD   VERSION      PST           SST           AST           TVG   CPU
        USAGE      USAGE
-----
1105   132-002-000   IS-NR      Active      -----      35%   52%
1205   132-002-000   IS-NR      Active      -----      35%   52%
1211   132-002-000   IS-NR      Active      -----      35%   52%
1303   132-002-000   IS-NR      Active      -----      35%   52%
1311   132-002-000   IS-NR      Active      -----      35%   52%
1313   132-002-000   IS-NR      Active      -----      35%   52%
2211   132-002-000   IS-NR      Active      -----      35%   52%
2213   132-002-000   IS-NR      Active      -----      35%   52%
-----
EROUTE Service Average TVG Capacity = 35%  Average CPU Capacity = 52%

CARDS DENIED EROUTE SERVICE:

Command Completed.

```

Continue the procedure with [Step 20](#) on page 198.

16. Display the status of the IPSMs (if the IPS or IPSHC GPL is being updated) using the `rept-stat-card` command and specifying the location of the card shown in the `rept-stat-gpl` output in [Step 11](#) on page 193.

For this example, enter this command.

```
rept-stat-card:loc=2301
```

This is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD  VERSION      TYPE      GPL      PST           SST           AST
2301  132-001-000   IPSM      IPS      IS-NR      Active      -----

  ALARM STATUS      = No Alarms.
  BPDCM GPL         = 132-002-000
  IMT BUS A         = Conn
  IMT BUS B         = Conn
Command Completed.

```

17. Display the terminal configuration in the database with the `rtrv-trm` command.

The IP terminals are shown by the terminal numbers 17 through 40. The `rtrv-trm` output shows the location of the IPSM associated with the IP terminals. This is an example of the possible output.

```

rlghncxa03w 09-03-01 16:02:08 GMT EAGLE5 40.1.0
TRM  TYPE      COMM      FC      TMOUT  MXINV  DURAL
1    VT320     9600-7-E-1 SW      30      5      99:59:59
2    KSR       9600-7-E-1 HW      30      5      INDEF
3    PRINTER   4800-7-E-1 HW      30      0      00:00:00
4    VT320     2400-7-E-1 BOTH    30      5      00:30:00
5    VT320     9600-7-0-1 NONE    30      5      00:00:30
6    OAP       19200-7-E-1 SW      0       5      INDEF

```

7	PRINTER	9600-7-N-2	HW	30	5	00:30:00
8	KSR	19200-7-E-2	BOTH	30	5	00:30:00
9	OAP	19200-7-E-1	SW	0	5	INDEF
10	VT320	9600-7-E-1	HW	30	5	00:30:00
11	VT320	4800-7-E-1	HW	30	5	00:30:00
12	PRINTER	9600-7-E-1	HW	30	4	00:30:00
13	VT320	9600-7-0-1	NONE	30	5	00:30:00
14	VT320	9600-7-E-2	SW	30	8	00:30:00
15	VT320	9600-7-N-2	HW	30	5	00:30:00
16	VT320	9600-7-E-2	BOTH	30	3	00:30:00
TRM	TYPE	LOC		TMOUT	MXINV	DURAL
17	TELNET	3101		60	5	00:30:00
18	TELNET	3101		60	5	00:30:00
19	TELNET	3101		60	5	00:30:00
20	TELNET	3101		60	5	00:30:00
21	TELNET	3101		60	5	00:30:00
22	TELNET	3101		60	5	00:30:00
23	TELNET	3101		60	5	00:30:00
24	TELNET	3101		60	5	00:30:00
25	TELNET	3105		60	5	00:30:00
26	TELNET	3105		60	5	00:30:00
27	TELNET	3105		60	5	00:30:00
28	TELNET	3105		60	5	00:30:00
39	TELNET	3105		60	5	00:30:00
30	TELNET	3105		60	5	00:30:00
31	TELNET	3105		60	5	00:30:00
32	TELNET	3105		60	5	00:30:00
33	TELNET	3111		60	5	00:30:00
34	TELNET	3111		60	5	00:30:00
35	TELNET	3111		60	5	00:30:00
36	TELNET	3111		60	5	00:30:00
37	TELNET	3111		60	5	00:30:00
38	TELNET	3111		60	5	00:30:00
39	TELNET	3111		60	5	00:30:00
40	TELNET	3111		60	5	00:30:00

Note: The `rtrv-trm` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-trm` command, see the `rtrv-trm` command description in the *Commands Manual*.

18. Display the status of the terminals with the `rept-stat-trm` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM  PST      SST      AST
1    IS-NR     Active    -----
2    IS-NR     Active    -----
3    IS-NR     Active    -----
4    IS-NR     Active    -----
5    IS-NR     Active    -----
6    IS-NR     Active    -----
7    IS-NR     Active    -----
8    IS-NR     Active    -----
9    IS-NR     Active    -----
10   IS-NR     Active    -----
11   IS-NR     Active    -----
12   IS-NR     Active    -----
13   IS-NR     Active    -----
14   IS-NR     Active    -----
15   IS-NR     Active    -----
16   IS-NR     Active    -----
```

```

17    IS-NR      Active    -----
18    IS-NR      Active    -----
19    IS-NR      Active    -----
20    IS-NR      Active    -----
21    IS-NR      Active    -----
22    IS-NR      Active    -----
23    IS-NR      Active    -----
24    IS-NR      Active    -----
25    IS-NR      Active    -----
26    IS-NR      Active    -----
27    IS-NR      Active    -----
28    IS-NR      Active    -----
29    IS-NR      Active    -----
30    IS-NR      Active    -----
31    IS-NR      Active    -----
32    IS-NR      Active    -----
33    IS-NR      Active    -----
34    IS-NR      Active    -----
35    IS-NR      Active    -----
36    IS-NR      Active    -----
37    IS-NR      Active    -----
38    IS-NR      Active    -----
39    IS-NR      Active    -----
40    IS-NR      Active    -----

```

Command Completed.

19. Place the terminals associated with the IPSM that will be updated with the new IPS or IPSHC GPL out of service using the `rmv-trm` command.

If the last in service SEAS terminal is assigned to the card containing the terminals that are being inhibited in this step, the `force=yes` parameter must be specified for that terminal.

For this example, enter these commands.

```

rmv-trm:trm=17
rmv-trm:trm=18
rmv-trm:trm=19
rmv-trm:trm=20
rmv-trm:trm=21
rmv-trm:trm=22
rmv-trm:trm=23
rmv-trm:trm=24

```



CAUTION

CAUTION: Placing these terminals out of service will disable any sessions running on these terminals.

If the status of any of the terminals shown in the PST field in [Step 18](#) on page 196 is OOS-MT-DSBLD (out-of-service maintenance disabled), that terminal is already out of service and the `rmv-trm` command does not need to be executed for that terminal.

This message should appear when each of these commands have successfully completed.

```

rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Inhibit message sent to terminal

```

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Command Completed.
```

20. The card that the new version of the GPL will be loaded onto must be out of service.

Place the card, selected from the outputs of [Step 11](#) on page 193, [Step 13](#) on page 194, [Step 14](#) on page 194, [Step 15](#) on page 194, or [Step 16](#) on page 195, out of service using the `rmv-card` command. If there is only one of these cards running these GPLs in service (VSCCP, GLS, MCP, GLSHC), the `force=yes` parameter must be specified with the `rmv-card` command.

For this example, enter this command.

```
rmv-card:loc=1101
```



CAUTION

CAUTION: Do not place all the cards running the same GPL in the EAGLE 5 ISS out of service at the same time. Doing so will cause all traffic carried by these cards to be lost and disable the feature associated with these cards.



CAUTION

CAUTION: If there is only one in service card running the GPL being updated in the EAGLE 5 ISS, placing the card out of service will cause the traffic carried by this card to be lost and disable the feature associated with this card.

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Card has been inhibited.
```

21. Put the card that was inhibited in [Step 20](#) on page 198 back into service using the `rst-card` command.

The `rst-card` command also loads the approved version of the GPL onto the card.

For this example, enter this command.

```
rst-card:loc=1101
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Card has been allowed.
```

22. Verify the GPLs on the cards using the `rept-stat-gpl` command with the `gpl` parameter value equal to the `gpl` parameter value specified in [Step 11](#) on page 193.

If any card is not running the release version of the GPL, shown in the `RELEASE` column of the `rtrv-gpl` output in [Step 10](#) on page 193, the indicator `ALM` is displayed next to the GPL version in the `RUNNING` column of the `rept-stat-gpl` output. For this example, enter these commands.

```
rept-stat-gpl:gpl=vscpp
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL      CARD  RUNNING      APPROVED      TRIAL
VSCCP    1101    132-003-000  132-003-000  132-002-000
VSCCP    1102    132-002-000 ALM  132-003-000  132-002-000
```

```
VSCCP      1103      132-002-000 ALM      132-003-000      132-002-000
Command Completed
```

Note: If the IPS or IPSHC GPL is not being updated in this procedure, continue the procedure with [Step 25](#) on page 200.

23. Put the terminals that were placed out of service in [Step 19](#) on page 197 back into service using the `rst-trm` command.

For this example, enter these commands.

```
rst-trm:trm=17
rst-trm:trm=18
rst-trm:trm=19
rst-trm:trm=20
rst-trm:trm=21
rst-trm:trm=22
rst-trm:trm=23
rst-trm:trm=24
```

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Allow message sent to terminal

rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Command Completed.
```

24. Verify that the terminals are in service with the `rept-stat-trm` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM   PST      SST      AST
1     IS-NR     Active    -----
2     IS-NR     Active    -----
3     IS-NR     Active    -----
4     IS-NR     Active    -----
5     IS-NR     Active    -----
6     IS-NR     Active    -----
7     IS-NR     Active    -----
8     IS-NR     Active    -----
9     IS-NR     Active    -----
10    IS-NR     Active    -----
11    IS-NR     Active    -----
12    IS-NR     Active    -----
13    IS-NR     Active    -----
14    IS-NR     Active    -----
15    IS-NR     Active    -----
16    IS-NR     Active    -----
17    IS-NR     Active    -----
18    IS-NR     Active    -----
19    IS-NR     Active    -----
20    IS-NR     Active    -----
21    IS-NR     Active    -----
22    IS-NR     Active    -----
23    IS-NR     Active    -----
```

24	IS-NR	Active	-----
25	IS-NR	Active	-----
26	IS-NR	Active	-----
27	IS-NR	Active	-----
28	IS-NR	Active	-----
29	IS-NR	Active	-----
30	IS-NR	Active	-----
31	IS-NR	Active	-----
32	IS-NR	Active	-----
33	IS-NR	Active	-----
34	IS-NR	Active	-----
35	IS-NR	Active	-----
36	IS-NR	Active	-----
37	IS-NR	Active	-----
38	IS-NR	Active	-----
39	IS-NR	Active	-----
40	IS-NR	Active	-----

Command Completed.

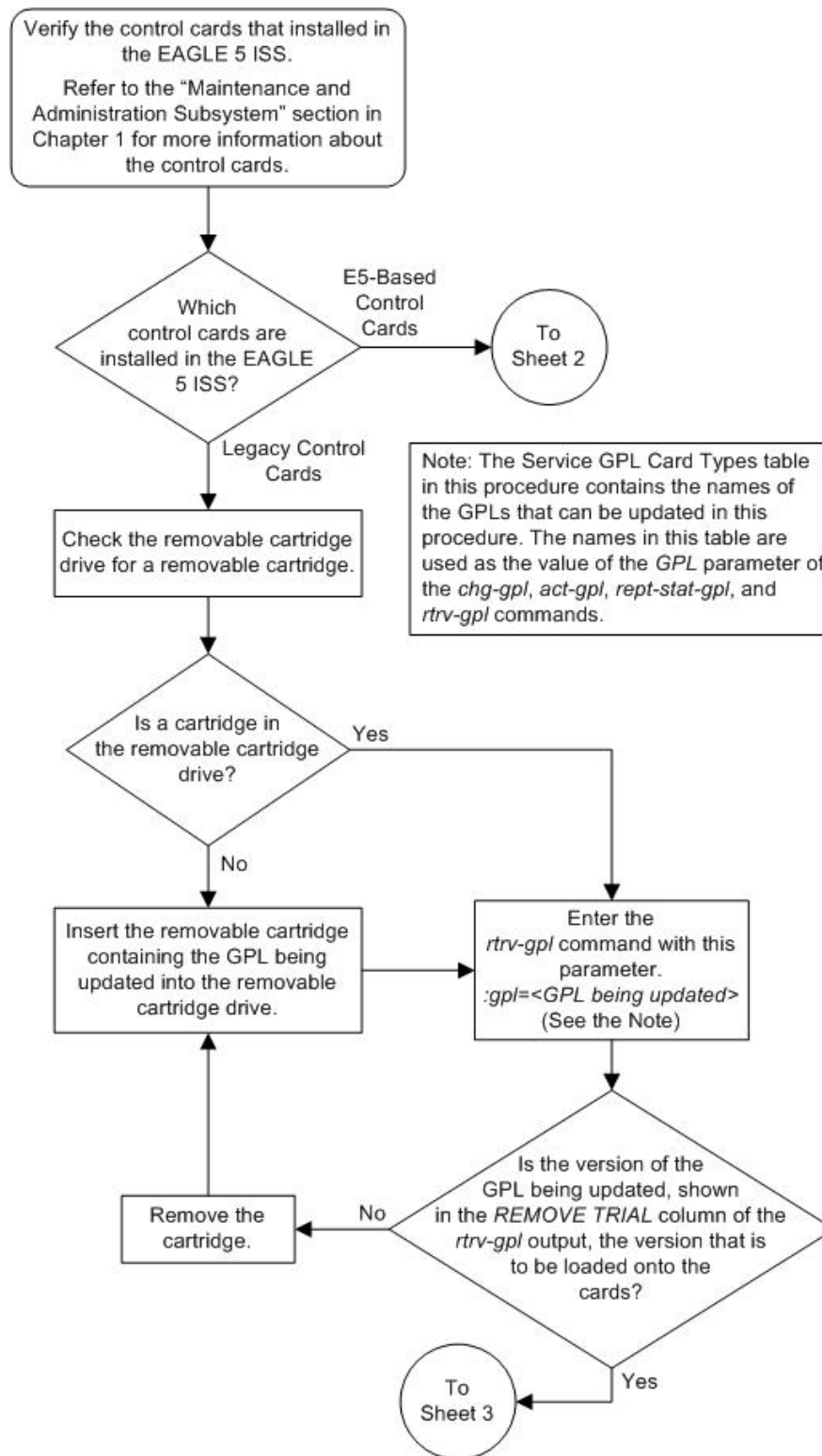
25. Continue the procedure by performing these actions.

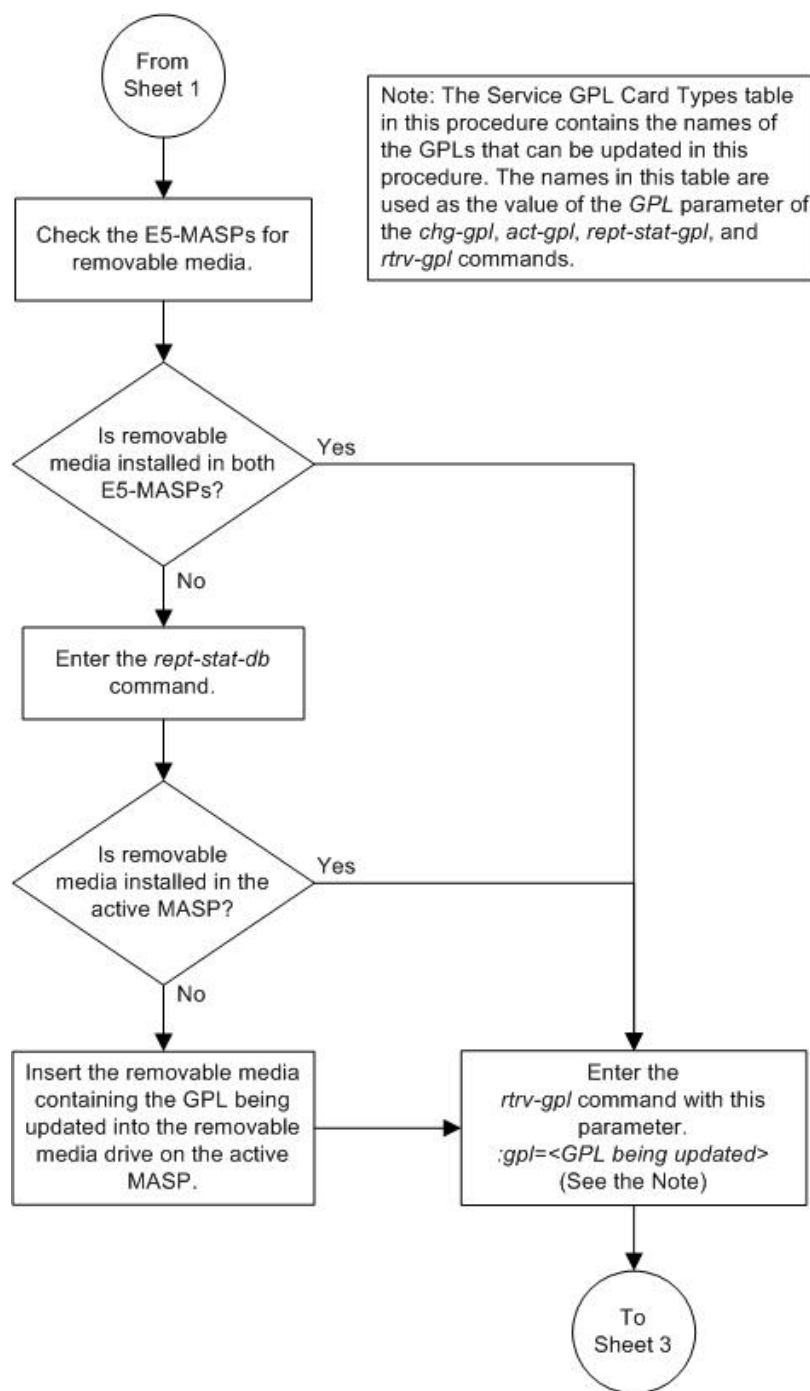
If legacy control cards are installed in the EAGLE 5 ISS, remove the removable cartridge from the removable cartridge drive on the MDAL card. For information about removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

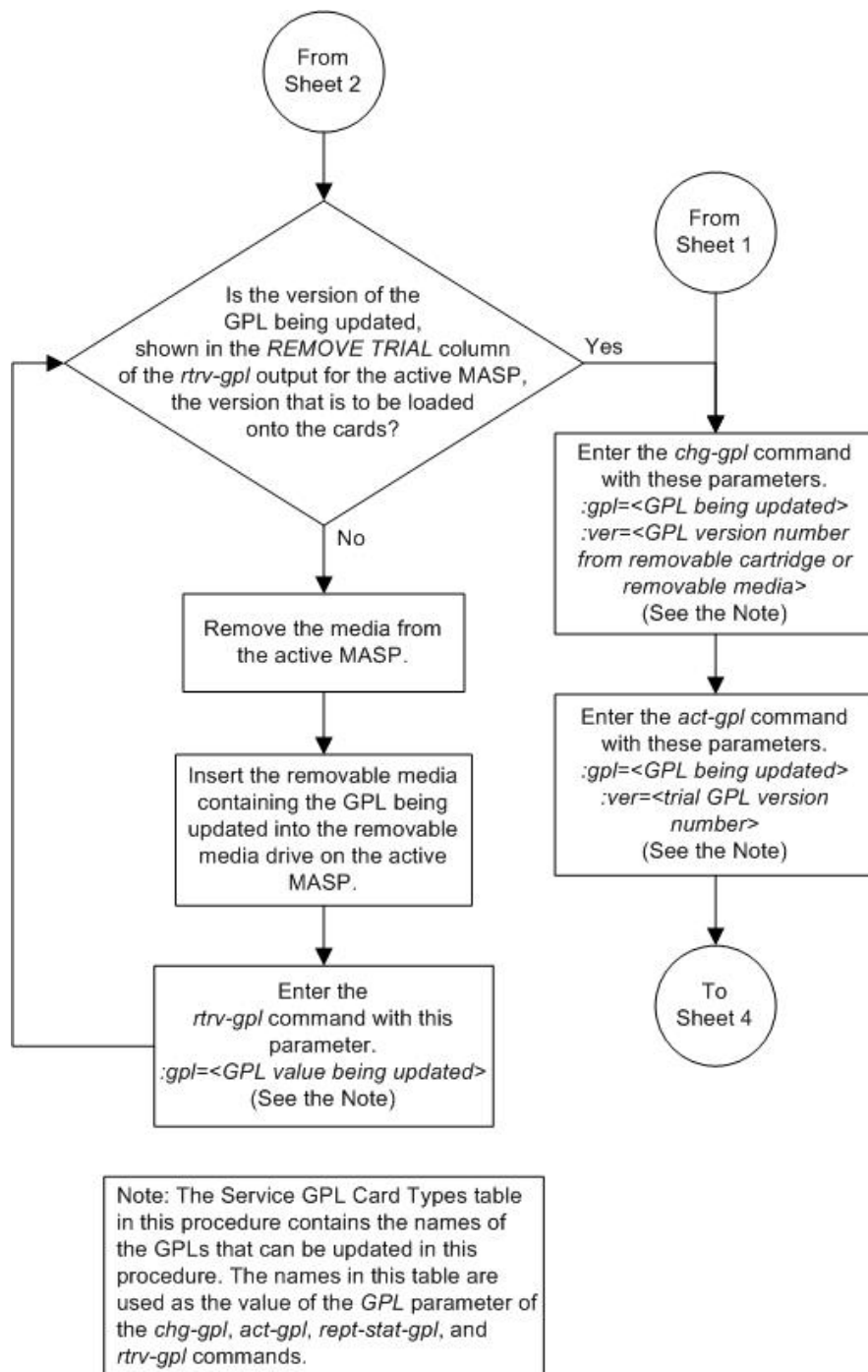
When the removable cartridge has been removed, or if E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure by performing one of these actions.

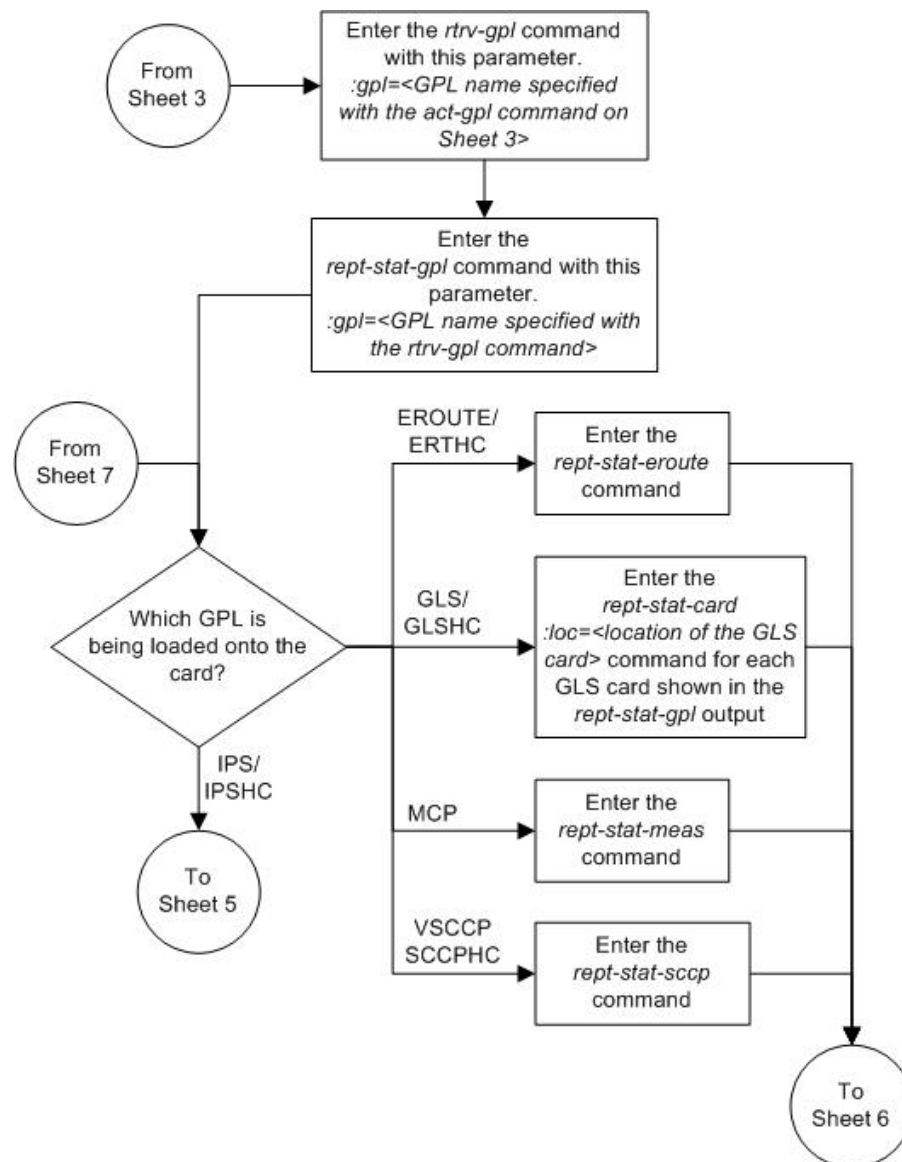
- If you wish to load the new GPL onto the other cards shown in [Step 11](#) on page 193, repeat this procedure from [Step 12](#) on page 193 for each card shown in [Step 11](#) on page 193.
- If the new GPL will not be loaded onto other cards but other GPLs will be updated, repeat this procedure from [Step 1](#) on page 190.
- If the new GPL will not be loaded onto other cards and no other GPLs are being updated, then this procedure is finished.

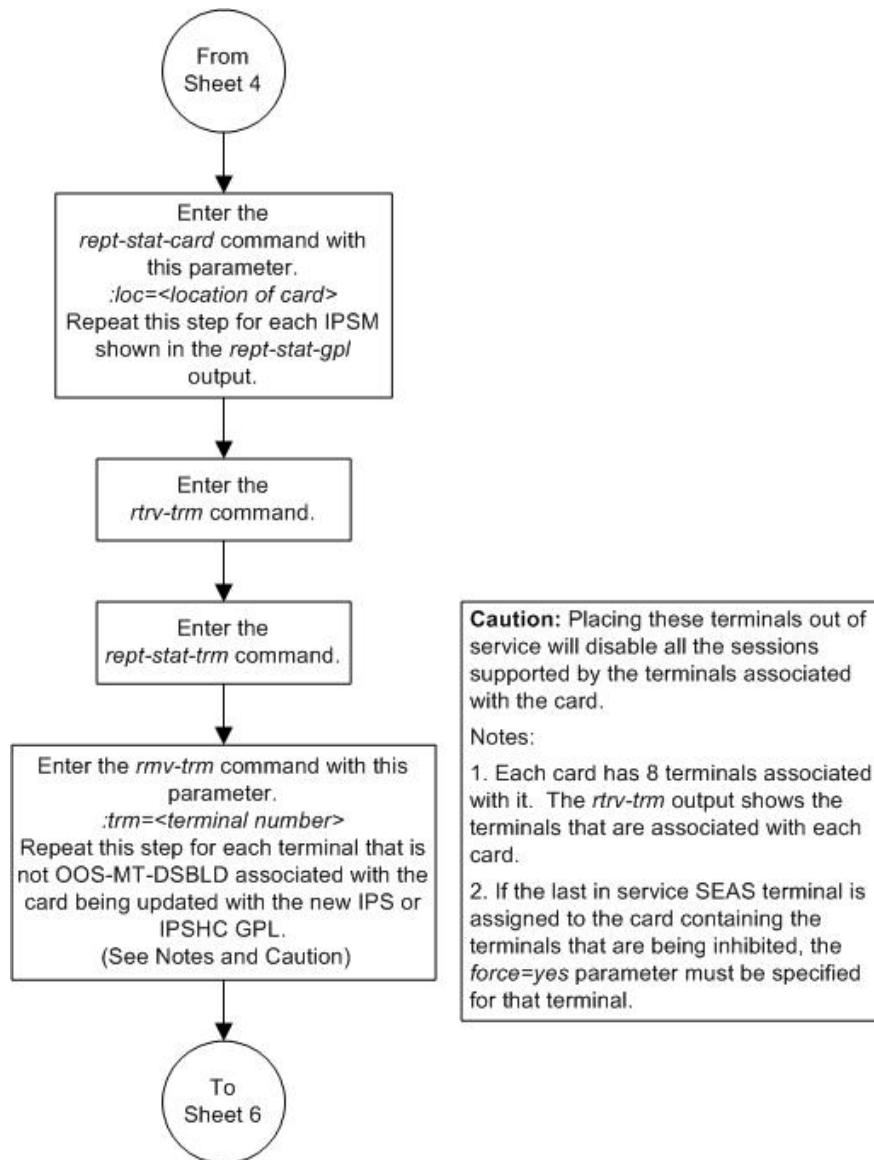
Figure 27: Updating the Service GPLs

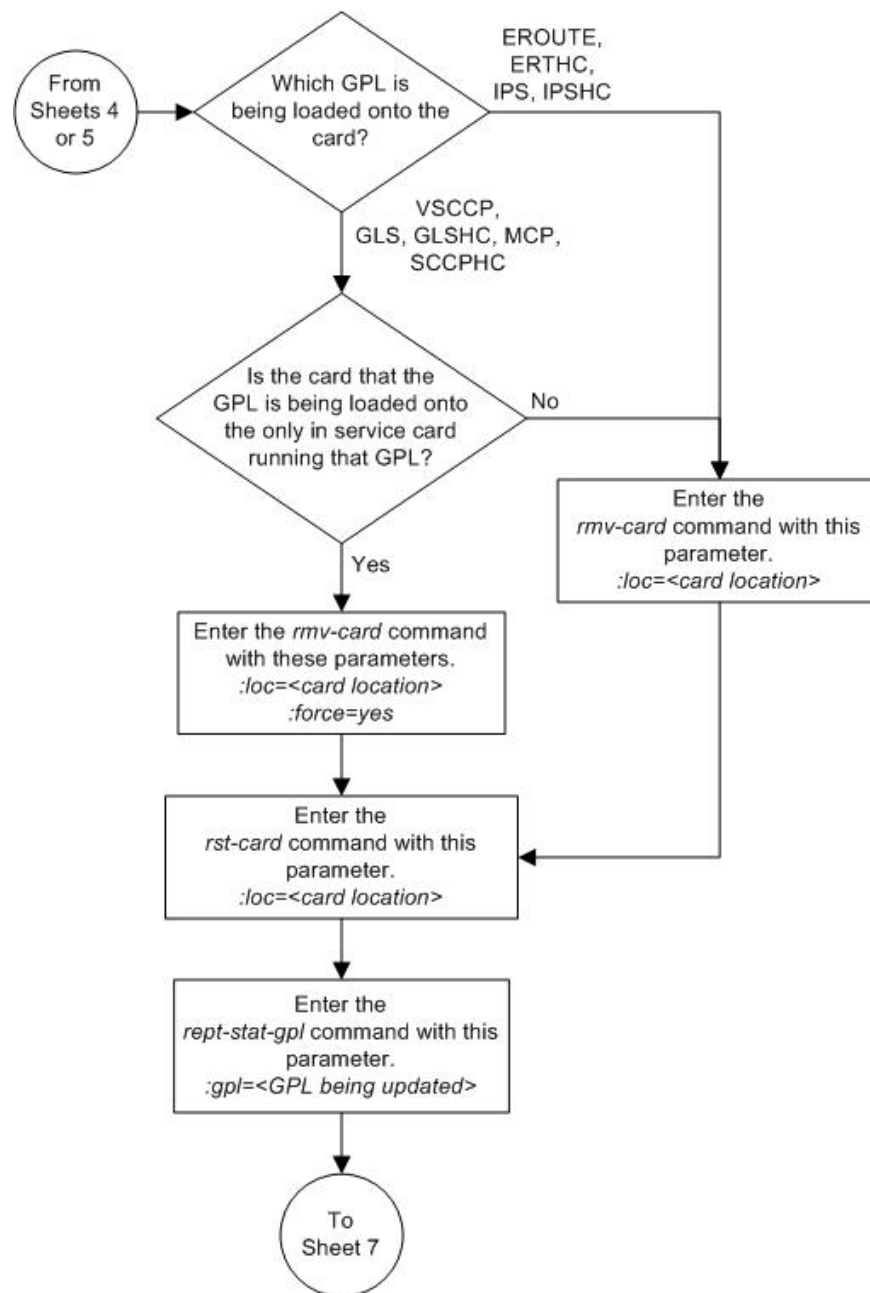


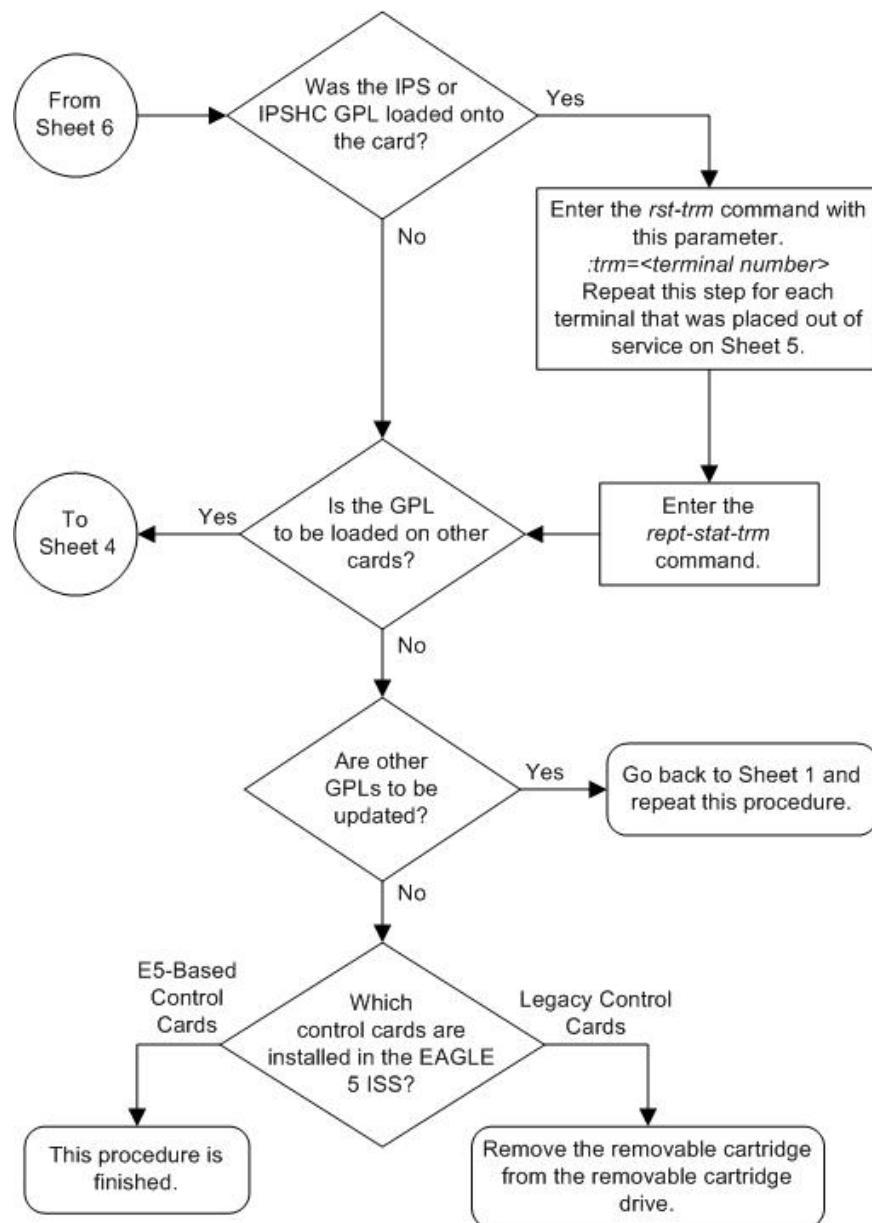












Updating the Flash GPLs

This procedure is used to update these GPLs: BPHCAP, BPHCAPT, BPMPL, BPMPLT, BPDCM, BPDCM2. These names are used as the value of the *gpl* parameter of the *chg-gpl*, *act-gpl*, *rept-stat-gpl*, and *rtrv-gpl* commands.

There are other flash GPLs in the EAGLE 5 ISS, but these flash GPLs are not covered in this procedure. The GPLs that run on high-capacity cards are shown in [Table 5: High-Capacity Card Flash GPLs](#) on page 208.

Table 5: High-Capacity Card Flash GPLs

HC MIM	E5-E1T1 E5-ENET	E5-STC E5-SLAN E5-IPSM E5-ATM E5-TSM	E5-SM4G
BLCPLD	BLCPLD	BLCPLD	BLCPLD
IMTPCI	IMTPCI	IMTPCI	IMTPCI
BLVXW6	BLVXW6	BLVXW6	BLVXW6
BLBIOS	BLBEPM	BLBEPM	BLBSMG
BLDIAG6	BLDIAG6	BLDIAG6	BLDIAG6
PLDPMC1	PLDPMC1		
BLROM1			
To update the GPLs on these cards, perform one of these procedures. Updating One of the Flash GPLs on the High-Capacity Cards on page 248. Updating All the Flash GPLs on the High-Capacity Cards on page 281.			

Updating the BPHMUX and HIPR GPLs are not covered in this procedure. The BPHMUX flash GPL runs only on the HMUX cards. To update the BPHMUX GPL, perform [Updating the BPHMUX GPL](#) on page 340. The HIPR flash GPL runs only on the HIPR cards. To update the HIPR GPL, perform [Updating the HIPR GPL](#) on page 353.

Updating the BLMCAP GPL for the E5-MASPs is not covered in this procedure. To update the BLMCAP, and the OAMHC GPLs, perform [Updating the BLMCAP and OAMHC GPLs](#) on page 157.

The flash GPLs are used in place of the IMT GPL on these cards:

- BPHCAP and BPHCAPT – LIM-ATM, LIME1ATM, used for high-speed ATM SS7 signaling links.
- BPMPL – The Multi-Port LIM running the SS7ML application for SS7 signaling links.
- BPMPLT – Multi-Port LIM (MPLT) or E1/T1 MIM running the SS7ML application GPL. The MPLT is used for SS7 signaling links. The E1/T1 MIM is used for either E1 or T1 signaling links.
- BPDCM – Cards running these application GPLs:
 - VXWSLAN – Used to support the STPLAN feature
 - SS7IPGW, IPGWI, IPLIM, or IPLIMI – Used to support IP signaling links
 - VSCCP – Used to support the Global Title Translation feature and its related features.
 - EROUTE – Used to support the Eagle 5 Integrated Monitoring Support feature
 - MCP – Used to support the Measurements Platform feature.
 - EOAM – Loaded on the GPSM-II card in card locations 1113 and 1115. The GPSM-II cards is used in combination with the TDM to form the Maintenance and Administration Subsystem Processor (MASP).
 - IPS – used to support the IP User Interface and FTP Retrieve and Replace features.

- BPDCM2 – the GPSM-II card in card locations 1113 and 1115. The GPSM-II cards are used in combination with the TDM to form the Maintenance and Administration Subsystem Processor (MASP). This GPL is also used on MCPMs, cards running the MCP application GPL and supporting the Measurements Platform feature.

If the GPL is being updated to a new version, a removable cartridge or removable media containing the GPL being updated is required.

Canceling the REPT-STAT-SLK and RTRV-SLK Commands

Because the `rept-stat-slk` and `rtrv-slk` commands used in this procedure can output information for a long period of time, the `rept-stat-slk` and `rtrv-slk` commands can be canceled and the output to the terminal stopped. There are three ways that the `rept-stat-slk` and `rtrv-slk` commands can be canceled.

- Press the F9 function key on the keyboard at the terminal where the `rept-stat-slk` or `rtrv-slk` commands command were entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rept-stat-slk` or `rtrv-slk` commands were entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rept-stat-slk` or `rtrv-slk` commands were entered, from another terminal other than the terminal where the `rept-stat-slk` or `rtrv-slk` commands were entered. To enter the `canc-cmd:trm=<xx>` command, the terminal must allow Security Administration commands to be entered from it and the user must be allowed to enter Security Administration commands. The terminal's permissions can be verified with the `rtrv-secu-trm` command. The user's permissions can be verified with the `rtrv-user` or `rtrv-secu-user` commands.

For more information about the `canc-cmd` command, go to the *Commands Manual*.

1. Verify the control cards that are installed in the EAGLE 5 ISS.

Refer to [Maintenance and Administration Subsystem](#) on page 7 for information about the control cards.

If legacy control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 2](#) on page 209.

If E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 5](#) on page 210.

2. Check the removable cartridge drive on the MDAL card for a removable cartridge.

If there is a removable cartridge in the drive, display the flash GPLs on the fixed disk and on the removable cartridge using the `rtrv-gpl` command with the `gpl` parameter value equal to the flash GPL being updated. For this example, enter this command.

```
rtrv-gpl:gpl=bpdcmm
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 11:34:04 GMT  EAGLE5 36.0.0
GPL Auditing  ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
BPDCM	1114	132-002-000	132-002-000	132-001-000	132-003-000
BPDCM	1116	132-002-000	132-002-000	132-001-000	-----

If the version of the flash GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the cartridge and continue the

If the version of the flash GPL shown in the REMOVE TRIAL column of the rtrv-gpl output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 211.

- To write protect a removable cartridge, see [MO Removable Cartridge Description](#) on page 17.

- For information about inserting the removable cartridge into the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19. After the removable cartridge has been inserted into the removable cartridge drive, repeat the `rtrv-gpl` command in [Step 2](#) on page 209 and verify the version of the flash GPL on the removable cartridge that you wish to update.

After this step has been performed, continue the procedure with [Step 8](#) on page 211.

- If removable media is installed in both E5-MASPs, continue the procedure with [Step 7](#) on page 210.

If removable media is not installed in both E5-MASPs, continue the procedure with [Step 6](#) on page 210.

- This is an example of the possible output.

```

rlghncxa03w 09-03-01 15:25:40 GMT  EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY)
      C   LEVEL      TIME LAST BACKUP
      - - - - -
FD BKUP Y          36 09-02-19 09:38:25 GMT
FD CRNT Y          39
      MCAP 1113
      - - - - -
RD BKUP -          -      -      -
USB BKP -          -      -      -

      TDM 1116 ( ACTV )
      C   LEVEL      TIME LAST BACKUP
      - - - - -
FD BKUP Y          36 09-02-19 09:38:25 GMT
FD CRNT Y          39
      MCAP 1115
      - - - - -
RD BKUP Y          36 09-02-19 09:27:17 GMT
USB BKP Y          3 09-02-07 01:11:22 GMT

```

If removable media is installed in the active MASP, continue the procedure with [Step 7](#) on page 210.

If removable media is not installed in the active MASP, insert the removable media in the removable media drive in the active MASP. For more information about inserting removable media in the removable media drive, refer to [Removable USB Drive](#) on page 20. After the removable media has been inserted in the removable media drive in the active MASP, continue the procedure with [Step 7](#) on page 210.

- ```
rtrv-gpl:gpl=bpdc
```



This is an example of the possible output.

```
rlghncxa03w 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

| GPL   | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|-------|------|-------------|-------------|-------------|--------------|
| BPDCM | 1114 | 132-010-000 | 132-010-000 | 132-010-008 | 132-010-008  |
| BPDCM | 1116 | 132-010-000 | 132-010-000 | 132-010-008 | 132-010-008  |
| BPDCM | 1115 | -----       | -----       | -----       | -----        |

If the version of the flash GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the removable media from the active MASP.

Insert the removable media that contains the flash GPL that is being updated into the removable media drive in the active MASP and repeat this step.

For more information about inserting removable media in the removable media drive, or removing removable media from the removable media drive, refer to [Removable USB Drive](#) on page 20.

If the version of the flash GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 211.

- Change the flash GPLs, using the `chg-gpl` command and specifying the value for the flash GPL shown in the REMOVE TRIAL column in the output of the `rtrv-gpl` command used in [Step 2](#) on page 209.

For this example, enter this command.

```
chg-gpl:gpl=bpdcml:ver=002-003-000
```

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

```
BPDCM upload on 1114 completed
BPDCM upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

- Activate the trial flash GPL, using the `act-gpl` command and specifying the name and version of the trial flash GPL specified in [Step 8](#) on page 211.

For this example, enter this command.

```
act-gpl:gpl=bpdcml:ver=002-003-000
```

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
BPDCM activate on 1114 completed
BPDCM activate on 1116 completed
```

- Verify that the flash GPL on the removable cartridge or removable media is the approved flash GPL on the fixed disk using the `rtrv-gpl` command with the `gpl` parameter value specified in [Step 9](#) on page 211.

For this example, enter this command.

```
rtrv-gpl:gpl=bpdc
```

If legacy control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

| GPL   | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|-------|------|-------------|-------------|-------------|--------------|
| BPDCM | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BPDCM | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | -----        |

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

| GPL   | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|-------|------|-------------|-------------|-------------|--------------|
| BPDCM | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BPDCM | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BPDCM | 1115 | -----       | -----       | -----       | -----        |

11. Verify the flash GPLs on the fixed disk and the cards that are running the flash GPLs using the `rept-stat-gpl` command with the `gpl` parameter value equal specified in [Step 10](#) on page 211.

For this example, enter this command.

```
rept-stat-gpl:gpl=bpdc
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 11:40:26 GMT EAGLE5 36.0.0
```

| GPL   | CARD | RUNNING         | APPROVED    | TRIAL       |
|-------|------|-----------------|-------------|-------------|
| BPDCM | 1113 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 1115 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 1303 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2101 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2103 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2105 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2107 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2111 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2113 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2115 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2205 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2207 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2213 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2301 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2303 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2305 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2307 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 2311 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 3103 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 3105 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| BPDCM | 3107 | 132-002-000 ALM | 132-003-000 | 132-002-000 |

Command Completed

**Note:** If the flash GPL being displayed by the `rept-stat-gpl` command is the BPDCM or BPDCM2 GPL, the output of the `rept-stat-gpl` command will show any DCMs, DSMs, or GPSM-II cards that are inserted in the EAGLE 5 ISS, whether they are configured in the database or not.

12. Display the status of the card, shown in the `rept-stat-gpl` output in [Step 11](#) on page 212, that the flash GPL will be loaded onto using the `rept-stat-card` command and specifying the location of the card.

For this example, enter this command.

```
rept-stat-card:loc=2105
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD VERSION TYPE GPL PST SST AST
2105 132-003-000 DCM VXWSLAN IS-NR Active -----
 ALARM STATUS = No Alarms.
 BPDCM GPL = 132-002-000
 IMT BUS A = Conn
 IMT BUS B = Conn
 SLK A PST = IS-NR LS=lsnsspn2 CLLI=-----
 SCCP SERVICE CARD = 1212
 SLAN SERVICE CARD = ----
Command Completed.
```

13. [Step 14](#) on page 213 through [Step 24](#) on page 219 are performed based on the application GPL running on the card shown in the GPL column in the `rept-stat-card` output in [Step 12](#) on page 213.

The following list shows the steps that are performed for the application GPL running on the card that is being updated with the new flash GPL.

- EROUTE – [Step 12](#) on page 213 shows the status of the card running the EROUTE GPL. Continue the procedure with [Step 25](#) on page 219.
- ATMANSI, ATMITU, SS7ML, IPLIM, IPLIMI, SS7IPGW, IPGWI – Perform [Step 14](#) on page 213 and [Step 15](#) on page 214. After [Step 14](#) on page 213 and [Step 15](#) on page 214 have been performed, continue the procedure with [Step 25](#) on page 219.
- VXWSLAN – Perform [Step 16](#) on page 214 and [Step 17](#) on page 214. After [Step 16](#) on page 214 and [Step 17](#) on page 214 have been performed, continue the procedure with [Step 25](#) on page 219.
- VSCCP – Perform [Step 18](#) on page 215. After [Step 18](#) on page 215 has been performed, continue the procedure with [Step 25](#) on page 219.
- MCP – Perform [Step 19](#) on page 215. After [Step 19](#) on page 215 has been performed, continue the procedure with [Step 25](#) on page 219.
- EOAM – Perform [Step 20](#) on page 216 through [Step 24](#) on page 219. After [Step 20](#) on page 216 through [Step 24](#) on page 219 have been performed, continue the procedure with [Step 25](#) on page 219.
- IPS – Perform [Step 21](#) on page 216 through [Step 23](#) on page 218. After [Step 21](#) on page 216 through [Step 23](#) on page 218 have been performed, continue the procedure with [Step 25](#) on page 219.

14. Display the signaling links associated with the card shown in [Step 12](#) on page 213.

Enter the `rt rv-slk` command with the card location specified in [Step 12](#) on page 213. This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0

LOC LINK LSN SLC TYPE L2T L1 PCR PCR
 MODE TSET ECM SET BPS N1 N2
```

|         |          |   |        |   |       |     |     |       |     |      |
|---------|----------|---|--------|---|-------|-----|-----|-------|-----|------|
| 1201 A  | lsn1201a | 0 | LIMDS0 | 1 | 56000 | --- | --- | BASIC | --- | ---- |
| 1201 B  | lsn1201b | 0 | LIMDS0 | 1 | 56000 | --- | --- | BASIC | --- | ---- |
| 1201 A1 | lsn1201a | 1 | LIMDS0 | 1 | 56000 | --- | --- | BASIC | --- | ---- |
| 1201 B1 | lsn1201b | 1 | LIMDS0 | 1 | 56000 | --- | --- | BASIC | --- | ---- |

15. Deactivate the SS7 signaling links on the card using the `dact -slk` command.

For this example, enter these commands.

```
dact-slk:loc=1201:link=a
```

```
dact-slk:loc=1201:link=b
```

```
dact-slk:loc=1201:link=a1
```

```
dact-slk:loc=1201:link=b1
```



**CAUTION**

**CAUTION:** These command examples place the SS7 signaling links on card 1201 out of service. This will interrupt service on the SS7 signaling links on card 1201 and allow the approved flash GPL to be loaded on to card 1201.



**CAUTION**

**CAUTION:** Do not deactivate all the SS7 signaling links in the EAGLE 5 ISS at the same time. Doing so will take all the SS7 signaling links out of service and isolate the EAGLE 5 ISS from the network.

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 11:45:18 GMT EAGLE5 36.0.0
Deactivate SLK message sent to card
```

Continue the procedure with [Step 25](#) on page 219.

16. Display the TCP/IP data links, and their status, associated with the cards shown in [Step 11](#) on page 212 and [Step 12](#) on page 213.

Enter the `rept-stat-dlk` command. This is an example of the possible output.

```
rlghncxa03w 06-10-01 17:00:36 GMT EAGLE5 36.0.0
DLK PST SST AST
1303 IS-NR Avail ---
2101 IS-NR Avail ---
2103 IS-NR Avail ---
2105 IS-NR Avail ---
2113 IS-NR Avail ---
2301 IS-NR Avail ---
Command Completed.
```

17. Deactivate the TCP/IP data link on the card that you wish to load the flash GPL onto, shown in [Step 16](#) on page 214, using the `canc-dlk` command.

For this example, enter this command.

```
canc-dlk:loc=2105
```



**CAUTION**

**CAUTION:** This command example places the TCP/IP data link on card 2105 out of service. This will interrupt service on the TCP/IP data link on card 2105 and allow the trial flash GPL to be loaded on to card 2105.



**CAUTION:** Do not deactivate all the TCP/IP data links in the EAGLE 5 ISS at the same time. Doing so will take all the TCP/IP data links out of service and cause the STPLAN feature to be disabled.



**CAUTION:** If there is only one TCP/IP data link in the EAGLE 5 ISS, placing the card out of service will cause the STPLAN feature to be disabled.

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 11:45:18 GMT EAGLE5 36.0.0
Deactivate Link message sent to card.
Command Completed.
```

Continue the procedure with [Step 25](#) on page 219.

18. Display the status of the service modules by entering the `rept-stat-sccp` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:57:31 GMT EAGLE5 36.0.0

CARD
VERSION PST SST AST MSU USAGE CPU USAGE

2311 132-002-001 IS-NR Active ----- 47% 81%
3101 132-002-001 IS-NR Active ----- 34% 50%
3103 132-002-001 IS-NR Active ----- 21% 29%

SCCP Service Average MSU Capacity = 34% Average CPU Capacity = 54%
Command Completed.
```

Continue the procedure with [Step 25](#) on page 219.

**Note:** The `rept-stat-sccp` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rept-stat-sccp` command, see the `rept-stat-sccp` command description in the *Commands Manual*.

19. Display the status of the MCPMs in the database with the `rept-stat-meas` command.

This is an example of the possible output.

```
rlghncxa03w 09-02-01 16:43:42 GMT EAGLE5 40.0.0

MEAS SS PST SST AST
IS-NR Active -----
ALARM STATUS = No Alarms

CARD VERSION TYPE PST SST AST
2107 P 132-002-000 EDSM IS-NR Active -----
 IP Link A IS-NR Active Available
2108 132-002-000 EDSM IS-NR Active -----
 IP Link A IS-NR Active Available
2111 132-002-000 EDSM IS-NR Active -----
 IP Link A IS-NR Active Available

CARD 2107 ALARM STATUS = No Alarms
```

```
CARD 2108 ALARM STATUS = No Alarms
CARD 2111 ALARM STATUS = No Alarms
```

Continue the procedure with [Step 25](#) on page 219.

**Note:** [Step 20](#) on page 216 is performed only if the application GPL running on the card shown in the `rept-stat-card` output in [Step 12](#) on page 213 is EOAM. If the application running on the card is IPS, continue the procedure with [Step 21](#) on page 216.

20. To load the BPDCM or BPDCM2 GPL on the GPSM-II, it must be loaded on the standby MASP (GPSM-II) first.

To determine which MASP is active, enter the `rept-stat-db` command. This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
 TDM 1114 (STDBY) TDM 1116 (ACTV)
 C LEVEL TIME LAST BACKUP C LEVEL TIME LAST BACKUP

FD BKUP Y 35 05-03-01 10:19:18 GMT Y 35 05-03-01 10:19:18 GMT
FD CRNT Y 106
 MDAL 1117

RD BKUP Y 106 05-02-31 20:27:53 GMT
```

The output of the `rept-stat-db` command shows which MASP is active with the indicator ( ACTV ) following the TDM card location. The indicator ( STDBY ) following the TDM card location shows which MASP is standby.

For this example, the MASP associated with TDM 1116 is active and the MASP associated with TDM 1114 is standby.

21. Display the terminal configuration in the database with the `rtrv-trm` command.

If the application GPL running on the card is EOAM, the OAP and SEAS terminals must be taken out of service. The OAP terminals are shown in the output with the entry OAP in the TYPE field. The SEAS terminals are shown in the output with the entry SEAS in the TYPE field. If no OAP or SEAS terminals are shown in the `rtrv-trm` command output, continue the procedure with [Step 25](#) on page 219.

If the application GPL running on the card is IPS, the Telnet terminals associated with the card shown in [Step 12](#) on page 213 must be taken out of service. The Telnet terminals are shown in the output with the entry TELNET in the TYPE field.

This is an example of the possible output. In this example, the OAP terminals are terminals 6 and 9. The SEAS terminals are terminals 27 and 36. The Telnet terminals that must be taken out of service are terminals 17 to 24.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 39.0.0
TRM TYPE COMM FC TMOUT MXINV DURAL
1 VT320 9600-7-E-1 SW 30 5 99:59:59
2 KSR 9600-7-E-1 HW 30 5 INDEF
3 PRINTER 4800-7-E-1 HW 30 0 00:00:00
4 VT320 2400-7-E-1 BOTH 30 5 00:30:00
5 VT320 9600-7-0-1 NONE 30 5 00:00:30
6 OAP 19200-7-E-1 SW 0 5 INDEF
7 PRINTER 9600-7-N-2 HW 30 5 00:30:00
8 KSR 19200-7-E-2 BOTH 30 5 00:30:00
9 OAP 19200-7-E-1 SW 0 5 INDEF
10 VT320 9600-7-E-1 HW 30 5 00:30:00
```

|     |         |            |      |       |       |          |        |
|-----|---------|------------|------|-------|-------|----------|--------|
| 11  | VT320   | 4800-7-E-1 | HW   | 30    | 5     | 00:30:00 |        |
| 12  | PRINTER | 9600-7-E-1 | HW   | 30    | 4     | 00:30:00 |        |
| 13  | VT320   | 9600-7-0-1 | NONE | 30    | 5     | 00:30:00 |        |
| 14  | VT320   | 9600-7-E-2 | SW   | 30    | 8     | 00:30:00 |        |
| 15  | VT320   | 9600-7-N-2 | HW   | 30    | 5     | 00:30:00 |        |
| 16  | VT320   | 9600-7-E-2 | BOTH | 30    | 3     | 00:30:00 |        |
| TRM | TYPE    | LOC        |      | TMOUT | MXINV | DURAL    | SECURE |
| 17  | TELNET  | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 18  | TELNET  | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 19  | TELNET  | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 20  | TELNET  | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 21  | TELNET  | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 22  | TELNET  | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 23  | TELNET  | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 24  | TELNET  | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 25  | TELNET  | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 26  | TELNET  | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 27  | SEAS    | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 28  | TELNET  | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 29  | TELNET  | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 30  | TELNET  | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 31  | TELNET  | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 32  | TELNET  | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 33  | TELNET  | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 34  | TELNET  | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 35  | TELNET  | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 36  | SEAS    | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 37  | TELNET  | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 38  | TELNET  | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 39  | TELNET  | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 40  | TELNET  | 1205       |      | 60    | 5     | 00:30:00 | yes    |

**Note:** The `rtrv-trm` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-trm` command, see the `rtrv-trm` command description in the *Commands Manual*.

22. Display the status of the terminals with the `rept-stat-trm` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
1 IS-NR Active -----
2 IS-NR Active -----
3 IS-NR Active -----
4 IS-NR Active -----
5 IS-NR Active -----
6 IS-NR Active -----
7 IS-NR Active -----
8 IS-NR Active -----
9 IS-NR Active -----
10 IS-NR Active -----
11 IS-NR Active -----
12 IS-NR Active -----
13 IS-NR Active -----
14 IS-NR Active -----
15 IS-NR Active -----
16 IS-NR Active -----
17 IS-NR Active -----
18 IS-NR Active -----
19 IS-NR Active -----
20 IS-NR Active -----
21 IS-NR Active -----
```

```

22 IS-NR Active -----
23 IS-NR Active -----
24 IS-NR Active -----
25 IS-NR Active -----
26 IS-NR Active -----
27 IS-NR Active -----
28 IS-NR Active -----
29 IS-NR Active -----
30 IS-NR Active -----
31 IS-NR Active -----
32 IS-NR Active -----
33 IS-NR Active -----
34 IS-NR Active -----
35 IS-NR Active -----
36 IS-NR Active -----
37 IS-NR Active -----
38 IS-NR Active -----
39 IS-NR Active -----
40 IS-NR Active -----

```

Command Completed.

23. Place the required terminals out of service using the `rmv-trm` command.

If the OAP or SEAS terminals are being placed out of service, the `force=yes` parameter must be used when placing the last OAP or SEAS terminal out of service.

To place the OAP terminals out of service in this example, enter these commands.

```
rmv-trm:trm=6
```

```
rmv-trm:trm=9:force=yes
```

To place the SEAS terminals out of service in this example, enter these commands.

```
rmv-trm:trm=27
```

```
rmv-trm:trm=36:force=yes
```



**CAUTION:** Placing the OAP or SEAS terminals out of service will disable the SEAS feature on the EAGLE 5 ISS.

#### CAUTION

To place the Telnet terminals out of service in this example, enter these commands.

```
rmv-trm:trm=17
```

```
rmv-trm:trm=18
```

```
rmv-trm:trm=19
```

```
rmv-trm:trm=20
```

```
rmv-trm:trm=21
```

```
rmv-trm:trm=22
```

```
rmv-trm:trm=23
```

```
rmv-trm:trm=24
```





**CAUTION**

**CAUTION:** Placing the Telnet terminals out of service will disable any Telnet sessions running on these terminals.

If the status of any of the terminals shown in the PST field in [Step 22](#) on page 217 is OOS-MT-DSBLD (out-of-service maintenance disabled), the terminal is already out of service and the `rmv-trm` command does not need to be executed for that terminal.

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Inhibit message sent to terminal

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Command Completed.
```

- [Step 24](#) on page 219 is performed only if the OAP or SEAS terminals were placed out of service in this step. If the OAP or SEAS terminals were not placed out of service in this step, continue the procedure with [Step 25](#) on page 219.
- If the OAP or SEAS terminals were placed out of service in this step, continue the procedure with [Step 24](#) on page 219.

24. Change the terminal type of the OAP or SEAS terminals to NONE with the `chg-trm` command, the `type=none` parameter, and with the values of the OAP or SEAS terminals used in [Step 23](#) on page 218.

If OAP terminals are shown in the `rtrv-trm` output in [Step 21](#) on page 216, for this example, enter these commands.

```
chg-trm:trm=6:type=none
chg-trm:trm=9:type=none
```

If SEAS terminals are shown in the `rtrv-trm` output in [Step 21](#) on page 216, for this example, enter these commands.

```
chg-trm:trm=27:type=none
chg-trm:trm=36:type=none
```

This message should appear when these commands have successfully completed.

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
CHG-TRM: MASP B - COMPLTD
```

25. Place the card shown in [Step 12](#) on page 213 out of service using the `rmv-card` command.



**CAUTION**

**CAUTION:** Multiple cards running the same flash GPL can be updated at the same time with the `init-flash` command ([Step 28](#) on page 221). This requires that the cards in the locations specified with the `init-flash` command in [Step 28](#) on page 221 are out of service. All the cards running one of these application GPLs (SS7ML, ATMANSI, ATMITU, IPLIM, IPLIMI, SS7IPGW, IPGWI, VXWSLAN, VSCCP, MCP, EROUTE, and IPS) can be placed out of service. However, it is recommended that only some of the cards running a specific application GPL are placed out of service. Placing all the cards running a specific application GPL out of service will cause the traffic carried by these cards to be lost and disable the features supported by these cards.



**CAUTION:** If the EOAM GPL is being updated, the card being placed out of service must be the GPSM-II associated with the standby MASP. Both cards running the EOAM GPL cannot be placed out of service at the same time.



**CAUTION:** If there is only one card running these application GPLs (SS7ML, ATMANSI, ATMITU, IPLIM, IPLIMI, SS7IPGW, IPGWI, VXWSLAN, VSCCP, MCP, EROUTE, or IPS), shown in the GPL column in the `rept - stat - card` output in [Step 12](#) on page 213, in the EAGLE 5 ISS, placing the card out of service will cause the traffic carried by this card to be lost and disable the feature that this card supports.

For this example, enter this command.

```
rmv-card:loc=2105
```

**Note:** If more than one card running the same flash GPL is to be updated in [Step 28](#) on page 221, repeat this step for those cards.

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Card has been inhibited.
```

If the card is running the SS7ML, IPLIM, IPLIMI, SS7IPGW, or IPGWI application GPLs, and the card contains the last signaling link in a linkset, the `force=yes` parameter must be specified.

If the card is running the VSCCP or MCP application GPLs, and is the last in service card running the VSCCP or MCP application GPL, the `force=yes` parameter must be specified.

**Note:** If you do not wish to reload the TDM clock LCA bitfile, continue the procedure with [Step 28](#) on page 221.

**26.** Verify the status of the high-speed clocks by entering the `rept - stat - clk` command.

This is an example of the possible output.

```
rlghncxa03w 08-06-01 11:34:04 GMT EAGLE5 39.0.0
COMPOSITE PST SST AST
 SYSTEM CLOCK IS-NR Active -----
ALARM STATUS = No Alarms.
 Primary Comp Clk 1114 (CLK A) IS-NR Active -----
 Primary Comp Clk 1116 (CLK B) IS-NR Active -----
 Secondary Comp Clk 1114 (CLK A) IS-NR Idle -----
 Secondary Comp Clk 1116 (CLK B) IS-NR Idle -----

Clock Using Bad
CLK A 9 0
CLK B 0 0
CLK I 0 --

HIGH SPEED PST SST AST
 SYSTEM CLOCK IS-NR Idle -----
ALARM STATUS = No Alarms.
 Primary HS Clk 1114 (HS CLK A) IS-NR Active -----
 Primary HS Clk 1116 (HS CLK B) IS-NR Active -----
 Secondary HS Clk 1114 (HS CLK A) IS-NR Idle -----
 Secondary HS Clk 1116 (HS CLK B) IS-NR Idle -----

HS CLK TYPE 1114 = RS422
HS CLK LINELEN 1114 = LONGHAUL
```

```
HS CLK TYPE 1116 = RS422
HS CLK LINELEN 1116 = LONGHAUL
```

| Clock    | Using | Bad |
|----------|-------|-----|
| HS CLK A | 2     | 0   |
| HS CLK B | 0     | 0   |
| HS CLK I | 0     | --  |

```
Command Completed
```

If the `rept-stat-clk` output does not show any high-speed clocks (HIGH SPEED SYSTEM CLOCK, Primary HS Clk, Secondary HS Clk, HS CLK TYPE, and HS CLK LINELEN fields), the EAGLE 5 ISS does not contain any cards that are capable of using high-speed master timing.

**Note:** If the HS CLK TYPE and HS CLK LINELEN values shown in [Step 2](#) on page 209 are set to the system default values (HS CLK TYPE = RS422 and HS CLK LINELEN = LONGHAUL), continue the procedure with [Step 28](#) on page 221.

27. Visually verify the part numbers of both TDMs in the EAGLE 5 ISS.

To load the TDM clock LCA bitfile, the part numbers of both TDMs must be 870-0774-15 or later.

If the TDM part numbers are 870-0774-15 or later, continue the procedure with [Step 29](#) on page 223.

If the TDM part numbers are not 870-0774-15 or later, the TDMs must be replaced with TDM part numbers 870-0774-15. Refer to [Customer Care Center](#) on page 4 for the contact information. If the older TDMs are not replaced, this procedure cannot be performed.

28. Load the flash GPL onto the card inhibited in [Step 25](#) on page 219 using the `init-flash` command with the `code=appr` parameter to load the approved version of the flash GPL onto the card.

For this example, enter this command.

```
init-flash:code=appr:loc=2105
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Downloading for card 2105 Started.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
BPHCAP Downloading for card 2105 Complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.
```

If the card inhibited in [Step 25](#) on page 219 is a GPSM-II, and you are reloading the TDM clock LCA bitfile, the `initclk=yes` and, if necessary, the `force=yes` parameters must be specified with the `init-flash` command.



**CAUTION**

**CAUTION:** If reloading the TDM clock LCA bitfile would cause a system clock outage, the `force=yes` parameter must be used with the `init-flash` command. A system clock outage can be caused by either the EAGLE 5 ISS having only one TDM (a simplex MASP configuration) or if the status of the high-speed clocks, shown in the `rept-stat-clk` output in [Step 26](#) on page 220, on the TDM which

is not being reset is Fault. A system clock outage will result in a loss of traffic on some or all signaling links.

The following command example loads the flash GPL onto the GPSM-II card and reloads the TDM clock LCA bitfile.

```
init-flash:initclk=yes:loc=1113:code=appr
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Download for card 1113 Started.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Download for card 1113 Completed.
```

### Updating more than One Card at the Same Time

If more than one card running the same flash GPL is being updated, enter the `init-flash` command with these parameters along with the `code=appr` parameter:

`sloc` – the first card location in the range of card locations

`eloc` – the last card location in the range of card locations

`gpl` – the flash GPL being updated

**Note:** The `sloc`, `eloc`, and `gpl` parameters cannot be specified with the `loc` parameter. When the `sloc`, `eloc`, and `gpl` parameters are specified, only the cards running the flash GPL specified by the `gpl` parameter and within the range specified by the `sloc` and `eloc` parameters are updated. All other cards in the range specified by the `sloc` and `eloc` parameters are skipped.

Entering this example command will update the cards in the locations 1101 to 2115 running the BPDCM flash GPL with the approved version of the BPDCM GPL.

```
init-flash:code=appr:sloc=1101:eloc=2115:gpl=bpdcn
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Download for cards 1101 - 2115 Started.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Download for cards 1101 - 2115 Completed.
LOC 1101 : PASSED
LOC 1102 : PASSED
LOC 1112 : PASSED
LOC 2105 : PASSED
LOC 2107 : PASSED
LOC 2111 : PASSED
LOC 2112 : PASSED
LOC 2115 : PASSED

ALL CARD RESULTS PASSED
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.
```

When the `init-flash` command has completed successfully, the card specified in the `init-flash` command is rebooted.

29. Put the cards that were inhibited in [Step 25](#) on page 219 back into service using the `rst-card` command.

For this example, enter this command.

```
rst-card:loc=2105
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Card has been allowed.
```

30. Verify that the flash GPL from [Step 28](#) on page 221 has loaded and that the card has returned to its in-service normal (IS-NR) state using the `rept-stat-card` command.

For this example, enter this command.

```
rept-stat-card:loc=2105
```

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
CARD VERSION TYPE GPL PST SST AST
2105 132-003-000 DCM VXWSLAN IS-NR Active -----
ALARM STATUS = No Alarms.
BPDCM GPL = 132-003-000 +
IMT BUS A = Conn
IMT BUS B = Conn
SLK A PST = IS-NR LS=lsnsspn2 CLI=-----
SCCP SERVICE CARD = 1212
SLAN SERVICE CARD = ----
Command Completed.
```

The '+' symbol indicates that the flash GPL has not been activated.

**Note:** If the version number of the BPDCM or BPDCM2 GPL shown in the `rept-stat-card` command output is different than the version specified in [Step 12](#) on page 213, contact the Customer Care Center. Refer to [Customer Care Center](#) on page 4 for the contact information.

31. Activate the approved flash GPL loaded onto the cards in [Step 28](#) on page 221 using the `act-flash` command.

For this example, enter this command.

```
act-flash:loc=2105
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Activation for card 2105 Completed.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.
```

### Activating more than One Card at the Same Time

If more than one card running the same flash GPL was updated in [Step 28](#) on page 221, enter the `act-flash` command with these parameters:

`sloc` – the first card location in the range of card locations

`eloc` – the last card location in the range of card locations

`gpl` – the flash GPL being activated

**Note:** The `sloc`, `eloc`, and `gpl` parameters cannot be specified with the `loc` parameter. When the `sloc`, `eloc`, and `gpl` parameters are specified, only the cards running the flash GPL specified by the `gpl` parameter and within the range specified by the `sloc` and `eloc` parameters are updated. All other cards in the range specified by the `sloc` and `eloc` parameters are skipped.

Entering this example command will activate the flash GPLs on the cards in the locations 1101 to 2115.

```
act-flash:sloc=1101:eloc=2115:gpl=bpdc
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Activation for cards 1101 - 2115 Started.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Activation for cards 1101 - 2115 Completed.
LOC 1101 : PASSED
LOC 1102 : PASSED
LOC 1112 : PASSED
LOC 2105 : PASSED
LOC 2107 : PASSED
LOC 2111 : PASSED
LOC 2112 : PASSED
LOC 2115 : PASSED

ALL CARD RESULTS PASSED
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.
```

32. Verify the flash GPLs on the cards using the `rept-stat-gpl` command with the `gpl` parameter value specified in [Step 9](#) on page 211.

If any card is not running the release version of the flash GPL, shown in the **RELEASE** column of the `rtrv-gpl` output in [Step 10](#) on page 211, the indicator **ALM** is displayed next to the flash GPL version in the **RUNNING** column of the `rept-stat-gpl` output. For this example, enter this command.

```
rept-stat-gpl:gpl=bpdc
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 11:40:26 GMT EAGLE5 36.0.0
GPL CARD RUNNING APPROVED TRIAL
BPDCM 1113 132-002-000 ALM 132-003-000 132-002-000
BPDCM 1115 132-002-000 ALM 132-003-000 132-002-000
BPDCM 1303 132-002-000 ALM 132-003-000 132-002-000
BPDCM 1307 132-002-000 ALM 132-003-000 132-002-000
BPDCM 2101 132-002-000 ALM 132-003-000 132-002-000
BPDCM 2103 132-002-000 ALM 132-003-000 132-002-000
BPDCM 2105 132-003-000 132-003-000 132-002-000
BPDCM 2113 132-002-000 ALM 132-003-000 132-002-000
BPDCM 2205 132-002-000 ALM 132-003-000 132-002-000
BPDCM 2207 132-002-000 ALM 132-003-000 132-002-000
BPDCM 2213 132-002-000 ALM 132-003-000 132-002-000
BPDCM 2301 132-002-000 ALM 132-003-000 132-002-000
BPDCM 2303 132-002-000 ALM 132-003-000 132-002-000
BPDCM 2305 132-002-000 ALM 132-003-000 132-002-000
BPDCM 2307 132-002-000 ALM 132-003-000 132-002-000
BPDCM 2311 132-002-000 ALM 132-003-000 132-002-000
```

```

BPDCM 3101 132-002-000 ALM 132-003-000 132-002-000
BPDCM 3103 132-002-000 ALM 132-003-000 132-002-000
BPDCM 3105 132-002-000 ALM 132-003-000 132-002-000
BPDCM 3107 132-002-000 ALM 132-003-000 132-002-000
Command Completed

```

**Note:** If the flash GPL being displayed by the `rept-stat-gpl` command is the BPDCM or BPDCM2 GPL, the output of the `rept-stat-gpl` command will show any DCMs, DSMs, or GPSM-II cards that are inserted in the EAGLE 5 ISS, whether they are configured in the database or not.

**Note:** If the card's application GPL, shown in the `rept-stat-card` output in [Step 12](#) on page 213, is SS7ML, ATMANSI, ATMITU, IPLIM, IPLIMI, SS7IPGW, or IPGWI, perform [Step 33](#) on page 225 and [Step 34](#) on page 225, then go to [Step 41](#) on page 229. Skip [Step 35](#) on page 226 through [Step 40](#) on page 228.

33. Place the signaling links that were deactivated in [Step 15](#) on page 214 back into service using the `act-slk` command.

For this example, enter these commands.

```

act-slk:loc=1201:link=a
act-slk:loc=1201:link=b
act-slk:loc=1201:link=a1
act-slk:loc=1201:link=b1

```

When each of these commands have successfully completed, this message should appear.

```

rlghncxa03w 06-10-01 11:55:49 GMT EAGLE5 36.0.0
Activate SLK message sent to card

```

34. Verify that the signaling links activated in [Step 33](#) on page 225 are back in service using the `rept-stat-slk` command with the card location and signaling link.

For this example, enter these commands.

```
rept-stat-slk:loc=1201:link=a
```

This is an example of the possible output.

```

rlghncxa03w 06-10-01 13:06:25 GMT EAGLE5 36.0.0
SLK LSN CLLI PST SST AST
1201,A lsnmpl1 ----- IS-NR Avail ----
ALARM STATUS = No Alarms.
UNAVAIL REASON = --

```

```
rept-stat-slk:loc=1201:link=b
```

This is an example of the possible output.

```

rlghncxa03w 06-10-01 13:06:25 GMT EAGLE5 36.0.0
SLK LSN CLLI PST SST AST
1201,B lsnmpl2 ----- IS-NR Avail ----
ALARM STATUS = No Alarms.
UNAVAIL REASON = --

```

```
rept-stat-slk:loc=1201:link=a1
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 13:06:25 GMT EAGLE5 36.0.0
SLK LSN CLLI PST SST AST
1201,A1 lsnmpl3 ----- IS-NR Avail ----
 ALARM STATUS = No Alarms.
 UNAVAIL REASON = --
```

rept-stat-slk:loc=1201:link=b1

This is an example of the possible output.

```
rlghncxa03w 06-10-01 13:06:25 GMT EAGLE5 36.0.0
SLK LSN CLLI PST SST AST
1201,B1 lsnmpl4 ----- IS-NR Avail ----
 ALARM STATUS = No Alarms.
 UNAVAIL REASON = --
Command Completed.
```

**Note:** If the card's application GPL, shown in the `rept-stat-card` output in [Step 12](#) on page 213, is `vxwslan`, perform [Step 35](#) on page 226 and [Step 36](#) on page 226, then go to [Step 41](#) on page 229. Skip [Step 37](#) on page 226 through [Step 40](#) on page 228.

35. Place the TCP/IP data link that was deactivated in [Step 17](#) on page 214 back into service using the `act-dlk` command.

For this example, enter this command.

`act-dlk:loc=2105`

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 11:55:49 GMT EAGLE5 36.0.0
Activate Link message sent to card.
```

36. Verify that the TCP/IP data links activated in [Step 35](#) on page 226 are back in service with the `rept-stat-dlk` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 17:00:36 GMT EAGLE5 36.0.0
DLK PST SST AST
1303 IS-NR Avail ---
2101 IS-NR Avail ---
2103 IS-NR Avail ---
2105 IS-NR Avail ---
2113 IS-NR Avail ---
2301 IS-NR Avail ---
```

**Note:** If the application GPL running on the card is not EOAM, continue the procedure with [Step 41](#) on page 229.

**Note:** If the application GPL running on the card is IPS, perform [Step 39](#) on page 227 and [Step 40](#) on page 228, then go to [Step 41](#) on page 229. Skip [Step 37](#) on page 226 and [Step 38](#) on page 227.

37. If you wish to load the new GPL onto the GPSM-II card making up the active MASP, enter the `init-card` command specifying the location of the GPSM-II card making up active MASP.



For this example, enter the `init-card:loc=1115` command. This message should appear.

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Init Card command issued to card 1115
```

After the `init-card` command has completed, repeat this procedure from [Step 25](#) on page 219, specifying the card location used in the `init-card` command.

If you did not wish to load the new version of the BPDCM or BPDCM2 GPL onto the other GPSPM-II card running the EOAM application, continue this procedure with either [Step 38](#) on page 227 or [Step 41](#) on page 229 based on the following conditions:

- If OAP and SEAS terminals were not shown in the `rtrv-trm` command output in [Step 21](#) on page 216, continue the procedure with [Step 41](#) on page 229.
- If OAP and SEAS terminals were shown in the `rtrv-trm` command output in [Step 21](#) on page 216, continue the procedure with [Step 38](#) on page 227.

38. Change the terminal type of the terminals that were changed to NONE in [Step 24](#) on page 219 to the terminal type OAP or SEAS with the `chg-trm` command and either the `type=oap` (for OAP terminals) or `type=seas` (for SEAS terminals) parameter

The terminal type is shown in the TYPE field in the `rtrv-trm` command output in [Step 21](#) on page 216.

If OAP terminals were changed in [Step 24](#) on page 219, for this example, enter these commands.

```
chg-trm:trm=6:type=oap
```

```
chg-trm:trm=9:type=oap
```

If SEAS terminals were changed in [Step 24](#) on page 219, for this example, enter these commands.

```
chg-trm:trm=27:type=seas
```

```
chg-trm:trm=36:type=seas
```

This message should appear when these commands have successfully completed.

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
CHG-TRM: MASP B - COMPLTD
```

39. Put the required terminals back into service with the `rst-trm` command.

If OAP terminals were placed out of service in [Step 23](#) on page 218, for this example, enter these commands.

```
rst-trm:trm=6
```

```
rst-trm:trm=9
```

If SEAS terminals were placed out of service in [Step 23](#) on page 218, for this example, enter these commands.

```
rst-trm:trm=27
```

```
rst-trm:trm=36
```

If Telnet terminals were placed out of service in [Step 23](#) on page 218, for this example, enter these commands.

```
rst-trm:trm=17
```

```
rst-trm:trm=18
rst-trm:trm=19
rst-trm:trm=20
rst-trm:trm=21
rst-trm:trm=22
rst-trm:trm=23
rst-trm:trm=24
```

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Allow message sent to terminal

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Command Completed.
```

40. Verify that the terminals are in service with the `rept-stat-trm` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
1 IS-NR Active -----
2 IS-NR Active -----
3 IS-NR Active -----
4 IS-NR Active -----
5 IS-NR Active -----
6 IS-NR Active -----
7 IS-NR Active -----
8 IS-NR Active -----
9 IS-NR Active -----
10 IS-NR Active -----
11 IS-NR Active -----
12 IS-NR Active -----
13 IS-NR Active -----
14 IS-NR Active -----
15 IS-NR Active -----
16 IS-NR Active -----
17 IS-NR Active -----
18 IS-NR Active -----
19 IS-NR Active -----
20 IS-NR Active -----
21 IS-NR Active -----
22 IS-NR Active -----
23 IS-NR Active -----
24 IS-NR Active -----
25 IS-NR Active -----
26 IS-NR Active -----
27 IS-NR Active -----
28 IS-NR Active -----
29 IS-NR Active -----
30 IS-NR Active -----
31 IS-NR Active -----
32 IS-NR Active -----
33 IS-NR Active -----
34 IS-NR Active -----
35 IS-NR Active -----
36 IS-NR Active -----
```

|    |       |        |       |
|----|-------|--------|-------|
| 37 | IS-NR | Active | ----- |
| 38 | IS-NR | Active | ----- |
| 39 | IS-NR | Active | ----- |
| 40 | IS-NR | Active | ----- |

Command Completed.

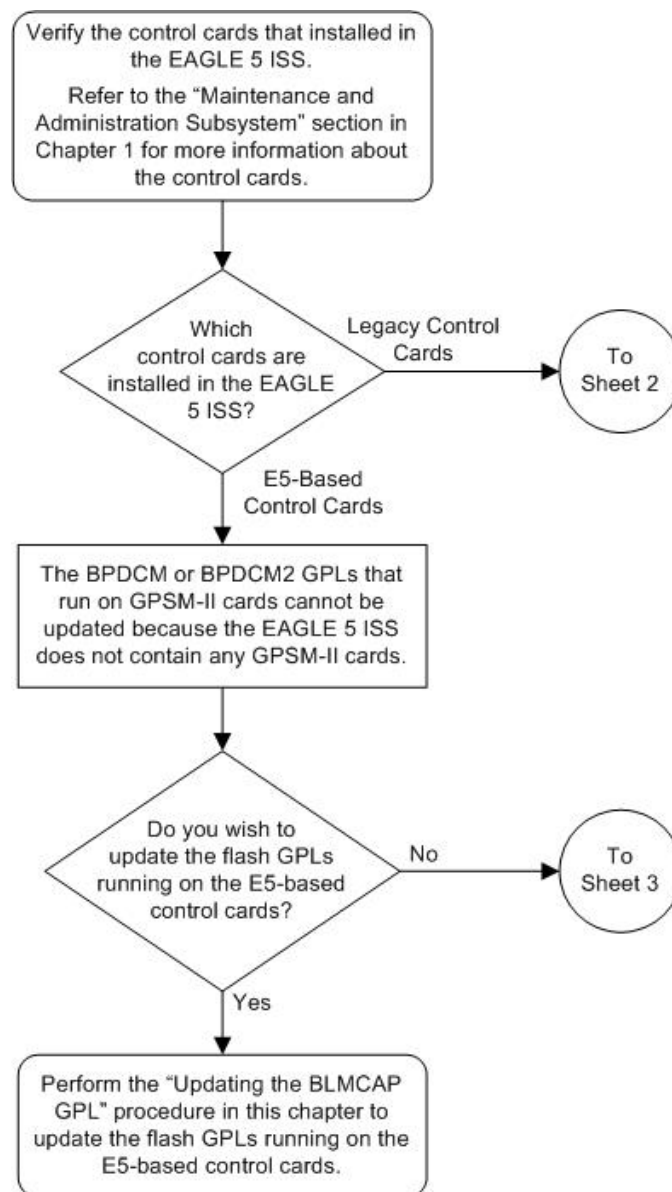
**41.** Continue the procedure by performing these actions.

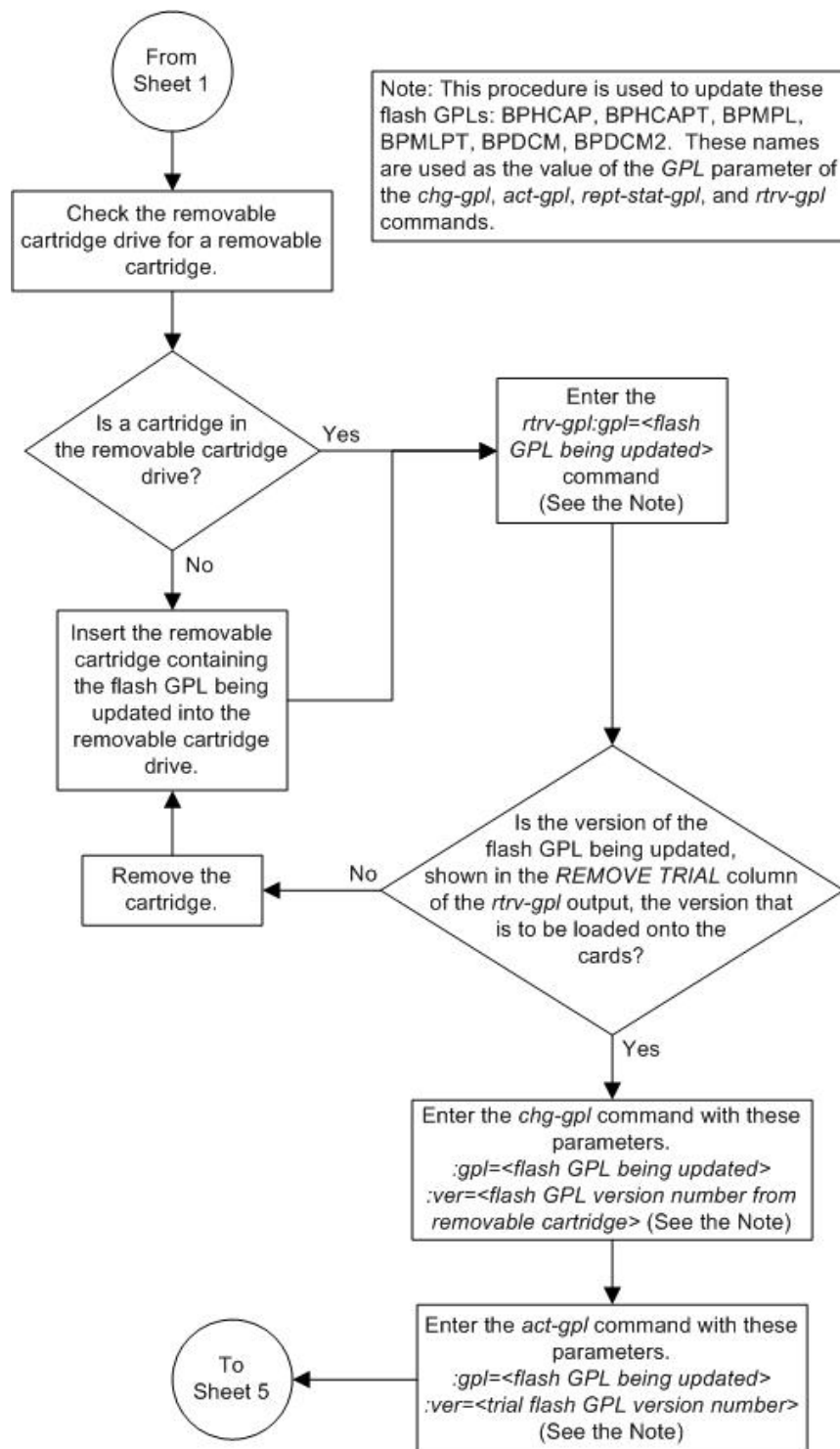
If legacy control cards are installed in the EAGLE 5 ISS, remove the removable cartridge from the removable cartridge drive on the MDAL card. For information about removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

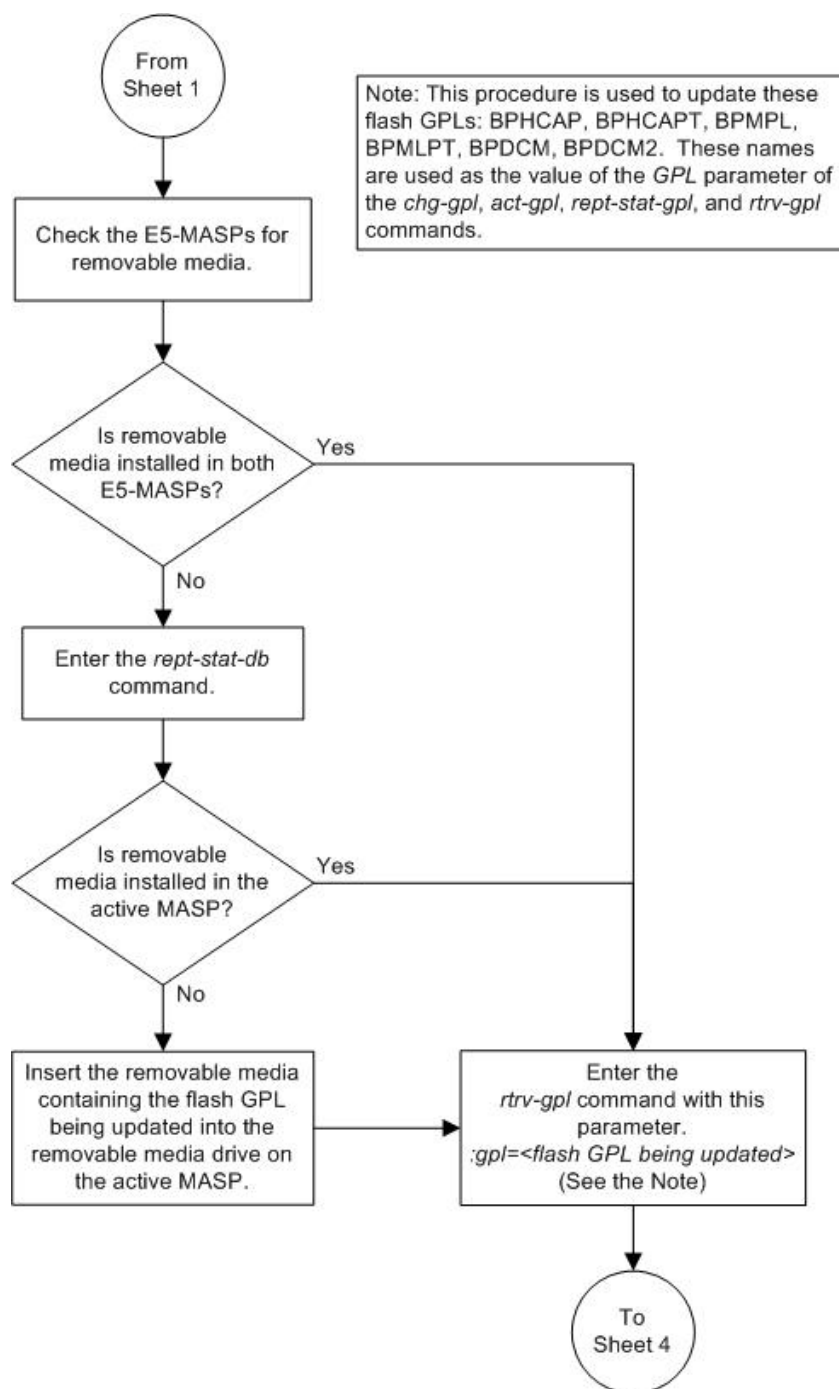
When the removable cartridge has been removed, or if E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure by performing one of these actions.

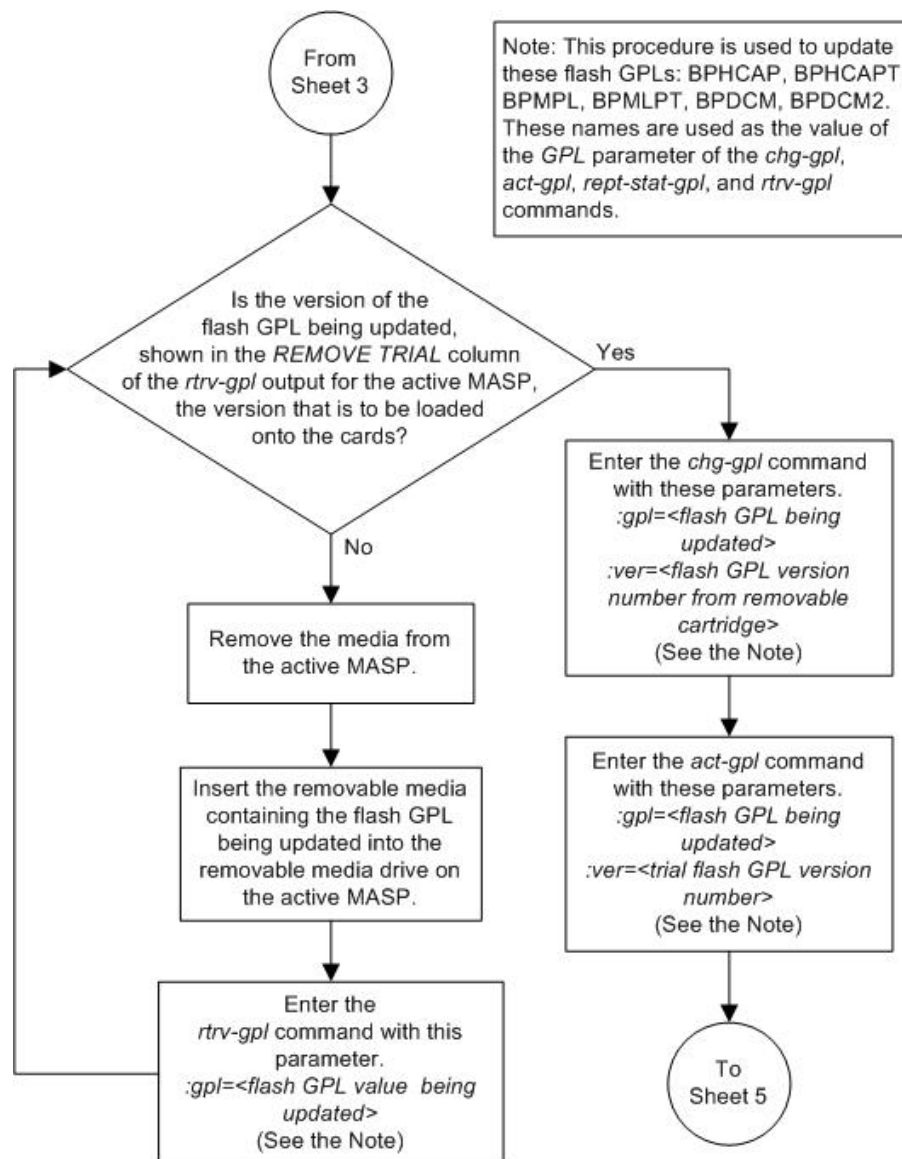
- If the BPDCM or BPDCM2 GPL was loaded onto the GPSM-II card and no other flash GPLs are being updated, then this procedure is finished.
- If the BPDCM or BPDCM2 GPL was loaded onto the GPSM-II card and other flash GPLs are being updated, repeat this procedure from [Step 1](#) on page 209.
- If the GPL that was loaded in this procedure was not the BPDCM or BPDCM2 GPL, perform one of these actions.
  - If the GPL will be loaded onto other cards, repeat this procedure from [Step 10](#) on page 211.
  - If the GPL will not be loaded onto other cards, but other flash GPLs will be updated, repeat this procedure from [Step 1](#) on page 209.
  - If the GPL will not be loaded onto other cards, and other flash GPLs will not be updated, this procedure is finished.

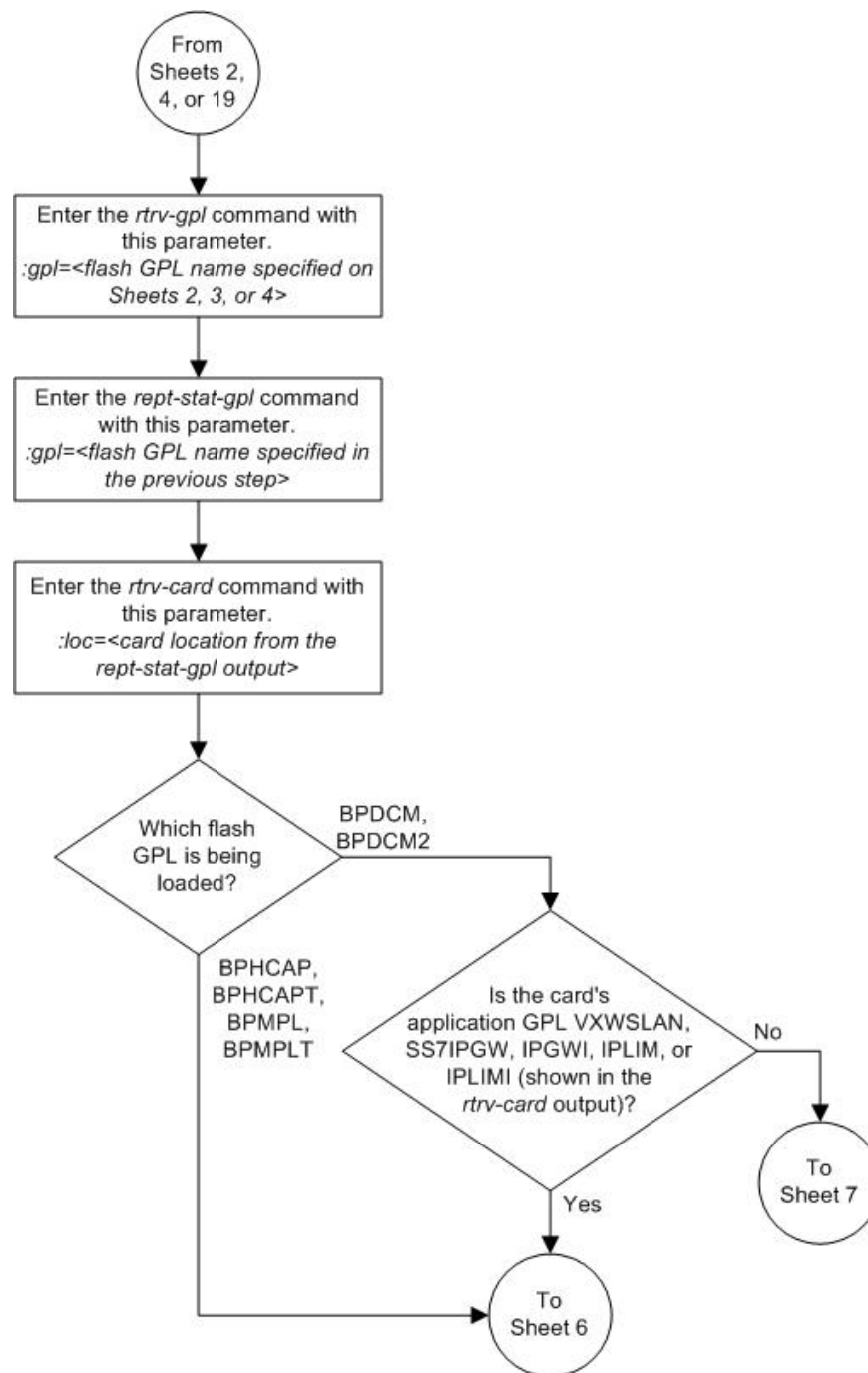
**Figure 28: Updating the Flash GPLs**



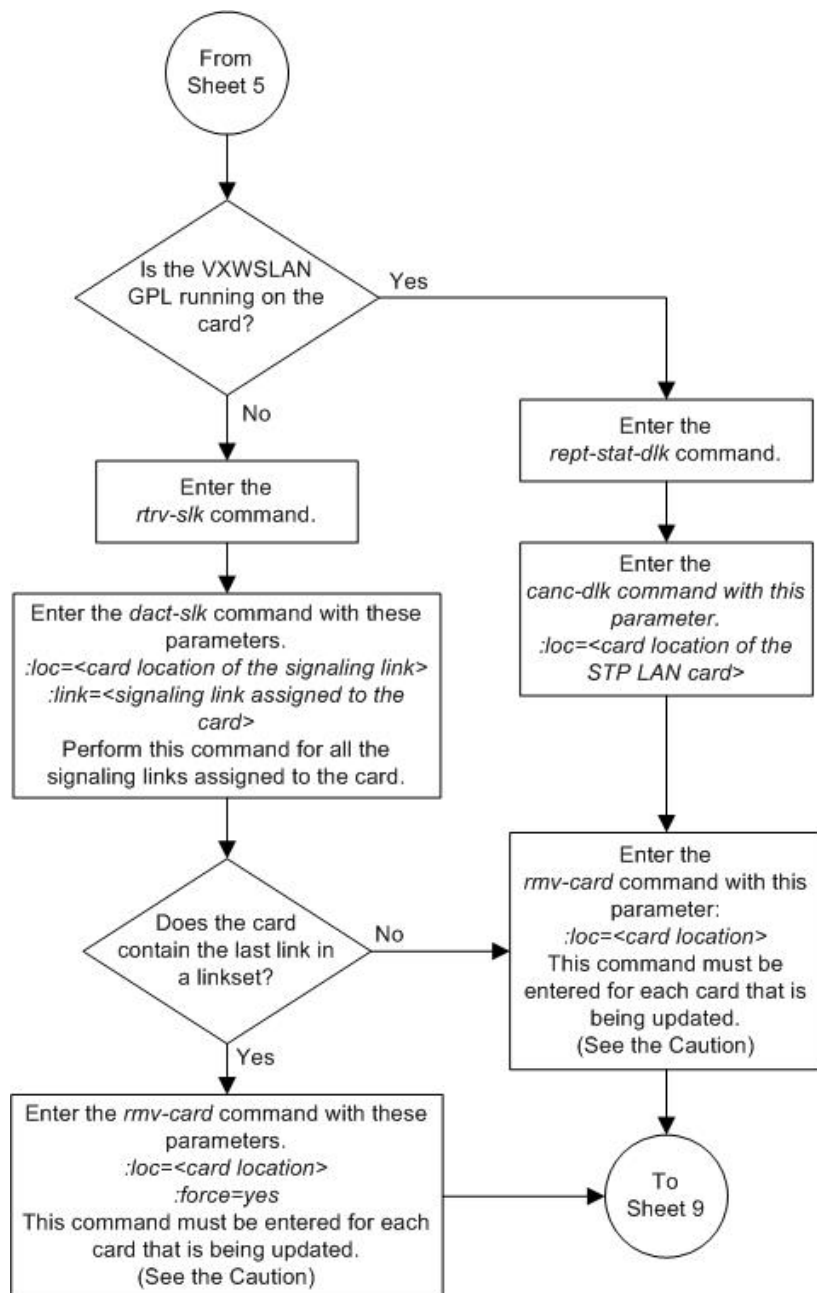




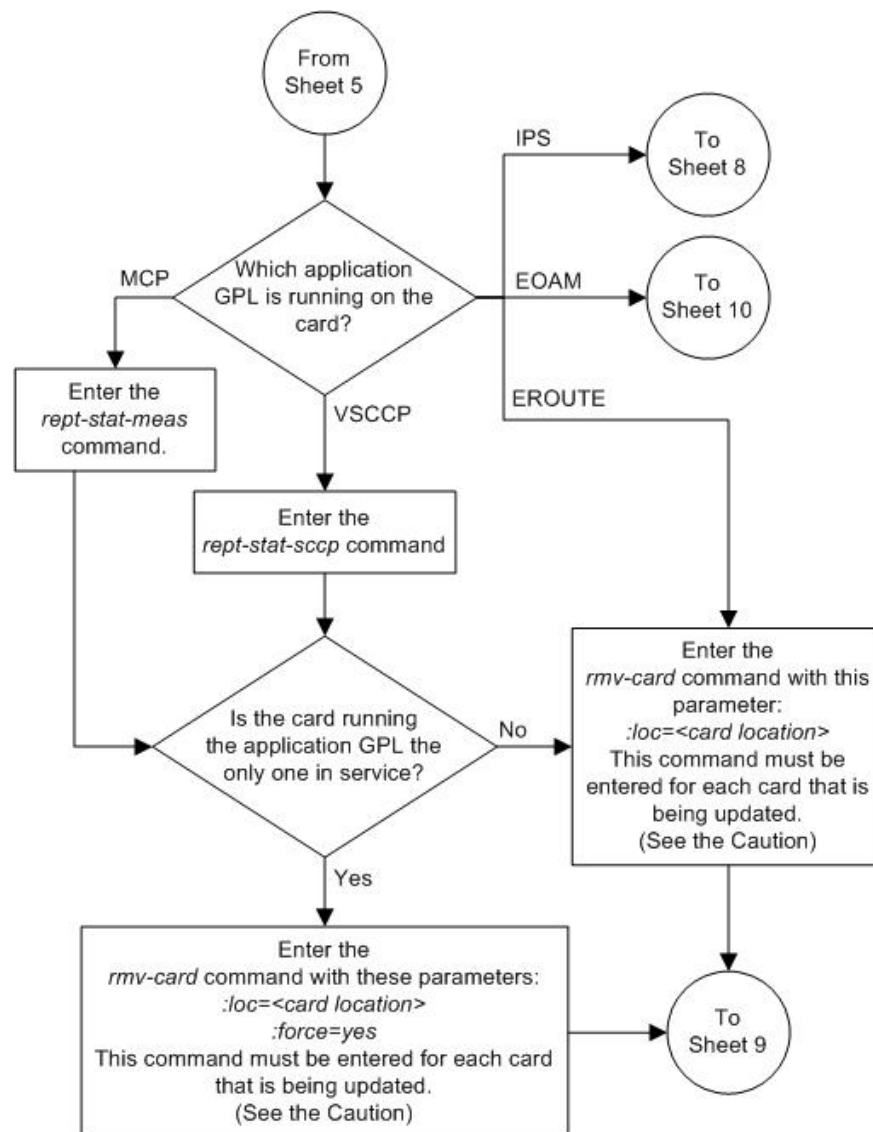




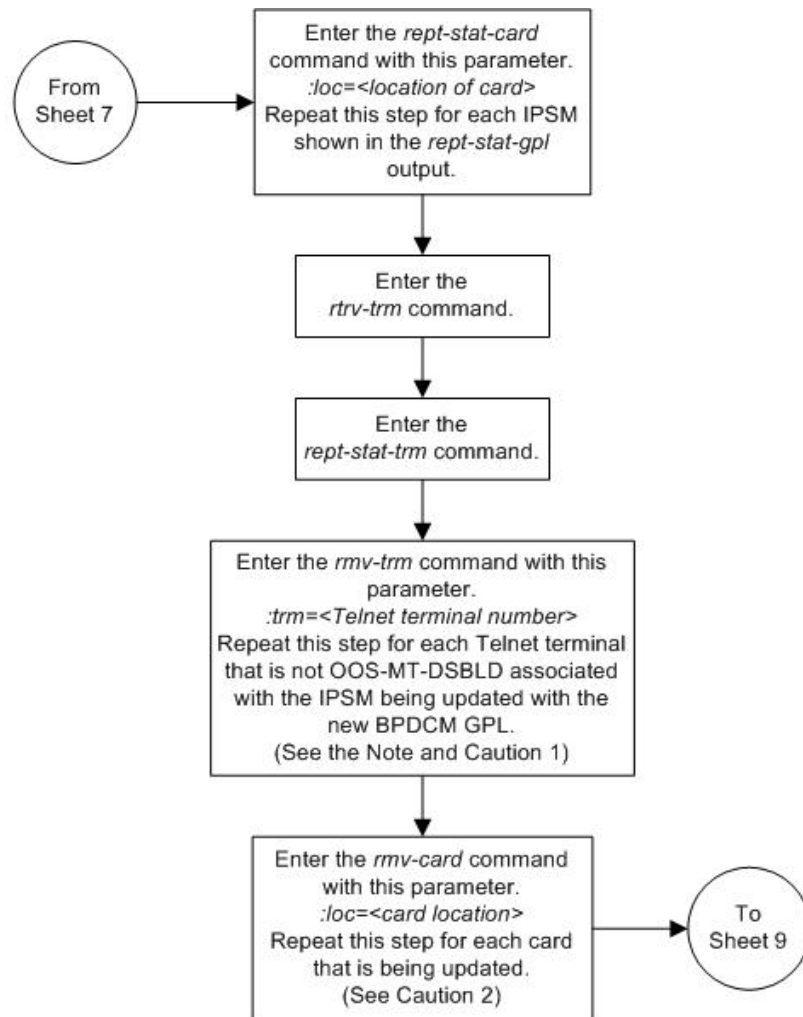




**Caution:** Multiple cards running the same flash GPL can be updated at the same time with the *init-flash* command. This requires that the cards in the locations specified with the *init-flash* command are out of service. All the cards running one of these application GPLs (ss7ml, atmansi, atmitu, iplim, iplimi, ss7ipgw, ipgwi, and vxwslan) can be placed out of service. However, it is recommended that only some of the cards running a specific application GPL are placed out of service. Placing all the cards running a specific application GPL out of service will cause the traffic carried by these cards to be lost and disable the features supported by these cards.



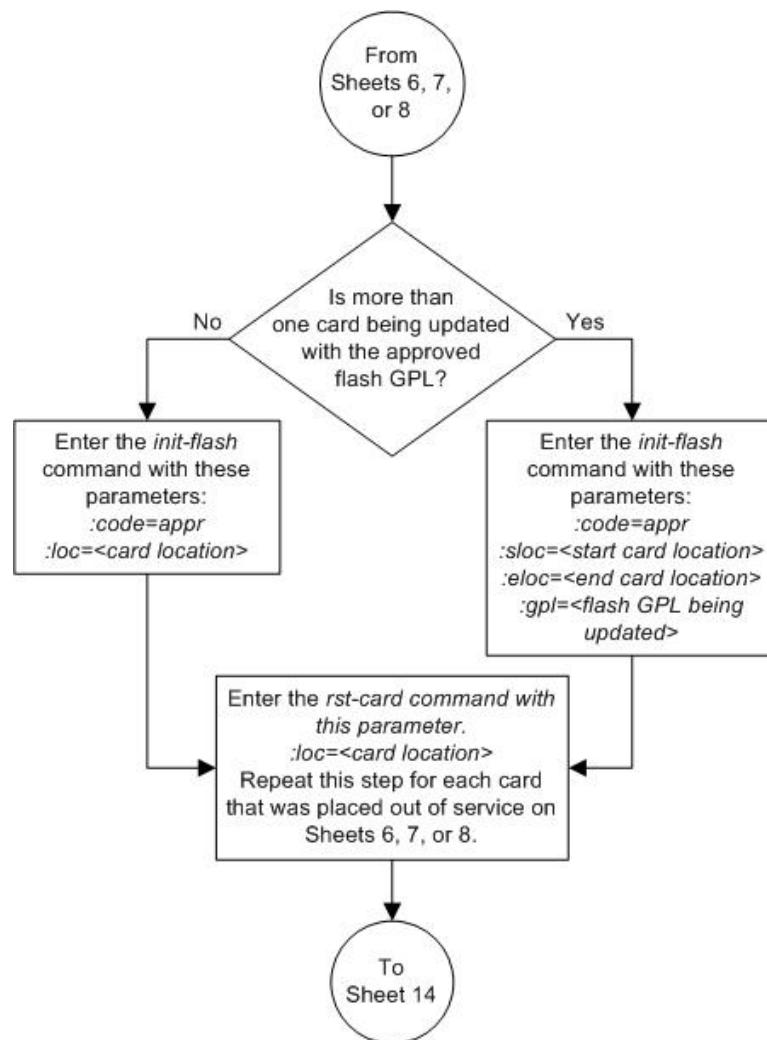
**Caution:** Multiple cards running the same flash GPL can be updated at the same time with the *init-flash* command. This requires that the cards in the locations specified with the *init-flash* command are out of service. All the cards running a one of these application GPLs (vscpp, mcp, eroute) can be placed out of service. However, it is recommended that only some of the cards running a specific application GPL are placed out of service. Placing all the cards running a specific application GPL out of service will cause the traffic carried by these cards to be lost and disable the features supported by these cards.

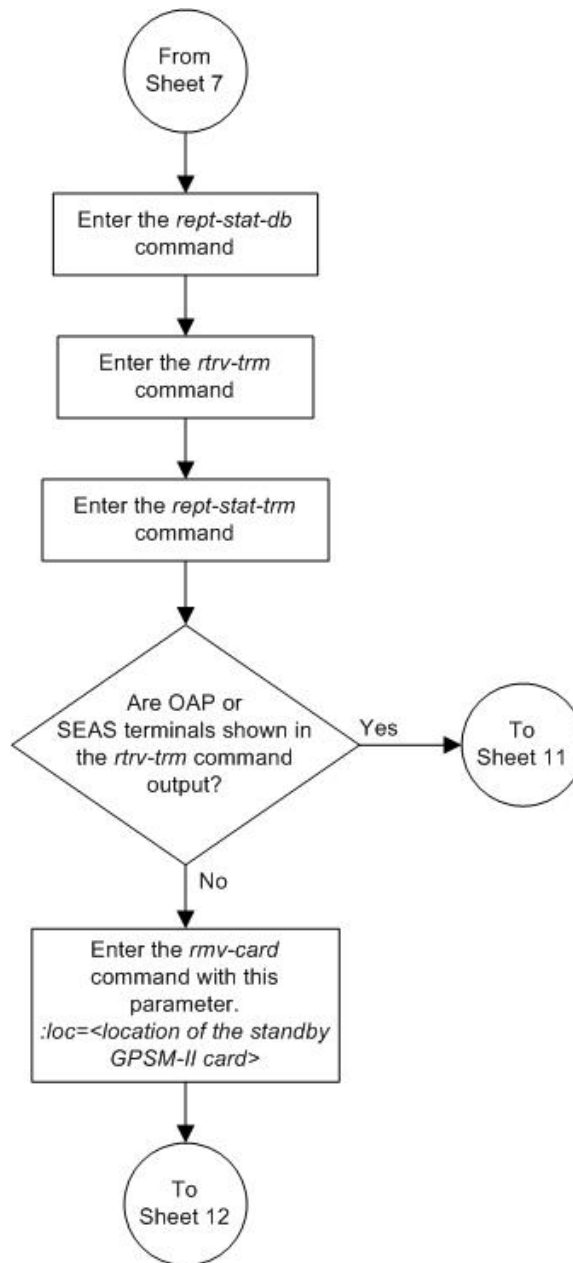


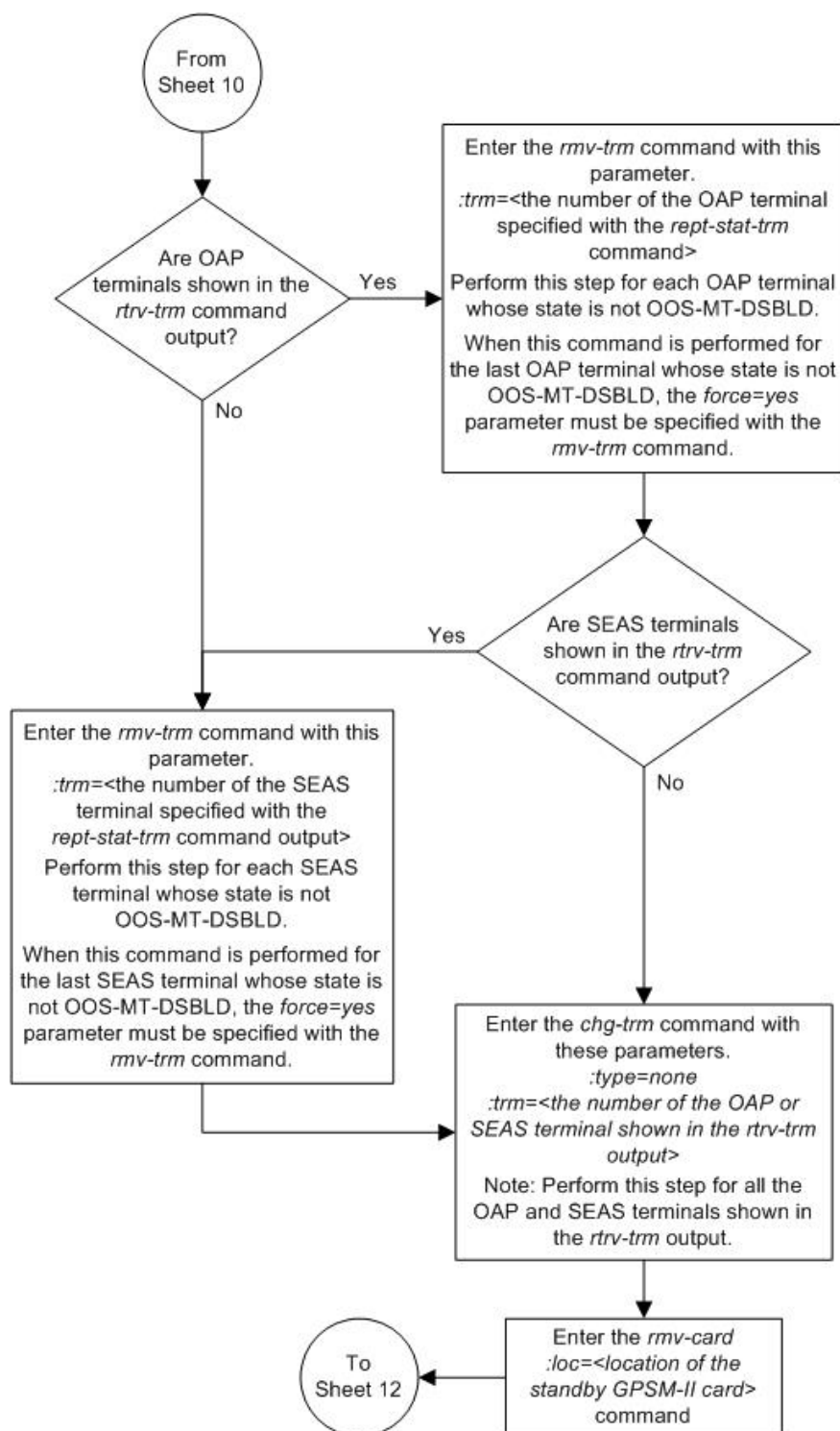
**Note:** Each IPSM has 8 Telnet terminals associated with it. The *rtv-trm* output shows the Telnet terminals that are associated with each IPSM.

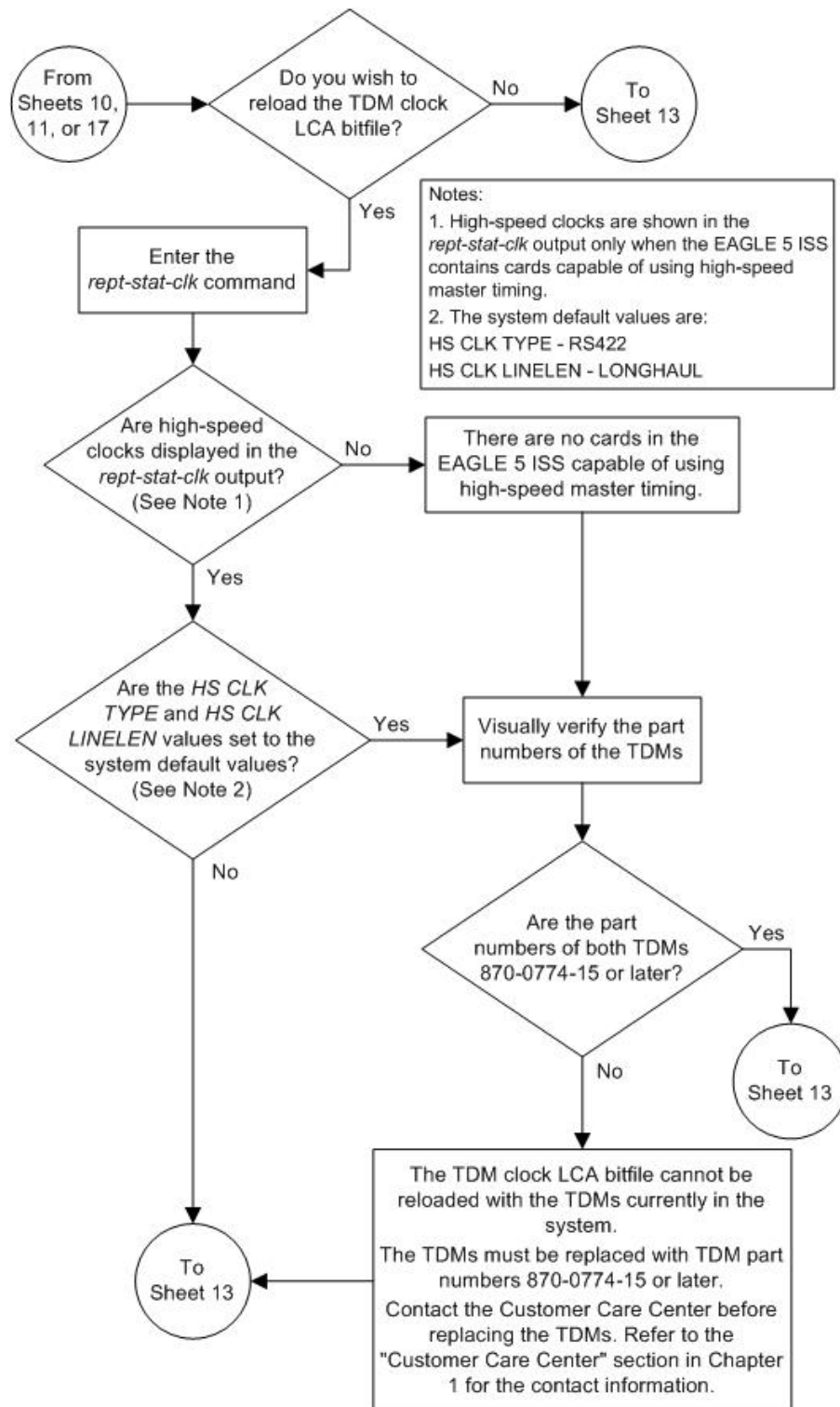
**Cautions:**

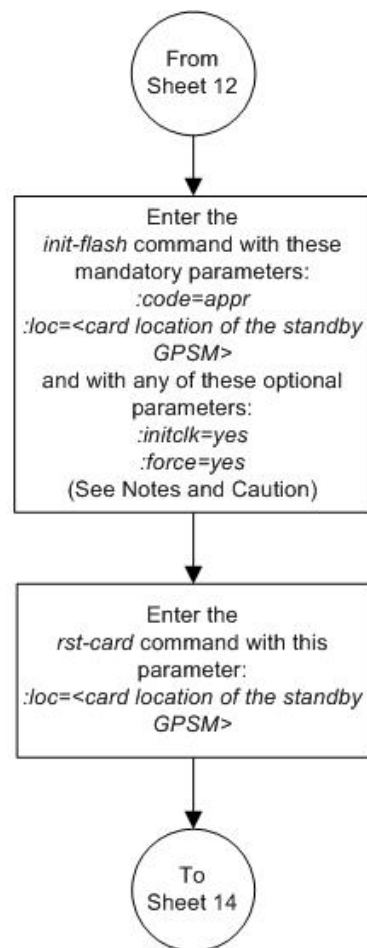
1. Placing the Telnet terminals out of service will disable all Telnet sessions supported by the terminals associated with the IPSM.
2. Multiple cards running the same flash GPL can be updated at the same time with the *init-flash* command. This requires that the cards in the locations specified with the *init-flash* command are out of service. All the IPSMs can be placed out of service at the same time. However, it is recommended that only some of the IPSMs are placed out of service. Placing all the IPSMs out of service will cause the traffic carried by IPSMs to be lost and disable the IP User Interface and FTP Retrieve and Replace features.







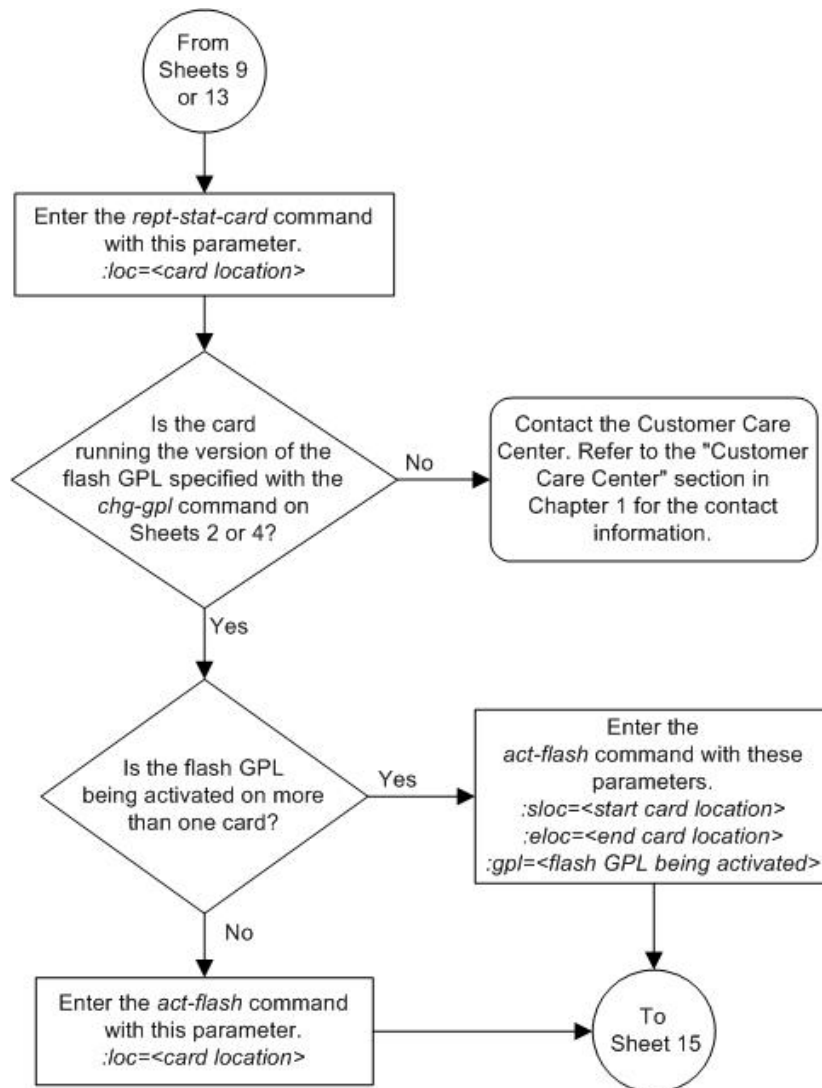


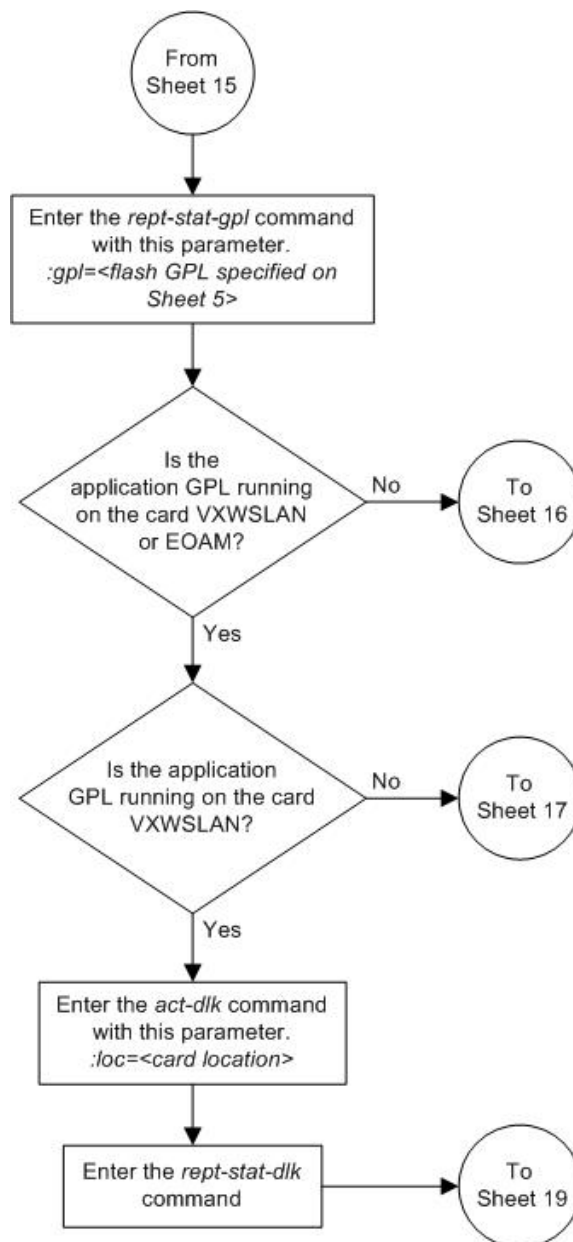
**Notes:**

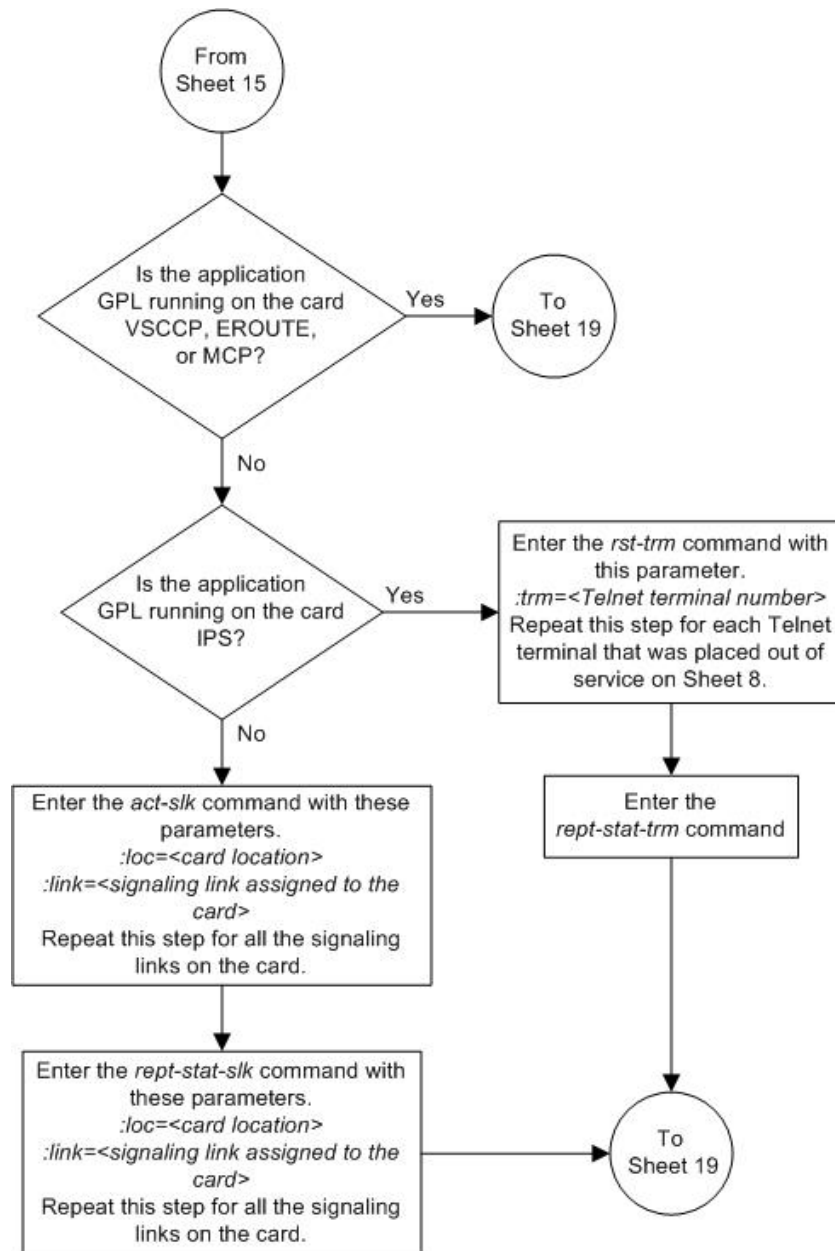
1. The *initclk=yes* parameter can be specified only if the part numbers of the TDMs in the system are 870-0774-15 or later. See Sheet 8.
2. The *force=yes* parameter can be specified only if the *initclk=yes* parameter is specified.
3. The *force=yes* parameter should be used only if the TDM clock LCA bitfile reload would cause a system clock outage. A system clock outage can be caused by either the system having only one TDM (a simplex MASP configuration) or if the status of high-speed clocks on the TDM which is not being reset is Fault. See the *rept-stat-clk* output from Sheet 8.

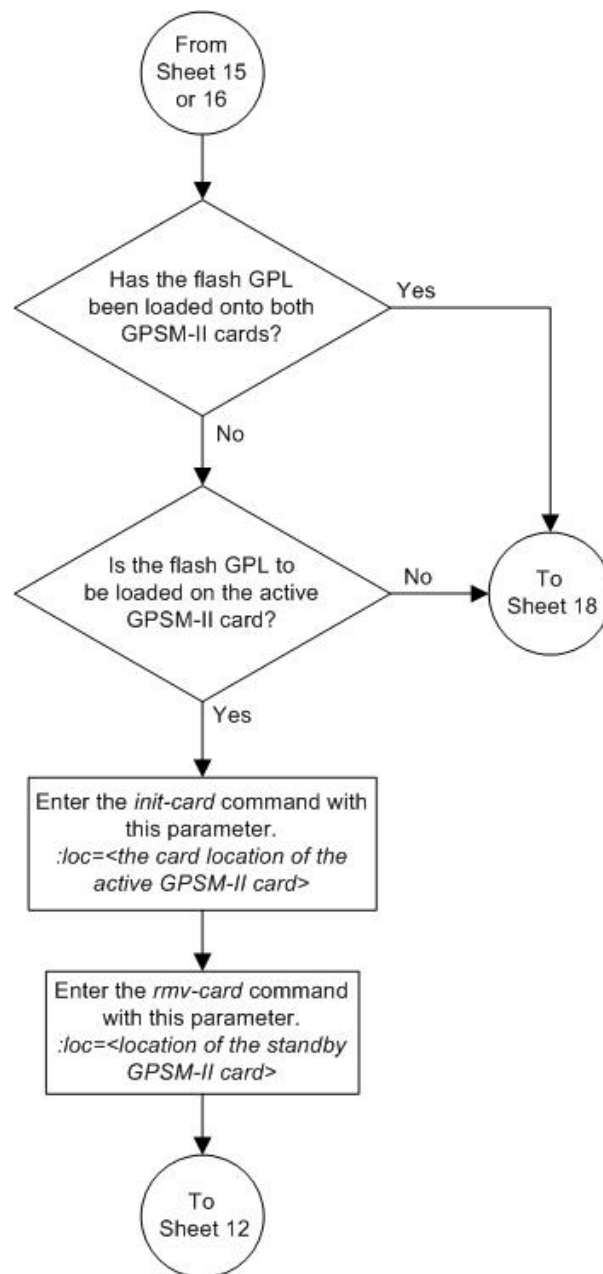
**Caution: A clock outage will result in a loss of traffic on some or all signaling links.**

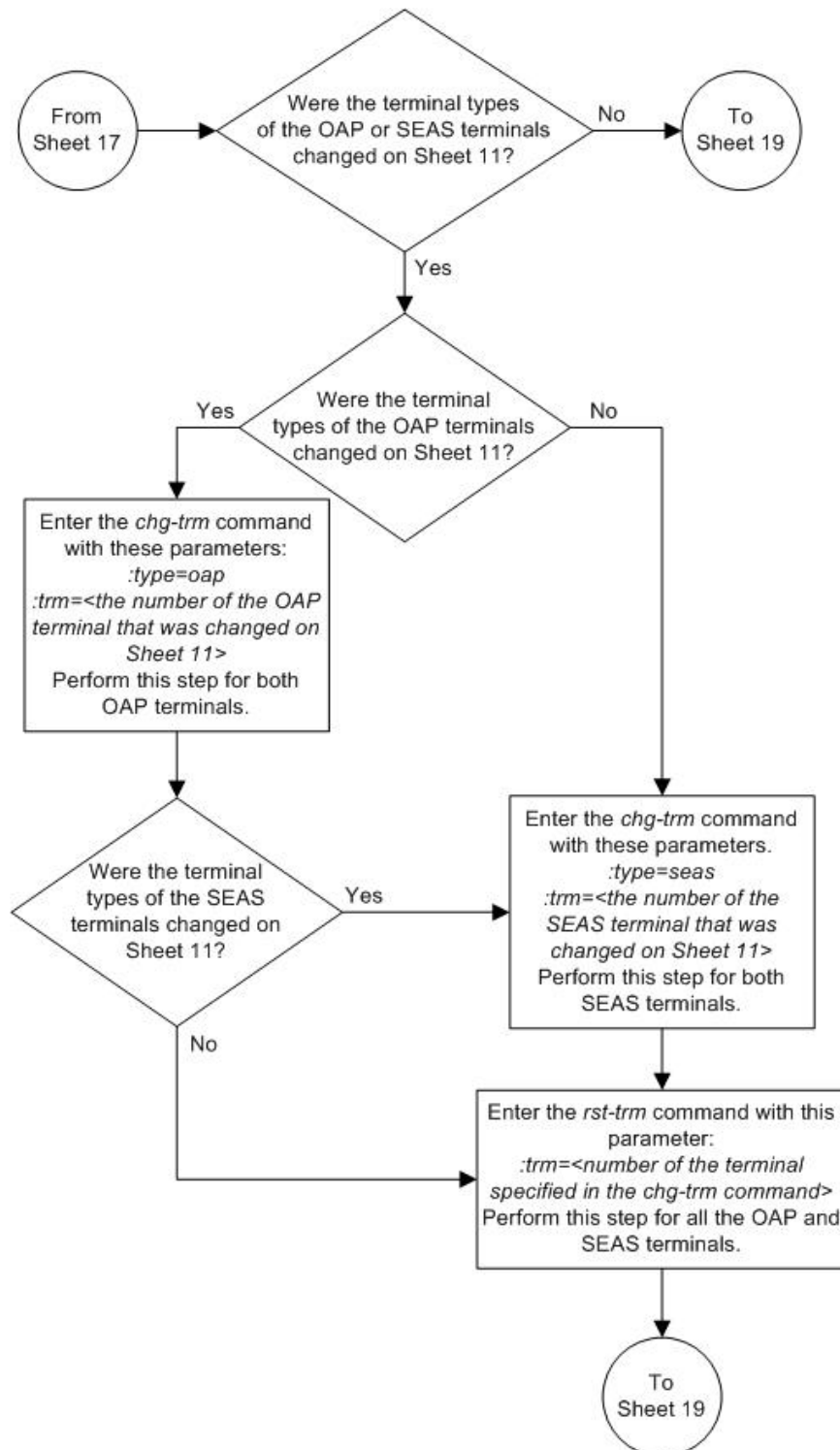


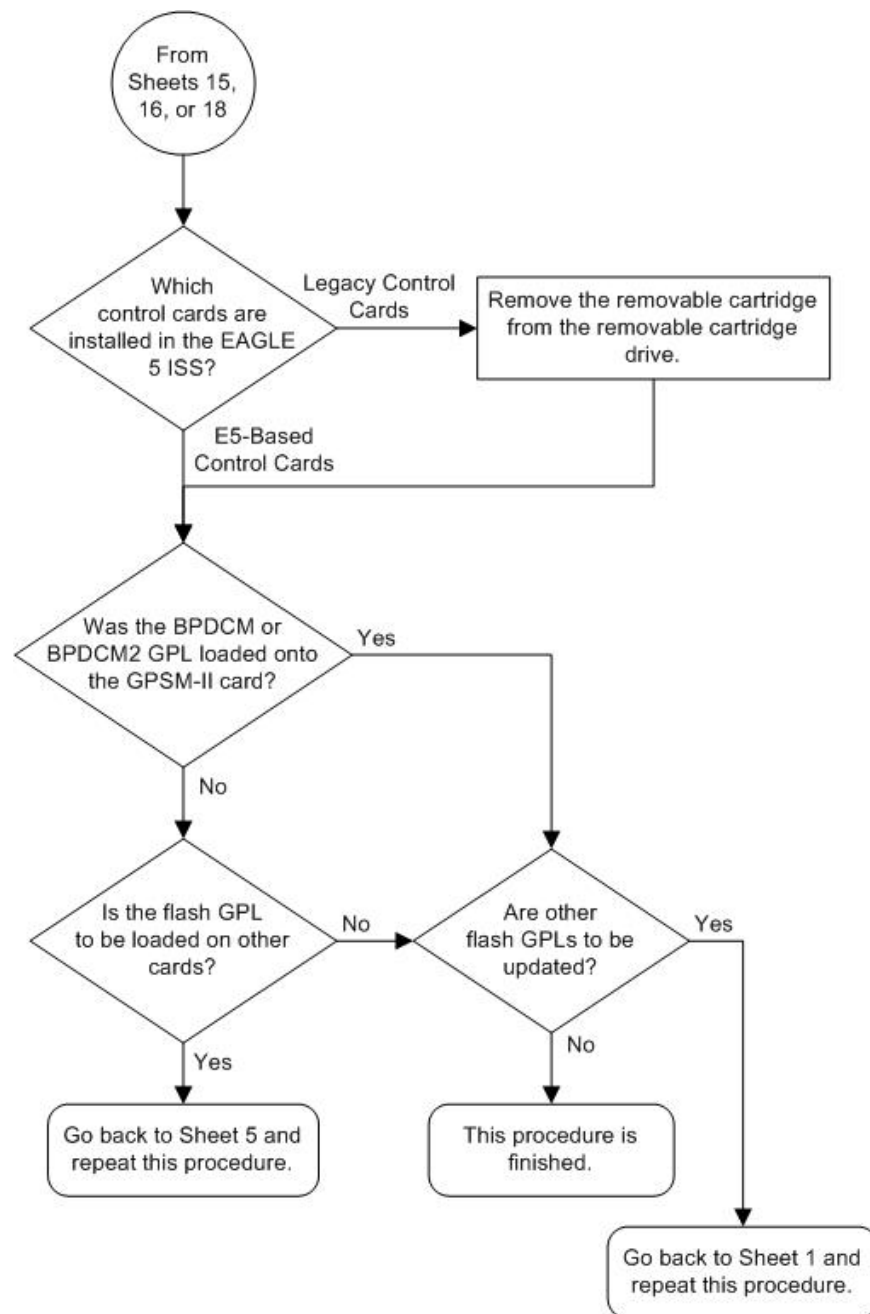












## Updating One of the Flash GPLs on the High-Capacity Cards

The high-capacity cards and their flash GPLs are shown in [Table 6: High-Capacity Card Flash GPLs](#) on page 249.

Table 6: High-Capacity Card Flash GPLs

| HC MIM  | E5-E1T1 E5-ENET | E5-STC E5-SLAN<br>E5-IPSM E5-ATM<br>E5-TSM | E5-SM4G |
|---------|-----------------|--------------------------------------------|---------|
| BLCPLD  | BLCPLD          | BLCPLD                                     | BLCPLD  |
| IMTPCI  | IMTPCI          | IMTPCI                                     | IMTPCI  |
| BLVXW6  | BLVXW6          | BLVXW6                                     | BLVXW6  |
| BLBIOS  | BLBEPM          | BLBEPM                                     | BLBSMG  |
| BLDIAG6 | BLDIAG6         | BLDIAG6                                    | BLDIAG6 |
| PLDPMC1 | PLDPMC1         |                                            |         |
| BLROM1  |                 |                                            |         |

This procedure updates each high-capacity card flash GPL individually using the `init-flash` and `act-flash` commands instead of updating all the card GPLs at the same time using the `flash-card` command. To update all the GPLs on the high-capacity card at the same time using the `flash-card` command, perform [Updating All the Flash GPLs on the High-Capacity Cards](#) on page 281.

The flash GPL names shown in [Table 6: High-Capacity Card Flash GPLs](#) on page 249 are used as the value of the `gpl` parameter of the `chg-gpl`, `act-gpl`, `rept-stat-gpl`, and `rtrv-gpl` commands. The applications and entities supported by the high-capacity cards are shown in [Table 7: High-Capacity Card Applications](#) on page 249.

Table 7: High-Capacity Card Applications

| High-Capacity Card | Card Name (as shown on the card label) | Application                        | Application GPL Running on the Card | Supported Entities                    |
|--------------------|----------------------------------------|------------------------------------|-------------------------------------|---------------------------------------|
| HC MIM             | HC MIM                                 | SS7ANSI, CCS71TU                   | SS7HC                               | E1 or T1 signaling links              |
| E5-E1T1            | E5-E1T1                                | SS7ANSI, CCS71TU                   | SS7EPM                              | E1 or T1 signaling links              |
| E5-ENET            | E5-ENET                                | SS7IPGW, IPLIM, IPLIMI, IPGWI, IPG | IPLHC, IPGHC, IPG                   | IP signaling links                    |
| E5-STC             | E5-ENET                                | EROUTE                             | ERTHC                               | EAGLE 5 Integrated Monitoring Support |
| E5-SM4G            | E5-SM4G                                | VSCCP                              | SCCPHC                              | GTT-related features                  |

| High-Capacity Card | Card Name (as shown on the card label) | Application     | Application GPL Running on the Card | Supported Entities                                                                                        |
|--------------------|----------------------------------------|-----------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------|
| E5-SLAN            | E5-ENET                                | STPLAN          | SLANHC                              | TCP/IP data links for the STPLAN feature                                                                  |
| E5-IPSM            | E5-IPSM                                | IPS             | IPSHC                               | Telnet sessions for remote connections to the EAGLE 5 ISS and SEAS terminals for the SEAS over IP feature |
| E5-ATM             | E5-ATM                                 | ATMANSI, ATMITU | ATMHC                               | ANSI and ITU ATM high-speed signaling links                                                               |
| E5-TSM             | E5-TSM                                 | GLS             | GLSHC                               | Gateway Screening related features                                                                        |

A removable cartridge or removable media containing the high-capacity flash GPLs that are being updated is required.



#### CAUTION

**CAUTION:** Before any of the flash GPLs on the high-capacity card can be updated, all the traffic hosted by the high-capacity card must be stopped, and the high-capacity card must be taken out of service.

#### Canceling the REPT-STAT-SLK and RTRV-SLK Commands

Because the `rept-stat-slk` and `rtrv-slk` commands used in this procedure can output information for a long period of time, the `rept-stat-slk` and `rtrv-slk` commands can be canceled and the output to the terminal stopped. There are three ways that the `rept-stat-slk` and `rtrv-slk` commands can be canceled.

- Press the F9 function key on the keyboard at the terminal where the `rept-stat-slk` or `rtrv-slk` commands command were entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rept-stat-slk` or `rtrv-slk` commands were entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rept-stat-slk` or `rtrv-slk` commands were entered, from another terminal other than the terminal where the `rept-stat-slk` or `rtrv-slk` commands were entered. To enter the `canc-cmd:trm=<xx>` command, the terminal must allow Security Administration commands to be entered from it and the user must be allowed to enter Security Administration commands. The terminal's permissions can be verified with the `rtrv-secu-trm` command. The user's permissions can be verified with the `rtrv-user` or `rtrv-secu-user` commands.

For more information about the `canc-cmd` command, go to the *Commands Manual*.

1. Verify the control cards that are installed in the EAGLE 5 ISS.



Refer to [Maintenance and Administration Subsystem](#) on page 7 for information about the control cards.

If legacy control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 2](#) on page 251.

If E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 5](#) on page 251.

2. Check the removable cartridge drive on the MDAL card for a removable cartridge.

If there is a removable cartridge in the drive, display the GPLs on the fixed disk and on the removable cartridge using the `rtrv-gpl` command with the `gpl` parameter value equal to the GPL being updated. For this example, enter this command.

```
rtrv-gpl:gpl=imtpci
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| IMTPCI | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| IMTPCI | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | -----        |

If the version of the GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the cartridge and go to [Step 3](#) on page 251. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

If the version of the GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 252.

3. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).

To write protect a removable cartridge, refer to [MO Removable Cartridge Description](#) on page 17.

4. Insert the removable cartridge containing the GPL being updated into the removable cartridge drive on the MDAL card.

For more information on inserting the removable cartridge in the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19. After the removable cartridge has been inserted into the removable cartridge drive, repeat the `rtrv-gpl` command in [Step 2](#) on page 251 and verify the version of the GPL on the removable cartridge that you wish to update.

5. Check the E5-MASPs for removable media.

If removable media is installed in both E5-MASPs, continue the procedure with [Step 7](#) on page 252.

If removable media is not installed in both E5-MASPs, continue the procedure with [Step 6](#) on page 251.

6. Verify the active MASP by entering the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:25:40 GMT EAGLE5 40.1.0
```

| DATABASE STATUS: >> OK << |           |       |          |              |                   |           |          |              |             |
|---------------------------|-----------|-------|----------|--------------|-------------------|-----------|----------|--------------|-------------|
| TDM 1114 ( STDBY )        |           |       |          |              | TDM 1116 ( ACTV ) |           |          |              |             |
|                           | C         | LEVEL | TIME     | LAST BACKUP  |                   | C         | LEVEL    | TIME         | LAST BACKUP |
| -----                     |           |       |          |              | -----             |           |          |              |             |
| FD BKUP                   | Y         | 36    | 09-02-19 | 09:38:25 GMT | Y                 | 36        | 09-02-19 | 09:38:25 GMT |             |
| FD CRNT                   | Y         | 39    |          |              | Y                 | 39        |          |              |             |
|                           | MCAP 1113 |       |          |              |                   | MCAP 1115 |          |              |             |
| -----                     |           |       |          |              | -----             |           |          |              |             |
| RD BKUP                   | -         | -     | -        | -            | Y                 | 36        | 09-02-19 | 09:27:17 GMT |             |
| USB BKP                   | -         | -     | -        | -            | Y                 | 3         | 09-02-07 | 01:11:22 GMT |             |

If removable media is installed in the active MASP, continue the procedure with [Step 7](#) on page 252.

If removable media is not installed in the active MASP, insert the removable media in the removable media drive in the active MASP. For more information about inserting removable media in the removable media drive, refer to [Removable USB Drive](#) on page 20. After the removable media has been inserted in the removable media drive in the active MASP, continue the procedure with [Step 7](#) on page 252.

7. Display the GPLs on the fixed disk and on the removable media using the `rtrv-gpl` command with the `gpl` parameter value equal to the GPL being updated. For this example, enter this command.

```
rtrv-gpl:gpl=imtpci
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| IMTPCI | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| IMTPCI | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| IMTPCI | 1115 | -----       | -----       | -----       | -----        |

If the version of the GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the removable media from the active MASP.

Insert the removable media that contains the GPL that is being updated into the removable media drive in the active MASP and repeat this step.

For more information about inserting removable media in the removable media drive, or removing removable media from the removable media drive, refer to [Removable USB Drive](#) on page 20.

If the version of the GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 252.

8. Change the GPLs, using the `chg-gpl` command and specifying the value for the trial GPL shown in the REMOVE TRIAL column in the output of the `rtrv-gpl` command used in [Step 2](#) on page 251 or [Step 7](#) on page 252.

For this example, enter this command.

```
chg-gpl:gpl=imtpci:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
```

```
GPL Auditing ON
```

```
IMTPCI upload on 1114 completed
IMTPCI upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

9. Activate the trial GPL, using the `act-gpl` command and specifying the name and version of the trial GPL specified in [Step 8](#) on page 252.

For this example, enter this command.

```
act-gpl:gpl=imtpci:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
IMTPCI activate on 1114 completed
IMTPCI activate on 1116 completed
```

10. Verify that the trial GPL has been made the approved GPL using the `rtrv-gpl` command with the `gpl` parameter value specified in [Step 9](#) on page 253.

For this example, enter this command.

```
rtrv-gpl:gpl=imtpci
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| IMTPCI | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| IMTPCI | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | -----        |

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| IMTPCI | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| IMTPCI | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| IMTPCI | 1115 | -----       | -----       | -----       | -----        |

11. Verify the cards that are running the GPL using the `rept-stat-gpl` command with the `gpl` parameter value specified in [Step 10](#) on page 253.

For this example, enter this command.

```
rept-stat-gpl:gpl=imtpci
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
```

| GPL    | CARD | RUNNING         | APPROVED    | TRIAL       |
|--------|------|-----------------|-------------|-------------|
| IMTPCI | 1303 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| IMTPCI | 2101 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| IMTPCI | 2103 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
| IMTPCI | 2205 | 132-002-000 ALM | 132-003-000 | 132-002-000 |

```
IMTPCI 2207 132-002-000 ALM 132-003-000 132-002-000
IMTPCI 2211 132-002-000 ALM 132-003-000 132-002-000
Command Completed
```

12. Display the status of the card, shown in the `rept-stat-gpl` output in [Step 11](#) on page 253, that the GPL will be loaded onto using the `rept-stat-card` command and specifying the location of the card.

For this example, enter this command.

```
rept-stat-card:loc=1303
```

For an HC MIM, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 LIME1 SS7HC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBIO5 GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLROM1 GPL version = 132-002-000
PLDPMC1 GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
SIGNALING LINK STATUS
SLK PST LS CLLI
A IS-NR e11303a -----
B IS-NR e11303b -----
A1 IS-NR e11303a -----
B3 IS-NR e11303b -----
Command Completed.
```

For an E5-E1T1 card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 LIME1 SS7EPM IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
PLDPMC1 GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 32C (90F) [ALARM TEMP: 60C (140F)]
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
SIGNALING LINK STATUS
SLK PST LS CLLI
A IS-NR e11303a -----
B IS-NR e11303b -----
A1 IS-NR e11303a -----
B3 IS-NR e11303b -----
Command Completed.
```

For an E5-ENET card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
```

```

1303 132-003-000 DCM IPLHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
PLDPMC1 GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 32C (90F) [ALARM TEMP: 60C (140F)]
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
SIGNALING LINK STATUS
 SLK PST LS CLLI
 A IS-NR e11303a -----
 B IS-NR e11303b -----
 A1 IS-NR e11303a -----
 B3 IS-NR e11303b -----
Command Completed.

```

For an E5-STC card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 STC ERTHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 61C (142F)
PEAK TEMPERATURE: = 61C (142F) [06-05-02 13:40]
NTP broadcast = VALID
STC IP PORT A: OOS-MT Unavail -----
ALARM STATUS = ** 0084 IP Connection Unavailable
ERROR STATUS = DHCP Lease. Physical Link.
STC IP PORT B: OOS-MT Unavail -----
ALARM STATUS = ** 0084 IP Connection Unavailable
ERROR STATUS = DHCP Lease. Physical Link.
Command Completed.

```

For an E5-SLAN card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 DCM SLANHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 60C (140F)
PEAK TEMPERATURE: = 63C (146F) [00-02-12 21:58]
DLK A PST = IS-NR SST = Avail AST = -----
SLAN % EAGLE CAPACITY = 57%

```

```
SLAN % HOST CAPACITY = 49%
Command Completed.
```

For an E5-SM4G card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 DSM SCCPHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBSMG GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 31C (88F)
PEAK TEMPERATURE: = 32C (90F) [07-05-12 15:55]
SCCP % OCCUP = 1%
```

Command Completed.

For an E5-IPSM card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 IPSM IPSHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 32C (90F)
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
Command Completed.
```

For an E5-ATM card, this is an example of the possible output.

```
rlghncxa03w 08-03-01 09:12:36 GMT EAGLE5 38.0.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 LIMATM ATMHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 38C (101F)
PEAK TEMPERATURE: = 38C (101F) [07-11-23 06:10]
SIGNALING LINK STATUS
 SLK PST LS CLLI
 A IS-NR ls1 -----
```

Command Completed.

For an E5-TSM card, this is an example of the possible output.

```
rlghncxa03w 08-12-01 09:12:36 GMT EAGLE5 40.0.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 TSM GLSHC IS-NR Active -----
 ALARM STATUS = No Alarms.
 IMTPCI GPL version = 132-002-000
 BLVXW6 GPL version = 132-002-000
 BLDIAG6 GPL version = 132-002-000
 BLBEPM GPL version = 132-002-000
 BLCPLD GPL version = 132-002-000
 IMT BUS A = Conn
 IMT BUS B = Conn
 CURRENT TEMPERATURE = 38C (101F)
 PEAK TEMPERATURE: = 38C (101F) [07-11-23 06:10]
```

Command Completed.

Continue the procedure by performing one of these actions:

- If card is running one of these application GPLs: SS7HC, SS7EPM, IPLHC, IPGHC, ATMHC, IPSG (shown in the GPL column in the `rept-stat-card` output in [Step 12](#) on page 254), continue the procedure with [Step 13](#) on page 257.
- If card is running one of these application GPLs: ERTHC, E5-TSM, or SCCPHC, (shown in the GPL column in the `rept-stat-card` output in [Step 12](#) on page 254), continue the procedure with [Step 20](#) on page 261.
- If the card is running the SLANHC application GPL (shown in the GPL column in the `rept-stat-card` output in [Step 12](#) on page 254), continue the procedure with [Step 15](#) on page 258.
- If the card is running the IPSHC application GPL, (shown in the GPL column in the `rept-stat-card` output in [Step 12](#) on page 254), continue the procedure with [Step 17](#) on page 259.

### 13. Display the signaling links associated with the card shown in [Step 12](#) on page 254.

Enter the `rtrv-slk` command with the card location specified in [Step 12](#) on page 254. For this example, enter this command.

```
rtrv-slk:loc=1303
```

This is an example of the possible output for an HC MIM or E5-E1T1 card.

```
rlghncxa03w 09-03-01 21:16:37 GMT EAGLE5 40.1.0

LOC LINK LSN SLC TYPE L2T PCR PCR E1 E1
1303 A e11303a 0 LIME1 1 64000 PCR 76 3800 1303 2 12
1303 B e11303b 0 LIME1 1 56000 BASIC --- 1303 1 2
1303 A1 e11303a 1 LIME1 1 56000 BASIC --- 1303 1 3
1303 B3 e11303b 1 LIME1 1 56000 BASIC --- 1303 1 7
```

This is an example of the possible output for an E5-ENET card.

```
rlghncxa03w 09-03-01 21:16:37 GMT EAGLE5 40.1.0

LOC LINK LSN SLC TYPE IPLIML2
1303 A e11303a 0 IPLIM M2PA
1303 B e11303b 0 IPLIM M2PA
```

```
1303 A1 e11303a 1 IPLIM M2PA
1303 B3 e11303b 1 IPLIM M2PA
```

This is an example of the possible output for an E5-ATM card.

```
rlghncxa03w 09-03-01 21:16:37 GMT EAGLE 38.0.0

LOC LINK LSN SLC TYPE LP SET BPS ATM TSEL VCI VPI LL
1303 A ls2 2 LIMATM 1 1544000 LINE 5 0 0
1303 B ls1 3 LIMATM 1 1544000 LINE 5 0 0
```

14. Deactivate the SS7 signaling links on the card using the `dact -slk` command.

For this example, enter these commands.

```
dact -slk:loc=1303:link=a
```

```
dact -slk:loc=1303:link=b
```

```
dact -slk:loc=1303:link=a1
```

```
dact -slk:loc=1303:link=b3
```



#### CAUTION

**CAUTION:** These command examples place the signaling links on card 1303 out of service. This will interrupt service on the signaling links on card 1303 and allow the flash GPL to be loaded on to card 1303.



#### CAUTION

**CAUTION:** Do not deactivate all the signaling links assigned to these cards: HC MIMs, E5-E1T1, E5-ENET, E5-ATM, at the same time. Doing so will take all the E1, T1, IP, ATM signaling links out of service and the traffic on these signaling links could be lost.



#### CAUTION

**CAUTION:** If the EAGLE 5 ISS contains only signaling links assigned to these cards: HC MIM, E5-ENET E5-E1T1, E5-ATM, deactivating these signaling links at the same time take all these signaling links out of service and isolate the EAGLE 5 ISS from the network.

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:45:18 GMT EAGLE5 40.1.0
Deactivate SLK message sent to card
```

Continue the procedure with [Step 20](#) on page 261.

15. Display the data link, and its status, associated with the card shown in [Step 12](#) on page 254. Enter the `rept-stat-dlk` command with the card location specified in [Step 12](#) on page 254.

For this example, enter this command.

```
rept-stat-dlk:loc=1303
```

This is an example of the possible output.

```
rlghncxa03w 067-05-01 17:00:36 GMT EAGLE5 40.1.0
DLK PST SST AST
1303 IS-NR Avail ---
Command Completed.
```



16. Deactivate the TCP/IP data link on the card that you wish to load the GPL onto using the `canc-dlk:loc=1303` command. For this example, enter this command.

```
canc-dlk:loc=1303
```

**CAUTION**

**CAUTION:** This command example places the TCP/IP data link on card 1303 out of service. This will interrupt service on the TCP/IP data link on card 1303 and allow the flash GPL to be loaded onto card 1303.

**CAUTION**

**CAUTION:** If there is only one TCP/IP data link in the EAGLE 5 ISS, placing the card out of service will cause the STPLAN feature to be disabled.

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:45:18 GMT EAGLE5 40.1.0
Deactivate Link message sent to card.
Command Completed.
```

Continue the procedure with [Step 20](#) on page 261.

17. Display the terminal configuration in the database with the `rtrv-trm` command.

The Telnet terminals associated with the card shown in [Step 12](#) on page 254 must be taken out of service. The Telnet terminals are shown in the output with the entry TELNET in the TYPE field. This is an example of the possible output. In this example, the Telnet terminals that must be taken out of service are terminals 17 to 24.

```
rlghncxa03w 09-03-01 16:02:08 GMT EAGLE5 40.1.0
```

| TRM | TYPE    | COMM        | FC   | TMOUT | MXINV | DURAL    |
|-----|---------|-------------|------|-------|-------|----------|
| 1   | VT320   | 9600-7-E-1  | SW   | 30    | 5     | 99:59:59 |
| 2   | KSR     | 9600-7-E-1  | HW   | 30    | 5     | INDEF    |
| 3   | PRINTER | 4800-7-E-1  | HW   | 30    | 0     | 00:00:00 |
| 4   | VT320   | 2400-7-E-1  | BOTH | 30    | 5     | 00:30:00 |
| 5   | VT320   | 9600-7-0-1  | NONE | 30    | 5     | 00:00:30 |
| 6   | OAP     | 19200-7-E-1 | SW   | 0     | 5     | INDEF    |
| 7   | PRINTER | 9600-7-N-2  | HW   | 30    | 5     | 00:30:00 |
| 8   | KSR     | 19200-7-E-2 | BOTH | 30    | 5     | 00:30:00 |
| 9   | OAP     | 19200-7-E-1 | SW   | 0     | 5     | INDEF    |
| 10  | VT320   | 9600-7-E-1  | HW   | 30    | 5     | 00:30:00 |
| 11  | VT320   | 4800-7-E-1  | HW   | 30    | 5     | 00:30:00 |
| 12  | PRINTER | 9600-7-E-1  | HW   | 30    | 4     | 00:30:00 |
| 13  | VT320   | 9600-7-0-1  | NONE | 30    | 5     | 00:30:00 |
| 14  | VT320   | 9600-7-E-2  | SW   | 30    | 8     | 00:30:00 |
| 15  | VT320   | 9600-7-N-2  | HW   | 30    | 5     | 00:30:00 |
| 16  | VT320   | 9600-7-E-2  | BOTH | 30    | 3     | 00:30:00 |

| TRM | TYPE   | LOC  | TMOUT | MXINV | DURAL    |
|-----|--------|------|-------|-------|----------|
| 17  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 18  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 19  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 20  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 21  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 22  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 23  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 24  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 25  | TELNET | 1203 | 60    | 5     | 00:30:00 |
| 26  | TELNET | 1203 | 60    | 5     | 00:30:00 |
| 27  | TELNET | 1203 | 60    | 5     | 00:30:00 |
| 28  | TELNET | 1203 | 60    | 5     | 00:30:00 |
| 39  | TELNET | 1203 | 60    | 5     | 00:30:00 |

|    |        |      |    |   |          |
|----|--------|------|----|---|----------|
| 30 | TELNET | 1203 | 60 | 5 | 00:30:00 |
| 31 | TELNET | 1203 | 60 | 5 | 00:30:00 |
| 32 | TELNET | 1203 | 60 | 5 | 00:30:00 |
| 33 | TELNET | 1208 | 60 | 5 | 00:30:00 |
| 34 | TELNET | 1208 | 60 | 5 | 00:30:00 |
| 35 | TELNET | 1208 | 60 | 5 | 00:30:00 |
| 36 | TELNET | 1208 | 60 | 5 | 00:30:00 |
| 37 | TELNET | 1208 | 60 | 5 | 00:30:00 |
| 38 | TELNET | 1208 | 60 | 5 | 00:30:00 |
| 39 | TELNET | 1208 | 60 | 5 | 00:30:00 |
| 40 | TELNET | 1208 | 60 | 5 | 00:30:00 |

**Note:** The `rtrv-trm` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-trm` command, see the `rtrv-trm` command description in the *Commands Manual*.

18. Display the status of the terminals with the `rept-stat-trm` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM PST SST AST
1 IS-NR Active -----
2 IS-NR Active -----
3 IS-NR Active -----
4 IS-NR Active -----
5 IS-NR Active -----
6 IS-NR Active -----
7 IS-NR Active -----
8 IS-NR Active -----
9 IS-NR Active -----
10 IS-NR Active -----
11 IS-NR Active -----
12 IS-NR Active -----
13 IS-NR Active -----
14 IS-NR Active -----
15 IS-NR Active -----
16 IS-NR Active -----
17 IS-NR Active -----
18 IS-NR Active -----
19 IS-NR Active -----
20 IS-NR Active -----
21 IS-NR Active -----
22 IS-NR Active -----
23 IS-NR Active -----
24 IS-NR Active -----
25 IS-NR Active -----
26 IS-NR Active -----
27 IS-NR Active -----
28 IS-NR Active -----
29 IS-NR Active -----
30 IS-NR Active -----
31 IS-NR Active -----
32 IS-NR Active -----
33 IS-NR Active -----
34 IS-NR Active -----
35 IS-NR Active -----
36 IS-NR Active -----
37 IS-NR Active -----
38 IS-NR Active -----
39 IS-NR Active -----
40 IS-NR Active -----
```

Command Completed.

19. Place the required terminals out of service using the `rmv-trm` command. For this example, enter these commands.

```
rmv-trm:trm=17
rmv-trm:trm=18
rmv-trm:trm=19
rmv-trm:trm=20
rmv-trm:trm=21
rmv-trm:trm=22
rmv-trm:trm=23
rmv-trm:trm=24
```

**Note:** If the terminal that is being taken out of service is the last in service SEAS terminal, the `force=yes` parameter must be specified with the `rmv-trm` command for that terminal.



**CAUTION**

**CAUTION:** Placing the Telnet terminals out of service will disable any Telnet sessions running on these terminals.

If the status of any of the terminals shown in the PST field in [Step 18](#) on page 260 is OOS-MT-DSBLD (out-of-service maintenance disabled), the terminal is already out of service and the `rmv-trm` command does not need to be executed for that terminal.

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Inhibit message sent to terminal

rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Command Completed.
```

20. Place the card shown in [Step 12](#) on page 254 out of service using the `rmv-card` command.



**CAUTION**

**CAUTION:** Multiple cards running the same flash GPL can be updated at the same time with the `init-flash` command ([Step 21](#) on page 262). This requires that the cards in the locations specified with the `init-flash` command in [Step 21](#) on page 262 are out of service. All the high-capacity cards running the same flash GPL being updated can be placed out of service. However it is recommended that only some of these high-capacity cards are placed out of service. Placing all these high-capacity cards out of service will cause all traffic hosted by high-capacity cards to be lost.



**CAUTION**

**CAUTION:** If there is only one high-capacity card running the flash GPL being updated, placing this card out of service will cause all the traffic hosted by this high-capacity card to be lost.

For this example, enter this command.

```
rmv-card:loc=1303
```

If more than one card running the same flash GPL is to be updated in [Step 21](#) on page 262, repeat this step for those cards.

When this command has successfully completed, this message should appear.

If the HC MIM, E5-E1T1, or E5-ENET card contains the last signaling link in a linkset, or if the E5-TSM is the last E5-TSM that is in service, the `force=yes` parameter must be specified.

21. Load the approved version of the flash GPL onto the card inhibited in [Step 20](#) on page 261 using the `init-flash` command with the `code=appr` parameter.

**Note:** If the BLBIOS GPL (on an HC MIM), BLBEPM GPL (on either the E5-E1T1, E5-ENET, E5-STC, E5-SLAN, E5-IPSM, E5-TSM, or E5-ATM card), or the BLBSMG GPL (on an E5-SM4G card) is specified with the `init-flash` command, and the BLCPLD GPL currently running on the card is not activated (the `act-flash` command has not been performed on the BLCPLD GPL), then the `init-flash` command will be rejected.

**Note:** If the BLCPLD GPL is specified with the `init-flash` command, and the BLBIOS GPL (on an HC MIM), the BLBEPM GPL (on either the E5-E1T1, E5-ENET, E5-STC, E5-SLAN, E5-IPSM, E5-TSM, or E5-ATM card), or the BLBSMG GPL (on a E5-SM4G card currently running on the card is not activated (the `act-flash` command has not been performed on the BLBIOS, BLBEPM, or BLBSMG GPL), the then `init-flash` command will be rejected.

**Note:** The `init-flash` command contains the `boot` parameter which has two values, `yes` or `no`. The `yes` value is the default value for the `boot` parameter. The high-capacity card will be re-initialized when the flash GPL download is complete if the `boot` parameter is not specified or if the `boot=yes` parameter is specified. To prevent the high-capacity card from being re-initialized, the `boot=no` parameter must be specified with the `init-flash` command. However, the high-capacity card must be re-initialized after these GPLs are downloaded to the high-capacity card:

**HC MIM, E5-ENET, E5-E1T1, E5-STC, E5-SLAN, E5-SM4G,, E5-IPSM, or E5-ATM cards - BLCPLD or BLDIAG6 GPLs.**

For this example, enter this command.

```
init-flash:code=appr:loc=1303:gpl=imtpci
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Downloading for card 1303 Started.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
IMTPCI Downloading for card 1303 Complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

### Updating more than One Card at the Same Time

If more than one card running the same flash GPL is being updated, enter the `init-flash` command with these parameters along with the `code=appr` parameter:

`sloc` - the first card location in the range of card locations

`eloc` - the last card location in the range of card locations

`gpl` - the flash GPL being updated

**Note:** The `sloc`, `eloc`, and `gpl` parameters cannot be specified with the `loc` parameter. When the `sloc`, `eloc`, and `gpl` parameters are specified, only the cards running the flash GPL specified by the `gpl` parameter and within the range specified by the `sloc` and `eloc` parameters are updated. All other cards in the range specified by the `sloc` and `eloc` parameters are skipped.

Entering the example command will update the cards in the locations 1303 to 2103 running the `imtpci` flash GPL with the approved version of the `imtpci` GPL.

```
init-flash:code=appr:sloc=1303:eloc=2103:gpl=imtpci
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Download for cards 1303 - 2103 Started.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Download for cards 1303 - 2103 Completed.
LOC 1303 : PASSED
LOC 2101 : PASSED
LOC 2103 : PASSED

ALL CARD RESULTS PASSED
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

See the third note in [Step 21](#) on page 262.

22. Put the cards that were inhibited in [Step 20](#) on page 261 back into service using the `rst-card` command.

The `rst-card` command also loads the approved version of the GPL onto the card.

For this example, enter this command.

```
rst-card:code=appr:loc=1303
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Card has been allowed.
```

23. Verify that the GPL from [Step 21](#) on page 262 has loaded and that the card has returned to its in-service normal (IS-NR) state using the `rept-stat-card` command.

For this example, enter this command.

```
rept-stat-card:loc=1303
```

For an HC MIM, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 LIME1 SS7HC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000 +
BLCPLD GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBIOS GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLROM1 GPL version = 132-002-000
PLDPMC1 GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
SIGNALING LINK STATUS
SLK PST LS CLLI
A OOS-MT-DSBLD e11303a -----
B OOS-MT-DSBLD e11303b -----
A1 OOS-MT-DSBLD e11303a -----
```

```

 B3 OOS-MT-DSBLD e11303b -----
Command Completed.

```

For an E5-E1T1 card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 IPLIM SS7EPM IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-003-000 +
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
PLDPMC1 GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 32C (90F) [ALARM TEMP: 60C (140F)]
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
SIGNALING LINK STATUS
 SLK PST LS CLLI
 A IS-NR e11303a -----
 B IS-NR e11303b -----
 A1 IS-NR e11303a -----
 B3 IS-NR e11303b -----

```

Command Completed.

For an E5-ENET card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 DCM IPLHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-003-000 +
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
PLDPMC1 GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 32C (90F) [ALARM TEMP: 60C (140F)]
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
SIGNALING LINK STATUS
 SLK PST LS CLLI
 A IS-NR e11303a -----
 B IS-NR e11303b -----
 A1 IS-NR e11303a -----
 B3 IS-NR e11303b -----

```

Command Completed.

For an E5-STC card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 STC ERTHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-003-000 +
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn

```

```

CURRENT TEMPERATURE = 61C (142F)
PEAK TEMPERATURE: = 61C (142F) [06-05-02 13:40]
NTP broadcast = VALID
STC IP PORT A: 00S-MT Unavail -----
 ALARM STATUS = ** 0084 IP Connection Unavailable
 ERROR STATUS = DHCP Lease. Physical Link.
STC IP PORT B: 00S-MT Unavail -----
 ALARM STATUS = ** 0084 IP Connection Unavailable
 ERROR STATUS = DHCP Lease. Physical Link.
Command Completed.

```

For an E5-SLAN card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 DCM SLANHC IS-NR Active -----
 ALARM STATUS = No Alarms.
 IMTPCI GPL version = 132-003-000 +
 BLVXW6 GPL version = 132-002-000
 BLDIAG6 GPL version = 132-002-000
 BLBEPM GPL version = 132-002-000
 BLCPLD GPL version = 132-002-000
 IMT BUS A = Conn
 IMT BUS B = Conn
 CURRENT TEMPERATURE = 60C (140F)
 PEAK TEMPERATURE: = 63C (146F) [00-02-12 21:58]
 DLK A PST = IS-NR SST = Avail AST = -----
 SLAN % EAGLE CAPACITY = 57%
 SLAN % HOST CAPACITY = 49%
Command Completed.

```

For an E5-SM4G card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 DSM SCCPHC IS-NR Active -----
 ALARM STATUS = No Alarms.
 IMTPCI GPL version = 132-003-000 +
 BLVXW6 GPL version = 132-002-000
 BLDIAG6 GPL version = 132-002-000
 BLBSMG GPL version = 132-002-000
 BLCPLD GPL version = 132-002-000
 IMT BUS A = Conn
 IMT BUS B = Conn
 CURRENT TEMPERATURE = 31C (88F)
 PEAK TEMPERATURE: = 32C (90F) [07-05-12 15:55]
 SCCP % OCCUP = 1%
Command Completed.

```

For an E5-IPSM card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 IPSM IPSHC IS-NR Active -----
 ALARM STATUS = No Alarms.
 IMTPCI GPL version = 132-003-000 +
 BLVXW6 GPL version = 132-002-000
 BLDIAG6 GPL version = 132-002-000
 BLBEPM GPL version = 132-002-000
 BLCPLD GPL version = 132-002-000
 IMT BUS A = Conn
 IMT BUS B = Conn
 CURRENT TEMPERATURE = 32C (90F)

```

```
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
Command Completed.
```

For an E5-ATM card, this is an example of the possible output.

```
rlghncxa03w 08-03-01 09:12:36 GMT EAGLE5 38.0.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 LIMATM ATMHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-003-000 +
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 38C (101F)
PEAK TEMPERATURE: = 38C (101F) [07-11-23 06:10]
SIGNALING LINK STATUS
 SLK PST LS CLLI
 A IS-NR ls1 -----
```

Command Completed.

For an E5-TSM card, this is an example of the possible output.

```
rlghncxa03w 08-12-01 09:12:36 GMT EAGLE5 40.0.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 TSM GLSHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-003-000 +
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 38C (101F)
PEAK TEMPERATURE: = 38C (101F) [07-11-23 06:10]
```

Command Completed.

The '+' symbol indicates that the GPL has not been activated.

**Note:** If the version number of the flash GPL being updated in this procedure and shown in the `rept-stat-card` command output in this step is not the version specified in [Step 8](#) on page 252, contact the Customer Care Center. Refer to [Customer Care Center](#) on page 4 for the contact information.

24. Activate the flash GPL loaded onto the cards specified in [Step 21](#) on page 262 using the `act-flash` command with the card location and the name of the flash GPL specified in [Step 21](#) on page 262.

For this example, enter this command.

```
act-flash:loc=1303:gpl=imtpci
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Activation for card 1303 Completed.
;
```



```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

### Activating more than One Card at the Same Time

If more than one card running the same flash GPL was updated in [Step 21](#) on page 262, enter the `act-flash` command with these parameters:

`sloc` – the first card location in the range of card locations

`eloc` – the last card location in the range of card locations

`gpl` – the flash GPL being activated

**Note:** The `sloc`, `eloc`, and `gpl` parameters cannot be specified with the `loc` parameter. When the `sloc`, `eloc`, and `gpl` parameters are specified, only the cards running the GPL specified by the `gpl` parameter and within the range specified by the `sloc` and `eloc` parameters are updated. All other cards in the range specified by the `sloc` and `eloc` parameters are skipped.

Entering this example command will activate the flash GPLs on the cards in the locations 1303 to 2103.

```
act-flash:sloc=1303:eloc=2103:gpl=imtpci
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Activation for cards 1303 - 2103 Started.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Activation for cards 1303 - 2103 Completed.
LOC 1303 : PASSED
LOC 2101 : PASSED
LOC 2103 : PASSED

ALL CARD RESULTS PASSED
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

25. Verify the flash GPLs on the cards using the `rept-stat-gpl` command with the `gpl` parameter value specified in [Step 24](#) on page 266.

If any card is not running the release version of the flash GPL, shown in the `RELEASE` column of the `rtv-gpl` output in [Step 10](#) on page 253, the indicator `ALM` is displayed next to the flash GPL version in the `RUNNING` column of the `rept-stat-gpl` output. For this example, enter this command.

```
rept-stat-gpl:gpl=imtpci
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL CARD RUNNING APPROVED TRIAL
IMTPCI 1303 132-003-000 132-003-000 132-002-000
IMTPCI 2101 132-002-000 ALM 132-003-000 132-002-000
IMTPCI 2103 132-002-000 ALM 132-003-000 132-002-000
IMTPCI 2205 132-002-000 ALM 132-003-000 132-002-000
IMTPCI 2207 132-002-000 ALM 132-003-000 132-002-000
```

```
IMTPCI 2211 132-002-000 ALM 132-003-000 132-002-000
Command Completed
```

Continue the procedure by performing one of these actions:

- If card is running one of these application GPLs: SS7HC, SS7EPM, IPLHC, IPGHC, ATMHC, IPSG (shown in the GPL column in the `rept-stat-card` output in [Step 23](#) on page 263), continue the procedure with [Step 26](#) on page 268.
  - If card is running one of these application GPLs: ERTHC or SCCPHC, (shown in the GPL column in the `rept-stat-card` output in [Step 23](#) on page 263), continue the procedure with [Step 32](#) on page 270.
  - If the card is running the SLANHC application GPL, (shown in the GPL column in the `rept-stat-card` output in [Step 23](#) on page 263), continue the procedure with [Step 28](#) on page 269.
  - If the card is running the IPSHC application GPL, (shown in the GPL column in the `rept-stat-card` output in [Step 23](#) on page 263), continue the procedure with [Step 30](#) on page 269.
26. Place the signaling links that were deactivated in [Step 14](#) on page 258 back into service using the `act-slk` command.

For this example, enter these commands.

```
act-slk:loc=1303:link=a
act-slk:loc=1303:link=b
act-slk:loc=1303:link=a1
act-slk:loc=1303:link=b3
```

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:55:49 GMT EAGLE5 40.1.0
Activate SLK message sent to card
```

27. Verify that the signaling links activated in [Step 26](#) on page 268 are back in service using the `rept-stat-slk` command with the card location and signaling link.

For this example, enter these commands.

```
rept-stat-slk:loc=1303:link=a
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 13:06:25 GMT EAGLE5 40.1.0
SLK LSN CLLI PST SST AST
1303,A e11303a ----- IS-NR Avail ----
ALARM STATUS = No Alarms.
UNAVAIL REASON = --
```

```
rept-stat-slk:loc=1303:link=b
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 13:06:25 GMT EAGLE5 40.1.0
SLK LSN CLLI PST SST AST
1303,B e11303b ----- IS-NR Avail ----
```

```
ALARM STATUS = No Alarms.
UNAVAIL REASON = --
```

```
rept-stat-slk:loc=1303:link=a1
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 13:06:25 GMT EAGLE5 40.1.0
SLK LSN CLLI PST SST AST
1303,A1 e11303a ----- IS-NR Avail ----
ALARM STATUS = No Alarms.
UNAVAIL REASON = --
```

```
rept-stat-slk:loc=1303:link=b3
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 13:06:25 GMT EAGLE5 40.1.0
SLK LSN CLLI PST SST AST
1303,B3 e11303b ----- IS-NR Avail ----
ALARM STATUS = No Alarms.
UNAVAIL REASON = --
Command Completed.
```

Continue the procedure with [Step 32](#) on page 270.

28. Place the TCP/IP data link that was deactivated in [Step 16](#) on page 259 back into using the `act-dlk` command. For this example, enter this command.

```
act-dlk:loc=1303
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:55:49 GMT EAGLE5 40.1.0
Activate Link message sent to card.
```

29. Verify that the TCP/IP data link activated in [Step 28](#) on page 269 is back in service with the `rept-stat-dlk` command. For this example, enter this command.

```
rept-stat-dlk:loc=1303
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 17:00:36 GMT EAGLE5 40.1.0
DLK PST SST AST
1303 IS-NR Avail ---
Command Completed.
```

Continue the procedure with [Step 32](#) on page 270.

30. Put the required terminals back into service with the `rst-trm` command. For this example, enter these commands.

```
rst-trm:trm=17
rst-trm:trm=18
rst-trm:trm=19
rst-trm:trm=20
rst-trm:trm=21
rst-trm:trm=22
rst-trm:trm=23
rst-trm:trm=24
```

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Allow message sent to terminal
```

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Command Completed.
```

31. Verify that the terminals are in service with the `rept -stat -trm` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
```

| TRM | PST   | SST    | AST   |
|-----|-------|--------|-------|
| 1   | IS-NR | Active | ----- |
| 2   | IS-NR | Active | ----- |
| 3   | IS-NR | Active | ----- |
| 4   | IS-NR | Active | ----- |
| 5   | IS-NR | Active | ----- |
| 6   | IS-NR | Active | ----- |
| 7   | IS-NR | Active | ----- |
| 8   | IS-NR | Active | ----- |
| 9   | IS-NR | Active | ----- |
| 10  | IS-NR | Active | ----- |
| 11  | IS-NR | Active | ----- |
| 12  | IS-NR | Active | ----- |
| 13  | IS-NR | Active | ----- |
| 14  | IS-NR | Active | ----- |
| 15  | IS-NR | Active | ----- |
| 16  | IS-NR | Active | ----- |
| 17  | IS-NR | Active | ----- |
| 18  | IS-NR | Active | ----- |
| 19  | IS-NR | Active | ----- |
| 20  | IS-NR | Active | ----- |
| 21  | IS-NR | Active | ----- |
| 22  | IS-NR | Active | ----- |
| 23  | IS-NR | Active | ----- |
| 24  | IS-NR | Active | ----- |
| 25  | IS-NR | Active | ----- |
| 26  | IS-NR | Active | ----- |
| 27  | IS-NR | Active | ----- |
| 28  | IS-NR | Active | ----- |
| 29  | IS-NR | Active | ----- |
| 30  | IS-NR | Active | ----- |
| 31  | IS-NR | Active | ----- |
| 32  | IS-NR | Active | ----- |
| 33  | IS-NR | Active | ----- |
| 34  | IS-NR | Active | ----- |
| 35  | IS-NR | Active | ----- |
| 36  | IS-NR | Active | ----- |
| 37  | IS-NR | Active | ----- |
| 38  | IS-NR | Active | ----- |
| 39  | IS-NR | Active | ----- |
| 40  | IS-NR | Active | ----- |

```
Command Completed.
```

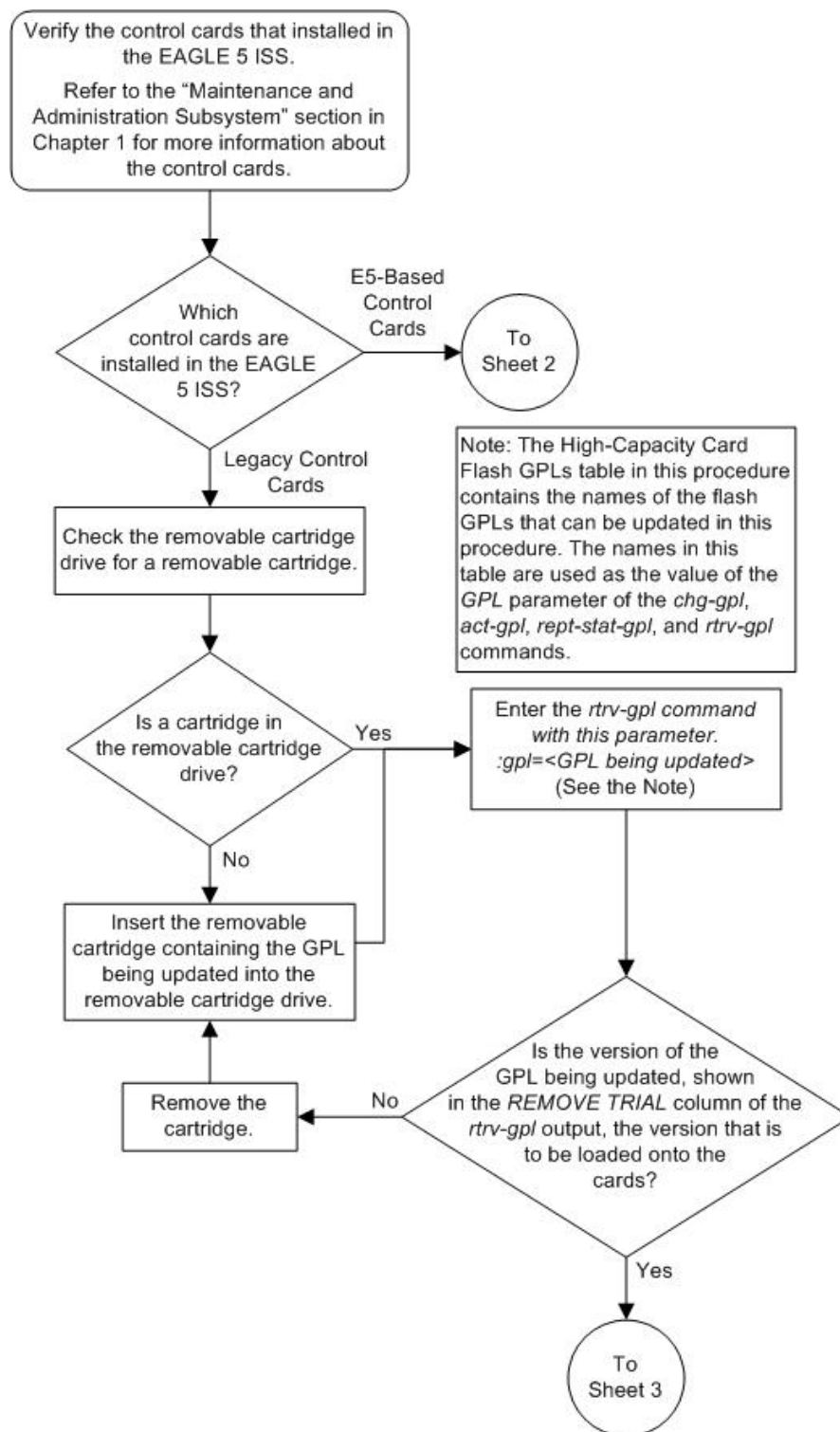
32. Continue the procedure by performing these actions.

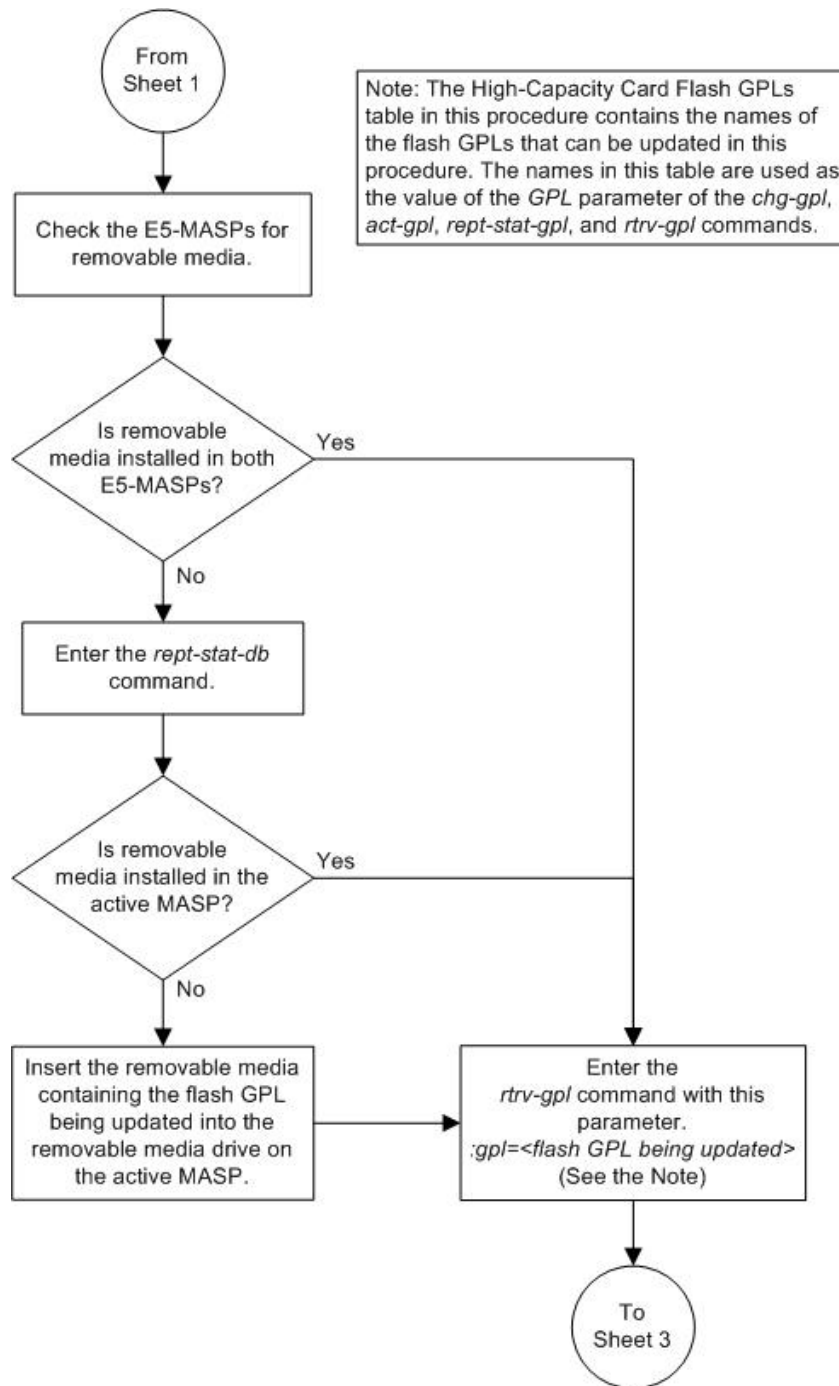
If legacy control cards are installed in the EAGLE 5 ISS, remove the removable cartridge from the removable cartridge drive on the MDAL card. For information about removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

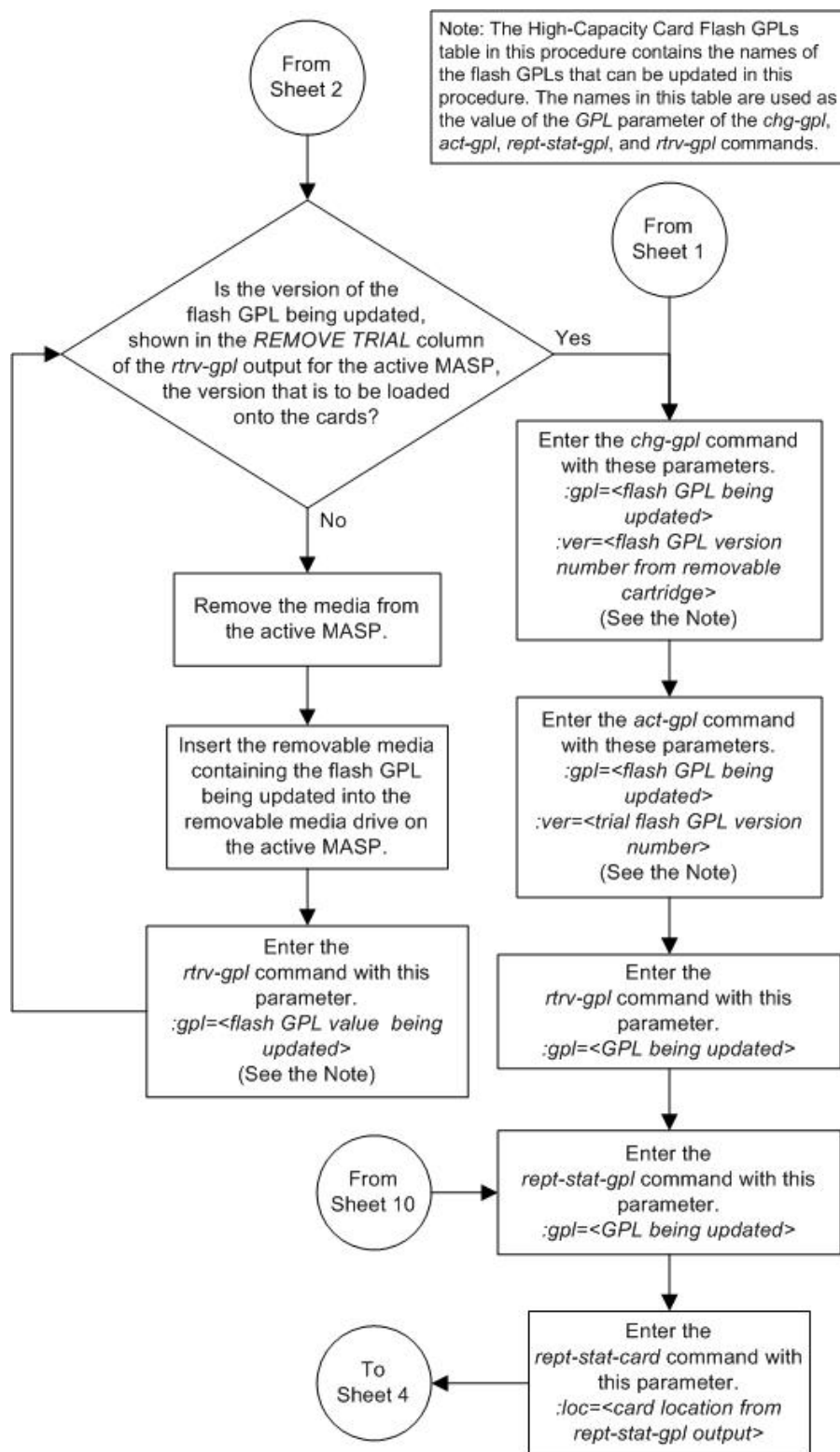
When the removable cartridge has been removed, or if E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure by performing one of these actions.

- If you wish to load the new GPL onto the other cards shown in [Step 11](#) on page 253, repeat this procedure from [Step 12](#) on page 254 for each card shown in [Step 11](#) on page 253.
- If the new GPL will not be loaded onto other cards but other GPLs will be updated, repeat this procedure from [Step 1](#) on page 250.
- If the new GPL will not be loaded onto other cards and no other GPLs are being updated, then this procedure is finished.

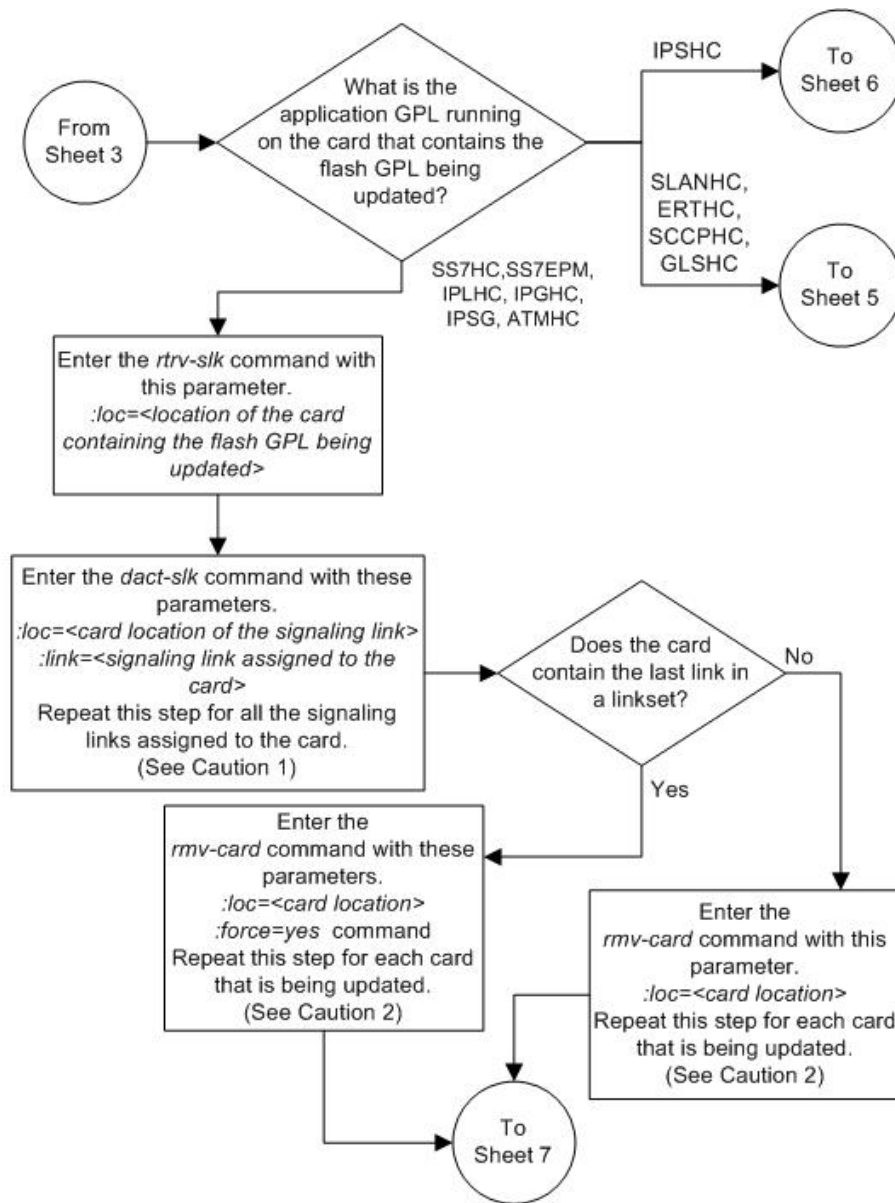
**Figure 29: Updating One of the Flash GPLs on the High-Capacity Cards**





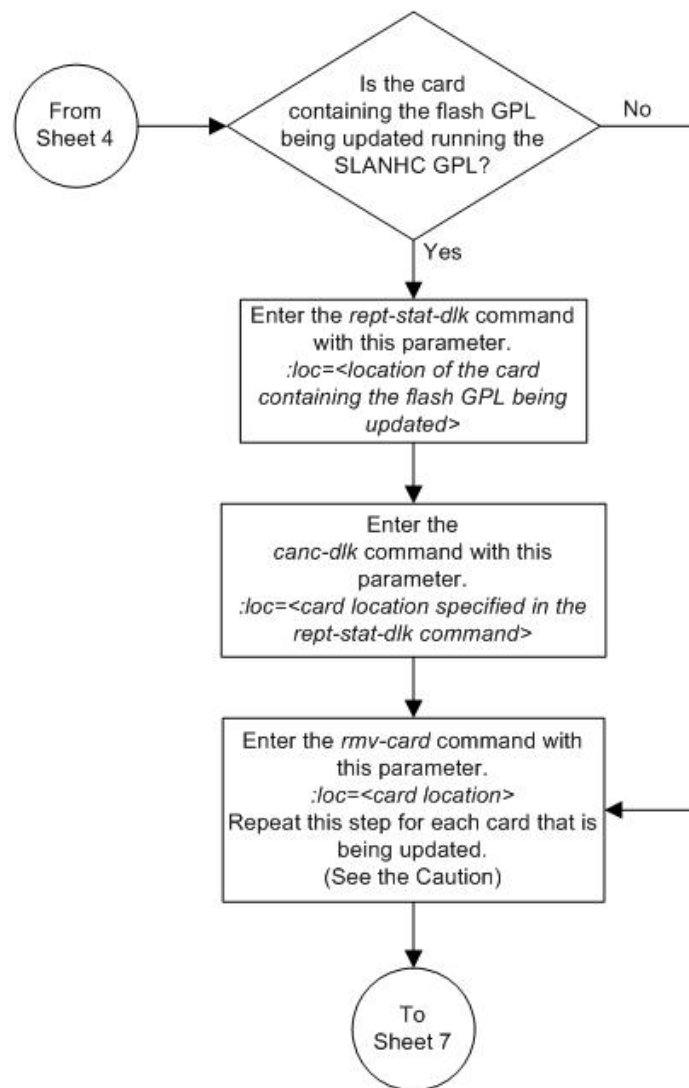






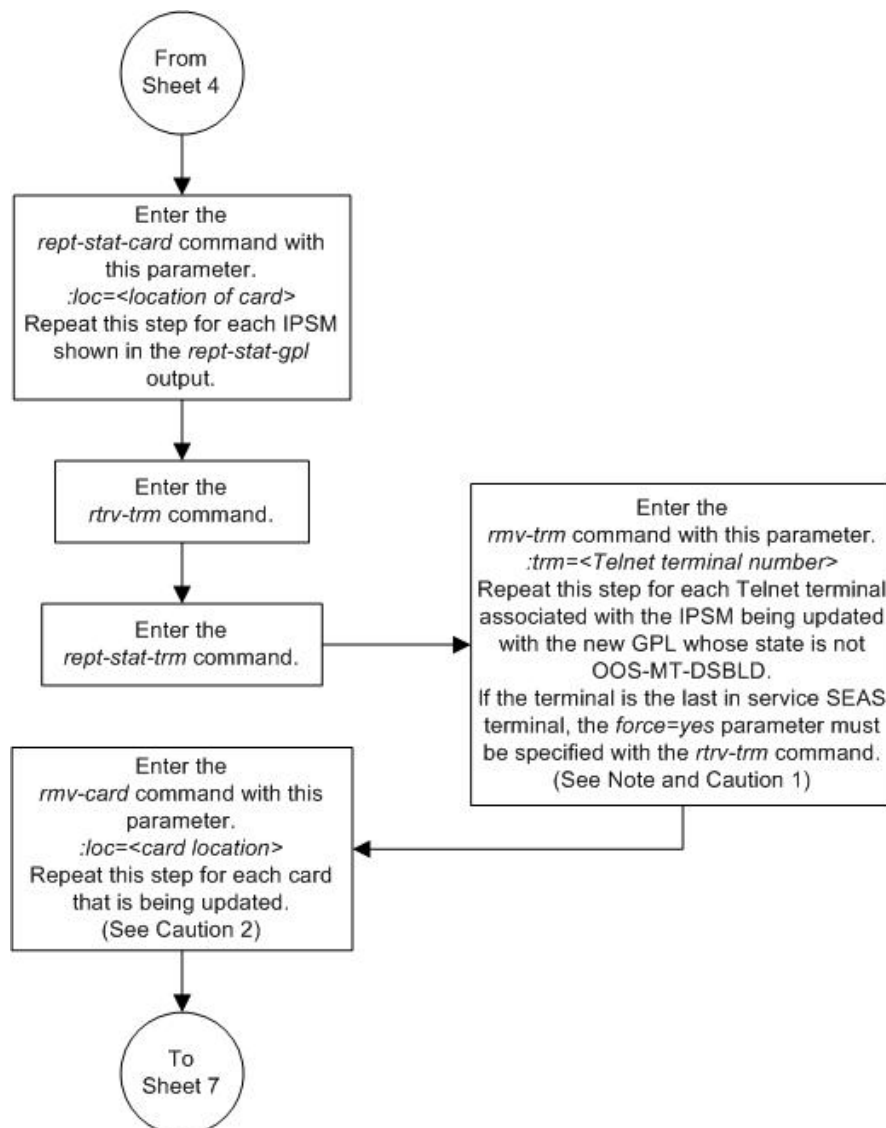
**Cautions:**

1. Do not deactivate all the signaling links assigned to the high-capacity cards in the EAGLE 5 ISS at the same time. Doing so will take all the signaling links out of service and the traffic on these signaling links could be lost.  
If the EAGLE 5 ISS contains only signaling links assigned to high-capacity cards, deactivating all the links assigned to these cards at the same time take all these signaling links out of service and isolate the EAGLE 5 ISS from the network.
2. Multiple high-capacity cards can be updated at the same time with the *init-flash* command. This requires that the high-capacity cards in the locations specified with the *init-flash* command are out of service.  
However, it is recommended that only some of the high-capacity cards are placed out of service. Placing all the high-capacity cards out of service will cause all the traffic hosted by the high-capacity cards to be lost.

**Caution:**

Multiple high-capacity cards can be updated at the same time with the *init-flash* command. This requires that the high-capacity cards in the locations specified with the *init-flash* command are out of service.

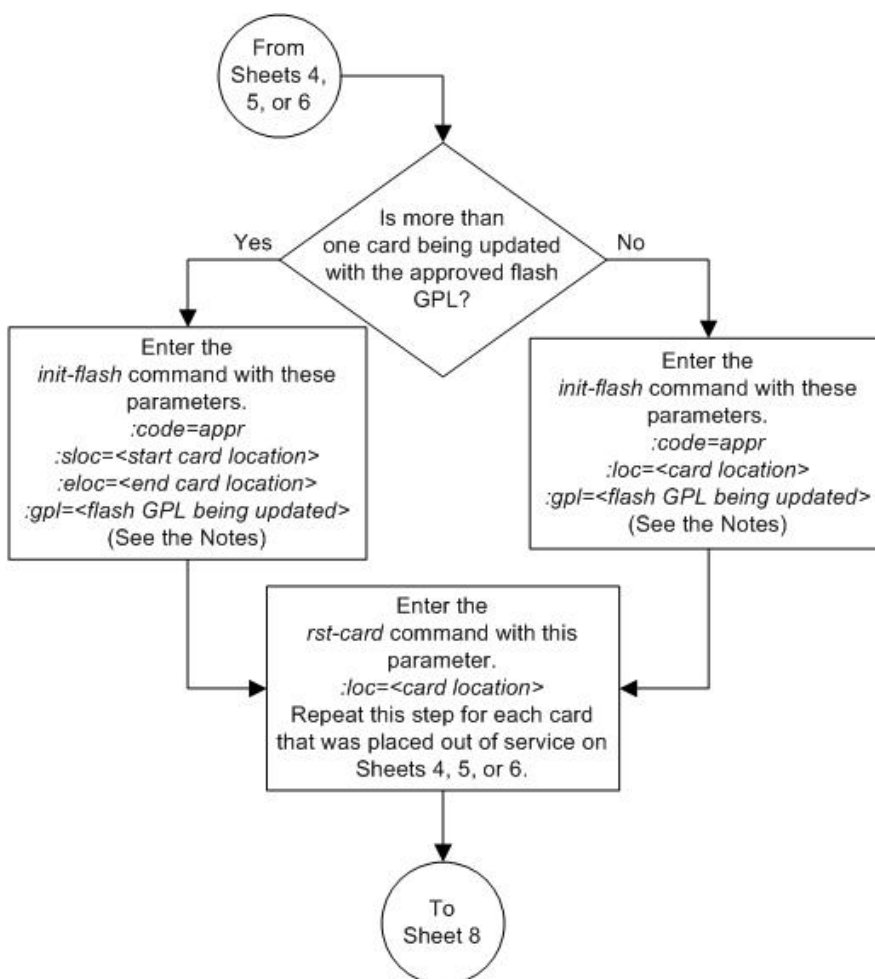
However, it is recommended that only some of the high-capacity cards are placed out of service. Placing all the high-capacity cards out of service will cause all the traffic hosted by the high-capacity cards to be lost.



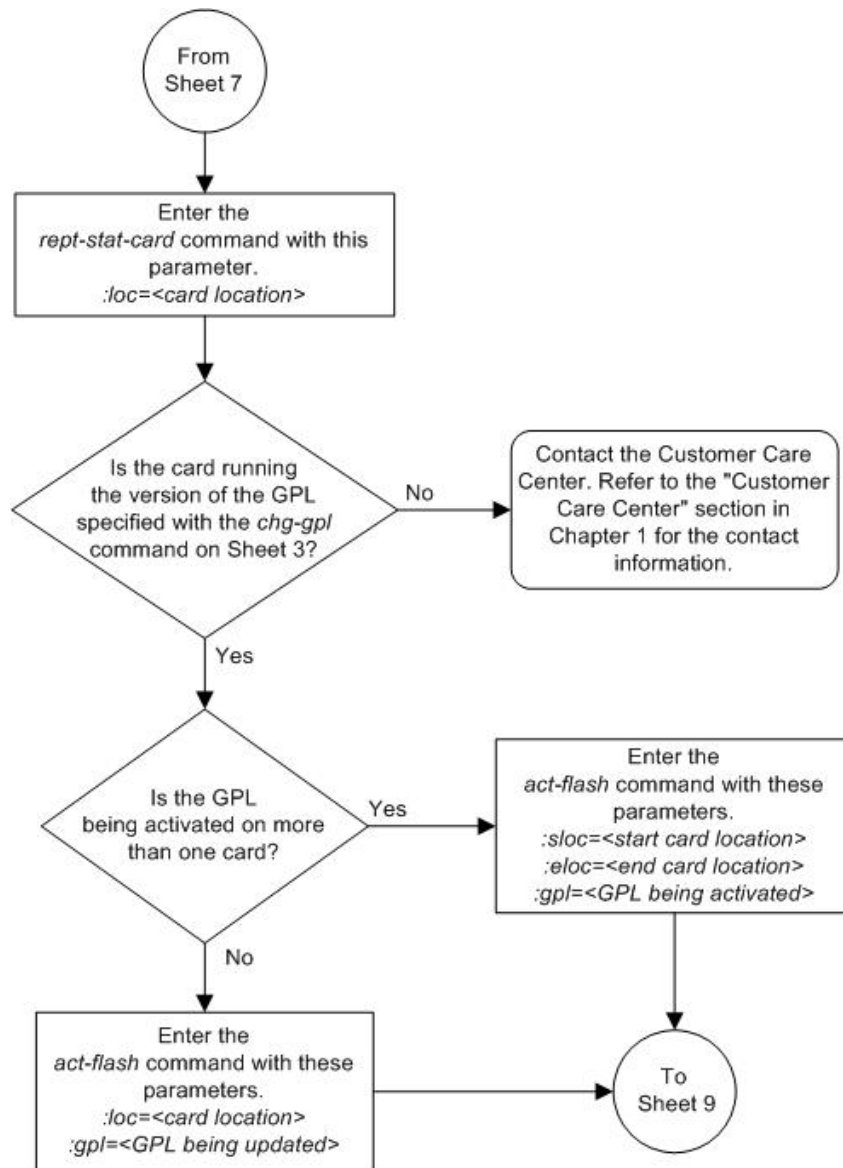
**Note:** Each IPSM has 8 Telnet terminals associated with it. The *rtv-trm* output shows the Telnet terminals that are associated with each IPSM.

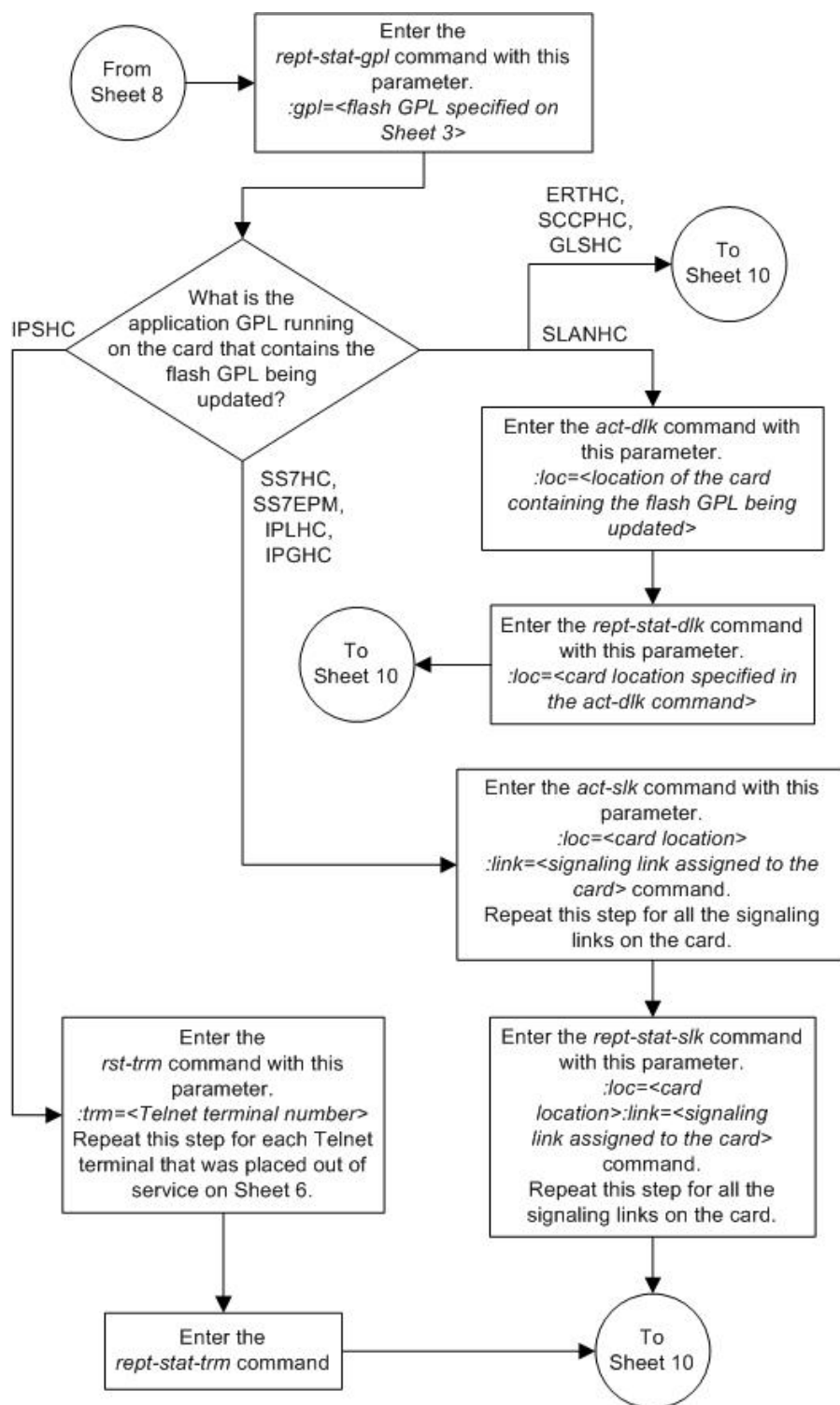
**Cautions:**

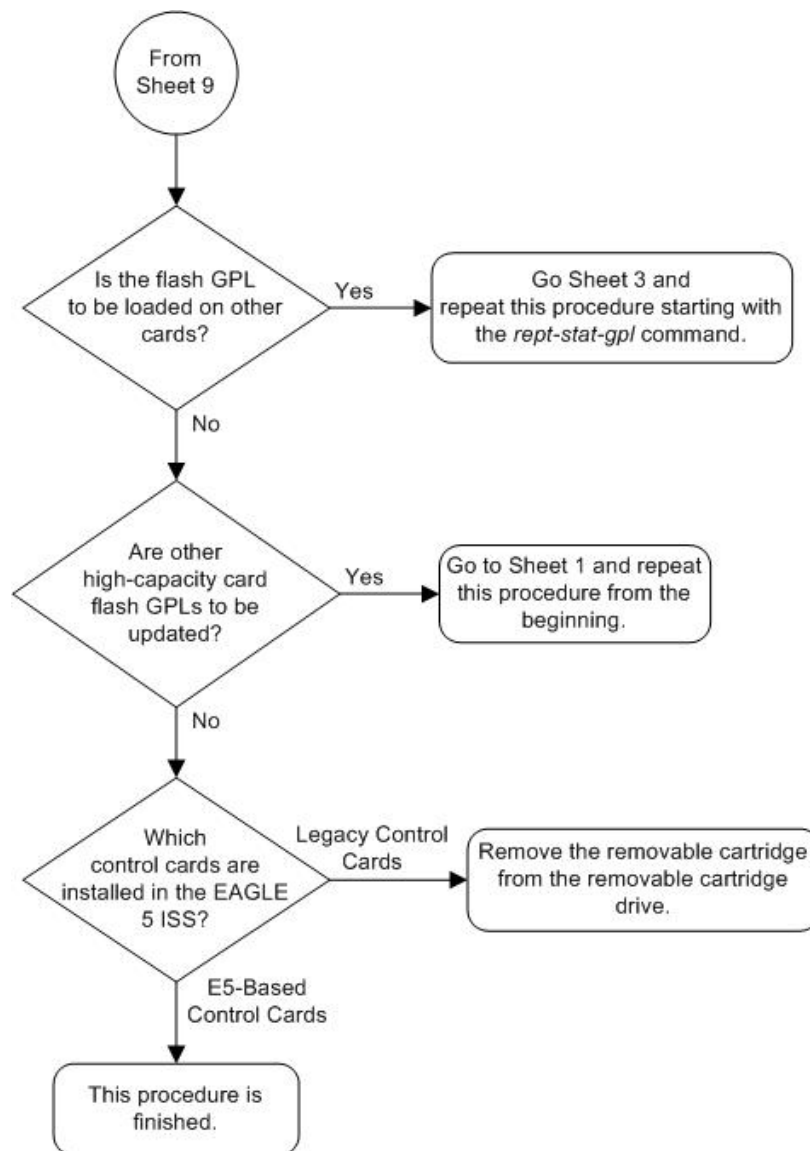
1. Placing the Telnet terminals out of service will disable all Telnet sessions supported by the terminals associated with the IPSM.
2. Multiple cards running the same flash GPL can be updated at the same time with the *init-flash* command. This requires that the cards in the locations specified with the *init-flash* command are out of service. All the IPSMs can be placed out of service at the same time. However, it is recommended that only some of the IPSMs are placed out of service. Placing all the IPSMs out of service will cause the traffic carried by IPSMs to be lost and disable the IP User Interface and FTP Retrieve and Replace features.

**Notes:**

1. The card or cards specified in the *init-flash* command will be re-initialized.
2. If the BLBIOS GPL (on an HC MIM), the BLBEPM GPL (on an E5-E1T1, E5-ENET, E5-STC, E5-SLAN, E5-IPSM, E5-TSM, or E5-ATM cards), or the BLBSMG GPL (on an E5-SM4G card) is specified with the *init-flash* command, and the BLCPLD GPL currently running on the card is not activated (the *act-flash* command has not been performed on the BLCPLD GPL), then the *init-flash* command will be rejected.
3. If the BLCPLD GPL is specified with the *init-flash* command, and the BLBIOS GPL (on an HC MIM), the BLBEPM GPL (on one of E5-E1T1, E5-ENET, E5-STC, E5-SLAN, E5-IPSM, E5-TSM, or E5-ATM cards), or the BLBSMG GPL (on an E5-SM4G card) currently running on the card is not activated (the *act-flash* command has not been performed on the BLBIOS, BLBEPM, or BLBSMG GPL), then the *init-flash* command will be rejected.
4. The *init-flash* command contains the *boot* parameter which has two values, *yes* or *no*. The *yes* value is the default value for the *boot* parameter. The high-capacity card will be re-initialized when the flash GPL download is complete if the *boot* parameter is not specified or if the *boot=yes* parameter is specified. To prevent the high-capacity card from being re-initialized, the *boot=no* parameter must be specified with the *init-flash* command. However, the high-capacity card must be re-initialized after the BLCPLD or BLDIAG6 GPLs flash GPLs are downloaded to the high-capacity card.







## Updating All the Flash GPLs on the High-Capacity Cards

The high-capacity cards and their flash GPLs are shown in [Table 8: High-Capacity Card Flash GPLs](#) on page 281.

**Table 8: High-Capacity Card Flash GPLs**

| HC MIM | E5-E1T1 E5-ENET | E5-STC E5-SLAN<br>E5-IPSM E5-ATM<br>E5-TSM | E5-SM4G |
|--------|-----------------|--------------------------------------------|---------|
| BLCPLD | BLCPLD          | BLCPLD                                     | BLCPLD  |

| HC MIM  | E5-E1T1 E5-ENET | E5-STC E5-SLAN<br>E5-IPSM E5-ATM<br>E5-TSM | E5-SM4G |
|---------|-----------------|--------------------------------------------|---------|
| IMTPCI  | IMTPCI          | IMTPCI                                     | IMTPCI  |
| BLVXW6  | BLVXW6          | BLVXW6                                     | BLVXW6  |
| BLBIOS  | BLBEPM          | BLBEPM                                     | BLBSMG  |
| BLDIAG6 | BLDIAG6         | BLDIAG6                                    | BLDIAG6 |
| PLDPMC1 | PLDPMC1         |                                            |         |
| BLROM1  |                 |                                            |         |

This procedure updates all the flash GPLs at the same time using the `flash-card` command, instead of updating each flash GPL individually using the `init-flash` and `act-flash` commands. To update each of these flash GPLs individually using the `init-flash` and `act-flash` commands, perform [Updating All the Flash GPLs on the High-Capacity Cards](#) on page 281.

The flash GPL names shown in [Table 8: High-Capacity Card Flash GPLs](#) on page 281 are used as the value of the `gpl` parameter of the `chg-gpl`, `act-gpl`, `rept-stat-gpl`, and `rtrv-gpl` commands. The applications and entities supported by the high-capacity cards are shown in [Table 9: High-Capacity Card Applications](#) on page 282.

**Table 9: High-Capacity Card Applications**

| High-Capacity Card | Card Name (as shown on the card label) | Application                                 | Application GPL Running on the Card | Supported Entities                                                               |
|--------------------|----------------------------------------|---------------------------------------------|-------------------------------------|----------------------------------------------------------------------------------|
| HC MIM             | HC MIM                                 | SS7ANSI<br>CCS71TU                          | SS7HC                               | E1 or T1 signaling links                                                         |
| E5-E1T1            | E5-E1T1                                | SS7ANSI,<br>CCS71TU                         | SS7EPM                              | E1 or T1 signaling links                                                         |
| E5-ENET            | E5-ENET                                | SS7IPGW,<br>IPLIM,<br>IPLIMI,<br>IPGWI,IPSG | IPLHC,<br>IPGHC,<br>IPSG            | IP signaling links                                                               |
| E5-STC             | E5-ENET                                | EROUTE                                      | ERTHC                               | EAGLE 5 Integrated Monitoring Support                                            |
| E5-SM4G            | E5-SM4G                                | VSCCP                                       | SCCPHC                              | GTT-related features                                                             |
| E5-SLAN            | E5-ENET                                | STPLAN                                      | SLANHC                              | TCP/IP data links for the STPLAN feature                                         |
| E5-IPSM            | E5-IPSM                                | IPS                                         | IPSHC                               | Telnet sessions for remote connections to the EAGLE 5 ISS and SEAS terminals for |



| High-Capacity Card | Card Name (as shown on the card label) | Application     | Application GPL Running on the Card | Supported Entities                          |
|--------------------|----------------------------------------|-----------------|-------------------------------------|---------------------------------------------|
|                    |                                        |                 |                                     | the SEAS over IP feature                    |
| E5-ATM             | E5-ATM                                 | ATMANSI, ATMITU | ATMHG                               | ANSI and ITU ATM high-speed signaling links |
| E5-TSM             | E5-TSM                                 | GLS             | GLSHG                               | Gateway Screening related features          |

A removable cartridge or removable media containing the high-capacity card flash GPLs that are being updated is required.

**CAUTION**

**CAUTION:** Before any of the flash GPLs on the high-capacity card can be updated, all traffic hosted by the high-capacity cards must be stopped and the high-capacity card must be taken out of service.

**Canceling the REPT-STAT-SLK and RTRV-SLK Commands**

Because the `rept-stat-slk` and `rtrv-slk` commands used in this procedure can output information for a long period of time, the `rept-stat-slk` and `rtrv-slk` commands can be canceled and the output to the terminal stopped. There are three ways that the `rept-stat-slk` and `rtrv-slk` commands can be canceled.

- Press the F9 function key on the keyboard at the terminal where the `rept-stat-slk` or `rtrv-slk` commands command were entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rept-stat-slk` or `rtrv-slk` commands were entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rept-stat-slk` or `rtrv-slk` commands were entered, from another terminal other than the terminal where the `rept-stat-slk` or `rtrv-slk` commands were entered. To enter the `canc-cmd:trm=<xx>` command, the terminal must allow Security Administration commands to be entered from it and the user must be allowed to enter Security Administration commands. The terminal's permissions can be verified with the `rtrv-secu-trm` command. The user's permissions can be verified with the `rtrv-user` or `rtrv-secu-user` commands.

For more information about the `canc-cmd` command, go to the *Commands Manual*.

1. Verify the control cards that are installed in the EAGLE 5 ISS.

Refer to [Maintenance and Administration Subsystem](#) on page 7 for information about the control cards.

If legacy control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 2](#) on page 283.

If E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 5](#) on page 287.

2. Check the removable cartridge drive on the MDAL card for a removable cartridge.

If there is a removable cartridge in the drive, display the flash GPLs on the fixed disk and on the removable cartridge using the `rtrv-gpl` command with the `gpl` parameter value equal to the GPL being updated. Enter the `rtrv-gpl` command for each flash GPL on the high-capacity card.

For an HC MIM, enter these commands.

`rtrv-gpl:gpl=blvxw6`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLVXW6 | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLVXW6 | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | -----        |

`rtrv-gpl:gpl=blbios`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLBIOS | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLBIOS | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | -----        |

`rtrv-gpl:gpl=bldiag6`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL     | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|---------|------|-------------|-------------|-------------|--------------|
| BLDIAG6 | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLDIAG6 | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | -----        |

`rtrv-gpl:gpl=bldpld`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLCPLD | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLCPLD | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | -----        |

`rtrv-gpl:gpl=blrom1`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLROM1 | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLROM1 | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | -----        |

`rtrv-gpl:gpl=pldpmc1`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
PLDPMC1 1114 132-002-000 132-002-000 132-001-000 132-003-000
PLDPMC1 1116 132-002-000 132-002-000 132-001-000 -----
```

`rtrv-gpl:gpl=imtpci`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
IMTPCI 1114 132-002-000 132-002-000 132-001-000 132-003-000
IMTPCI 1116 132-002-000 132-002-000 132-001-000 -----
```

For an E5-E1T1, E5-ENET, E5-STC, E5-SLAN, E5-IPSM, E5-TSM, or E5-ATM card, enter these commands.

`rtrv-gpl:gpl=blvxw6`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLVXW6 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLVXW6 1116 132-002-000 132-002-000 132-001-000 -----
```

`rtrv-gpl:gpl=blbepm`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLBEPM 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLBEPM 1116 132-002-000 132-002-000 132-001-000 -----
```

`rtrv-gpl:gpl=bldiag6`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLDIAG6 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLDIAG6 1116 132-002-000 132-002-000 132-001-000 -----
```

`rtrv-gpl:gpl=blcpld`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLCPLD | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLCPLD | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | -----        |

`rtrv-gpl:gpl=imtpci`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| IMTPCI | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| IMTPCI | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | -----        |

`rtrv-gpl:gpl=pldpmc1`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL     | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|---------|------|-------------|-------------|-------------|--------------|
| PLDPMC1 | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| PLDPMC1 | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | -----        |

**Note:** The GPL `rtrv-gpl:gpl=pldpmc1` command applies to E5-ENET and E5-E1T1 cards only.

For an E5-SM4G card, enter these commands.

`rtrv-gpl:gpl=blvxw6`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLVXW6 | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLVXW6 | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | -----        |

`rtrv-gpl:gpl=bclpld`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLCPLD | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLCPLD | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | -----        |

`rtrv-gpl:gpl=imtpci`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL | CARD | RELEASE | APPROVED | TRIAL | REMOVE TRIAL |
|-----|------|---------|----------|-------|--------------|
|-----|------|---------|----------|-------|--------------|

```
IMTPCI 1114 132-002-000 132-002-000 132-001-000 132-003-000
IMTPCI 1116 132-002-000 132-002-000 132-001-000 -----
```

```
rtrv-gpl:gpl=bldiag6
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLDIAG6 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLDIAG6 1116 132-002-000 132-002-000 132-001-000 -----
```

```
rtrv-gpl:gpl=blbsmg
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLBSMG 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLBSMG 1116 132-002-000 132-002-000 132-001-000 -----
```

If any of the versions of the high-capacity card flash GPLs shown in the REMOVE TRIAL column of the `rtrv-gpl` output are not the version that is to be loaded onto the cards, remove the cartridge and go to [Step 3](#) on page 287. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

If all of the versions of the high-capacity card flash GPLs shown in the REMOVE TRIAL column of the `rtrv-gpl` output are the versions that are to be loaded onto the cards, continue the procedure with [Step 8](#) on page 292.

3. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).

To write a removable cartridge, refer to [MO Removable Cartridge Description](#) on page 17.

4. Insert the removable cartridge containing the latest high-capacity flash GPLs being updated into the removable cartridge drive on the MDAL card.

For more information on inserting the removable cartridge in the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19. After the removable cartridge has been inserted into the removable cartridge drive, repeat the `rtrv-gpl` command in [Step 2](#) on page 283 and verify the versions of the flash GPLs on the removable cartridge that you wish to update.

5. Check the E5-MASPs for removable media.

If removable media is installed in both E5-MASPs, continue the procedure with [Step 7](#) on page 288.

If removable media is not installed in both E5-MASPs, continue the procedure with [Step 6](#) on page 287.

6. Verify the active MASP by entering the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:25:40 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
```

| TDM 1114 ( STDBY ) |   |           |          |          |        | TDM 1116 ( ACTV ) |    |           |          |      |        |
|--------------------|---|-----------|----------|----------|--------|-------------------|----|-----------|----------|------|--------|
|                    | C | LEVEL     | TIME     | LAST     | BACKUP |                   | C  | LEVEL     | TIME     | LAST | BACKUP |
| FD BKUP            | Y | 36        | 09-02-19 | 09:38:25 | GMT    | Y                 | 36 | 09-02-19  | 09:38:25 | GMT  |        |
| FD CRNT            | Y | 39        |          |          |        | Y                 | 39 |           |          |      |        |
|                    |   | MCAP 1113 |          |          |        |                   |    | MCAP 1115 |          |      |        |
| RD BKUP            | - | -         | -        | -        |        | Y                 | 36 | 09-02-19  | 09:27:17 | GMT  |        |
| USB BKP            | - | -         | -        | -        |        | Y                 | 3  | 09-02-07  | 01:11:22 | GMT  |        |

If removable media is installed in the active MASP, continue the procedure with [Step 7](#) on page 288.

If removable media is not installed in the active MASP, insert the removable media in the removable media drive in the active MASP. For more information about inserting removable media in the removable media drive, refer to [Removable USB Drive](#) on page 20. After the removable media has been inserted in the removable media drive in the active MASP, continue the procedure with [Step 7](#) on page 288.

7. Display the GPLs on the fixed disk and on the removable media using the `rtrv-gpl` command with the `gpl` parameter value equal to the GPL being updated. Enter the `rtrv-gpl` command for each flash GPL on the high-capacity card.

For an HC MIM, enter these commands.

```
rtrv-gpl:gpl=blvxw6
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLVXW6 | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLVXW6 | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLVXW6 | 1115 | -----       | -----       | -----       | -----        |

```
rtrv-gpl:gpl=blbios
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLBIOS | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLBIOS | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLBIOS | 1115 | -----       | -----       | -----       | -----        |

```
rtrv-gpl:gpl=bldiag6
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL     | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|---------|------|-------------|-------------|-------------|--------------|
| BLDIAG6 | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLDIAG6 | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BLDIAG6 | 1115 | -----       | -----       | -----       | -----        |

```
rtrv-gpl:gpl=blcpld
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLCPLD 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLCPLD 1116 132-002-000 132-002-000 132-001-000 132-003-000
BLCPLD 1115 ----- ----- ----- -----
```

rtrv-gpl:gpl=blrom1

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLROM1 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLROM1 1116 132-002-000 132-002-000 132-001-000 132-003-000
BLROM1 1115 ----- ----- ----- -----
```

rtrv-gpl:gpl=pldpmc1

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
PLDPMC1 1114 132-002-000 132-002-000 132-001-000 132-003-000
PLDPMC1 1116 132-002-000 132-002-000 132-001-000 132-003-000
PLDPMC1 1115 ----- ----- ----- -----
```

rtrv-gpl:gpl=imtpci

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
IMTPCI 1114 132-002-000 132-002-000 132-001-000 132-003-000
IMTPCI 1116 132-002-000 132-002-000 132-001-000 132-003-000
IMTPCI 1115 ----- ----- ----- -----
```

For an E5-E1T1, E5-ENET, E5-STC, E5-SLAN, E5-IPSM, E5-TSM, or E5-ATM card, enter these commands.

rtrv-gpl:gpl=blvxw6

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLVXW6 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLVXW6 1116 132-002-000 132-002-000 132-001-000 132-003-000
BLVXW6 1115 ----- ----- ----- -----
```

rtrv-gpl:gpl=blbepm

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLBEPM 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLBEPM 1116 132-002-000 132-002-000 132-001-000 132-003-000
BLBEPM 1115 ----- ----- ----- -----
```

`rtrv-gpl:gpl=blddiag6`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLDIAG6 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLDIAG6 1116 132-002-000 132-002-000 132-001-000 132-003-000
BLDIAG6 1115 ----- ----- ----- -----
```

`rtrv-gpl:gpl=blcpld`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLCPLD 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLCPLD 1116 132-002-000 132-002-000 132-001-000 132-003-000
BLCPLD 1115 ----- ----- ----- -----
```

`rtrv-gpl:gpl=imtpci`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
IMTPCI 1114 132-002-000 132-002-000 132-001-000 132-003-000
IMTPCI 1116 132-002-000 132-002-000 132-001-000 132-003-000
IMTPCI 1115 ----- ----- ----- -----
```

`rtrv-gpl:gpl=pldpmc1`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
PLDPMC1 1114 132-002-000 132-002-000 132-001-000 132-003-000
PLDPMC1 1116 132-002-000 132-002-000 132-001-000 132-003-000
PLDPMC1 1115 ----- ----- ----- -----
```

**Note:** The GPL `rtrv-gpl:gpl=pldpmc1` command applies to E5-ENET and E5-E1T1 cards only.

For an E5-SM4G card, enter these commands.



`rtrv-gpl:gpl=blvxw6`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLVXW6 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLVXW6 1116 132-002-000 132-002-000 132-001-000 132-003-000
BLVXW6 1115 ----- ----- ----- -----
```

`rtrv-gpl:gpl=blcpld`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLCPLD 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLCPLD 1116 132-002-000 132-002-000 132-001-000 132-003-000
BLCPLD 1115 ----- ----- ----- -----
```

`rtrv-gpl:gpl=imtpci`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
IMTPCI 1114 132-002-000 132-002-000 132-001-000 132-003-000
IMTPCI 1116 132-002-000 132-002-000 132-001-000 132-003-000
IMTPCI 1115 ----- ----- ----- -----
```

`rtrv-gpl:gpl=bldiag6`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLDIAG6 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLDIAG6 1116 132-002-000 132-002-000 132-001-000 132-003-000
BLDIAG6 1115 ----- ----- ----- -----
```

`rtrv-gpl:gpl=blbsmg`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLBSMG 1114 132-002-000 132-002-000 132-001-000 132-003-000
BLBSMG 1116 132-002-000 132-002-000 132-001-000 132-003-000
BLBSMG 1115 ----- ----- ----- -----
```

If any of the versions of the flash GPLs shown in the REMOVE TRIAL column of the `rtrv-gpl` output are not the version that is to be loaded onto the cards, remove the removable media from the active MASP.

Insert the removable media that contains the flash GPLs that are being updated into the removable media drive in the active MASP and repeat this step.

For more information about inserting removable media in the removable media drive, or removing removable media from the removable media drive, refer to [Removable USB Drive](#) on page 20.

If all of the versions of the high-capacity flash GPLs shown in the REMOVE TRIAL column of the `rt rv-gpl` output are the versions that are to be loaded onto the cards, continue the procedure with [Step 8](#) on page 292.

8. Change the flash GPLs using the `chg-gpl` command and specifying the value for the trial flash GPL shown in the REMOVE TRIAL column in the output of the `rt rv-gpl` command (in [Step 2](#) on page 283 or [Step 7](#) on page 288 ) for each flash GPL.

For an HC MIM, enter these commands.

```
chg-gpl:gpl=blvxw6:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BLVXW6 upload on 1114 completed
BLVXW6 upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=blbios:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BLBIOS upload on 1114 completed
BLBIOS upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=bldiag6:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BLDIAG6 upload on 1114 completed
BLDIAG6 upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=blcpld:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BLCPLD upload on 1114 completed
BLCPLD upload on 1116 completed
```

```
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=blrom1:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BLROM1 upload on 1114 completed
BLROM1 upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=pldpmc1:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
PLDPMC1 upload on 1114 completed
PLDPMC1 upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=imtpci:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
IMTPCI upload on 1114 completed
IMTPCI upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

For an E5-E1T1, E5-ENET, E5-STC, E5-SLAN, E5-IPSM, E5-TSM, or E5-ATM card, enter these commands.

```
chg-gpl:gpl=blvxw6:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BLVXW6 upload on 1114 completed
BLVXW6 upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=blbepm:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BLBEPM upload on 1114 completed
BLBEPM upload on 1116 completed
```

```
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=blddiag6:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BLDIAG6 upload on 1114 completed
BLDIAG6 upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=blcpld:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BLCPLD upload on 1114 completed
BLCPLD upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=imtpci:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
IMTPCI upload on 1114 completed
IMTPCI upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=pldpmc1:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
PLDPMC1 upload on 1114 completed
PLDPMC1 upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

**Note:** The `chg-gpl:gpl=pldpmc1` command applies to E5-ENET and E5-E1T1 cards only.

For an E5-SM4G card, enter these commands.

```
chg-gpl:gpl=blvxw6:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BLVXW6 upload on 1114 completed
BLVXW6 upload on 1116 completed
```

```
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=blbsmg:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BLBSMG upload on 1114 completed
BLBSMG upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=bldiag6:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BLDIAG6 upload on 1114 completed
BLDIAG6 upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=blcpld:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BLCPLD upload on 1114 completed
BLCPLD upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

```
chg-gpl:gpl=imtpci:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
IMTPCI upload on 1114 completed
IMTPCI upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

9. Activate the trial GPL, using the `act-gpl` command and specifying the name and version of the trial GPL specified in [Step 8](#) on page 292.

For an HC MIM, enter these commands.

```
act-gpl:gpl=blvxw6:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BLVXW6 activate on 1114 completed
BLVXW6 activate on 1116 completed
```

```
act-gpl:gpl=blbios:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BLBIOS activate on 1114 completed
BLBIOS activate on 1116 completed
```

act-gpl:gpl=bldiag6:ver=132-003-000

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BLDIAG6 activate on 1114 completed
BLDIAG6 activate on 1116 completed
```

act-gpl:gpl=blcpld:ver=132-003-000

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BLCPLD activate on 1114 completed
BLCPLD activate on 1116 completed
```

act-gpl:gpl=blrom1:ver=132-003-000

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BLROM1 activate on 1114 completed
BLROM1 activate on 1116 completed
```

act-gpl:gpl=pldpmc1:ver=132-003-000

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
PLDPMC1 activate on 1114 completed
PLDPMC1 activate on 1116 completed
```

act-gpl:gpl=imtpci:ver=132-003-000

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
IMTPCI activate on 1114 completed
IMTPCI activate on 1116 completed
```

For an E5-E1T1, E5-ENET, E5-STC, E5-SLAN, E5-IPSM, E5-TSM, or E5-ATM card, enter these commands.

act-gpl:gpl=blvxw6:ver=132-003-000

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BLVXW6 activate on 1114 completed
BLVXW6 activate on 1116 completed
```

act-gpl:gpl=blbepm:ver=132-003-000

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
```

```
BLBEPM activate on 1114 completed
BLBEPM activate on 1116 completed
```

```
act-gpl:gpl=bldiag6:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BLDIAG6 activate on 1114 completed
BLDIAG6 activate on 1116 completed
```

```
act-gpl:gpl=blcpld:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BLCPLD activate on 1114 completed
BLCPLD activate on 1116 completed
```

```
act-gpl:gpl=imtpci:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
IMTPCI activate on 1114 completed
IMTPCI activate on 1116 completed
```

```
act-gpl:gpl=pldpmc1:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
PLDPMC1 activate on 1114 completed
PLDPMC1 activate on 1116 completed
```

**Note:** The act-gpl:gpl=pldpmc1 command applies to E5-ENET and E5-E1T1 cards only.

For an E5-SM4G card, enter these commands.

```
act-gpl:gpl=blvxw6:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BLVXW6 activate on 1114 completed
BLVXW6 activate on 1116 completed
```

```
act-gpl:gpl=blbsmg:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BLBSMG activate on 1114 completed
BLBSMG activate on 1116 completed
```

```
act-gpl:gpl=bldiag6:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BLDIAG6 activate on 1114 completed
BLDIAG6 activate on 1116 completed
```

```
act-gpl:gpl=blcpld:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BLCPLD activate on 1114 completed
BLCPLD activate on 1116 completed
```

```
act-gpl:gpl=imtpci:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
IMTPCI activate on 1114 completed
IMTPCI activate on 1116 completed
```

10. Verify that the trial GPL has been made the approved GPL using the `rtrv-gpl` command with the `gpl` parameter values specified in [Step 9](#) on page 295.

For an HC MIM, enter these commands.

```
rtrv-gpl:gpl=blvxw6
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLVXW6 | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLVXW6 | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | -----        |

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLVXW6 | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLVXW6 | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLVXW6 | 1115 | -----       | -----       | -----       | -----        |

```
rtrv-gpl:gpl=blbios
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLBIOS | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLBIOS | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | -----        |

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLBIOS | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLBIOS | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLBIOS | 1115 | -----       | -----       | -----       | -----        |

```
rtrv-gpl:gpl=bldiag6
```



This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLDIAG6 1114 132-003-000 132-003-000 132-002-000 132-003-000
BLDIAG6 1116 132-003-000 132-003-000 132-002-000 -----
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLDIAG6 1114 132-003-000 132-003-000 132-002-000 132-003-000
BLDIAG6 1116 132-003-000 132-003-000 132-002-000 132-003-000
BLDIAG6 1115 ----- ----- ----- -----
```

`rtrv-gpl:gpl=blcpld`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLCPLD 1114 132-003-000 132-003-000 132-002-000 132-003-000
BLCPLD 1116 132-003-000 132-003-000 132-002-000 -----
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLCPLD 1114 132-003-000 132-003-000 132-002-000 132-003-000
BLCPLD 1116 132-003-000 132-003-000 132-002-000 132-003-000
BLCPLD 1115 ----- ----- ----- -----
```

`rtrv-gpl:gpl=blrom1`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLROM1 1114 132-003-000 132-003-000 132-002-000 132-003-000
BLROM1 1116 132-003-000 132-003-000 132-002-000 -----
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLROM1 1114 132-003-000 132-003-000 132-002-000 132-003-000
```

|        |      |             |             |             |             |
|--------|------|-------------|-------------|-------------|-------------|
| BLROM1 | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000 |
| BLROM1 | 1115 | -----       | -----       | -----       | -----       |

rtrv-gpl:gpl=pldpmc1

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
PLDPMC1 1114 132-003-000 132-003-000 132-002-000 132-003-000
PLDPMC1 1116 132-003-000 132-003-000 132-002-000 -----
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
PLDPMC1 1114 132-003-000 132-003-000 132-002-000 132-003-000
PLDPMC1 1116 132-003-000 132-003-000 132-002-000 132-003-000
PLDPMC1 1115 -----
```

rtrv-gpl:gpl=imtpci

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
IMTPCI 1114 132-003-000 132-003-000 132-002-000 132-003-000
IMTPCI 1116 132-003-000 132-003-000 132-002-000 -----
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
IMTPCI 1114 132-003-000 132-003-000 132-002-000 132-003-000
IMTPCI 1116 132-003-000 132-003-000 132-002-000 132-003-000
IMTPCI 1115 -----
```

For an E5-E1T1, E5-ENET, E5-STC, E5-SLAN, E5-IPSM, E5-TSM, or E5-ATM card, enter these commands.

rtrv-gpl:gpl=blvxw6

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
```

|        |      |             |             |             |             |
|--------|------|-------------|-------------|-------------|-------------|
| BLVXW6 | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000 |
| BLVXW6 | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | -----       |

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLVXW6 1114 132-003-000 132-003-000 132-002-000 132-003-000
BLVXW6 1116 132-003-000 132-003-000 132-002-000 132-003-000
BLVXW6 1115 ----- ----- ----- -----
```

`rtrv-gpl:gpl=blbepm`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLBEPM 1114 132-003-000 132-003-000 132-002-000 132-003-000
BLBEPM 1116 132-003-000 132-003-000 132-002-000 -----
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLBEPM 1114 132-003-000 132-003-000 132-002-000 132-003-000
BLBEPM 1116 132-003-000 132-003-000 132-002-000 132-003-000
BLBEPM 1115 ----- ----- ----- -----
```

`rtrv-gpl:gpl=blddiag6`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLDIAG6 1114 132-003-000 132-003-000 132-002-000 132-003-000
BLDIAG6 1116 132-003-000 132-003-000 132-002-000 -----
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLDIAG6 1114 132-003-000 132-003-000 132-002-000 132-003-000
BLDIAG6 1116 132-003-000 132-003-000 132-002-000 132-003-000
BLDIAG6 1115 ----- ----- ----- -----
```

`rtrv-gpl:gpl=blcpld`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLCPLD 1114 132-003-000 132-003-000 132-002-000 132-003-000
BLCPLD 1116 132-003-000 132-003-000 132-002-000 -----
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BLCPLD 1114 132-003-000 132-003-000 132-002-000 132-003-000
BLCPLD 1116 132-003-000 132-003-000 132-002-000 132-003-000
BLCPLD 1115 -----
```

`rtrv-gpl:gpl=imtpci`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
IMTPCI 1114 132-003-000 132-003-000 132-002-000 132-003-000
IMTPCI 1116 132-003-000 132-003-000 132-002-000 -----
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
IMTPCI 1114 132-003-000 132-003-000 132-002-000 132-003-000
IMTPCI 1116 132-003-000 132-003-000 132-002-000 132-003-000
IMTPCI 1115 -----
```

`rtrv-gpl:gpl=pldpmc1`

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
PLDPMC1 1114 132-003-000 132-003-000 132-002-000 132-003-000
PLDPMC1 1116 132-003-000 132-003-000 132-002-000 -----
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
PLDPMC1 1114 132-003-000 132-003-000 132-002-000 132-003-000
```

|         |      |             |             |             |             |
|---------|------|-------------|-------------|-------------|-------------|
| PLDPMC1 | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000 |
| PLDPMC1 | 1115 | -----       | -----       | -----       | -----       |

**Note:** The `rtrv-gpl:gpl=pldpmc1` command example applies to E5-ENET and E5-E1T1 cards only.

For an E5-SM4G card, enter these commands.

`rtrv-gpl:gpl=blvxw6`

This is an example of the possible output.

rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0  
GPL Auditing ON

|        |      |             |             |             |              |
|--------|------|-------------|-------------|-------------|--------------|
| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
| BLVXW6 | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLVXW6 | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | -----        |

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0  
GPL Auditing ON

|        |      |             |             |             |              |
|--------|------|-------------|-------------|-------------|--------------|
| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
| BLVXW6 | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLVXW6 | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLVXW6 | 1115 | -----       | -----       | -----       | -----        |

`rtrv-gpl:gpl=blbsmg`

This is an example of the possible output.

rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0  
GPL Auditing ON

|        |      |             |             |             |              |
|--------|------|-------------|-------------|-------------|--------------|
| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
| BLBSMG | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLBSMG | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | -----        |

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0  
GPL Auditing ON

|        |      |             |             |             |              |
|--------|------|-------------|-------------|-------------|--------------|
| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
| BLBSMG | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLBSMG | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLBSMG | 1115 | -----       | -----       | -----       | -----        |

`rtrv-gpl:gpl=bldiag6`

This is an example of the possible output.

rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0  
GPL Auditing ON

|     |      |         |          |       |              |
|-----|------|---------|----------|-------|--------------|
| GPL | CARD | RELEASE | APPROVED | TRIAL | REMOVE TRIAL |
|-----|------|---------|----------|-------|--------------|

|         |      |             |             |             |             |
|---------|------|-------------|-------------|-------------|-------------|
| BLDIAG6 | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000 |
| BLDIAG6 | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | -----       |

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL     | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|---------|------|-------------|-------------|-------------|--------------|
| BLDIAG6 | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLDIAG6 | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLDIAG6 | 1115 | -----       | -----       | -----       | -----        |

rtrv-gpl:gpl=bldpld

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLCPLD | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLCPLD | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | -----        |

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BLCPLD | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLCPLD | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BLCPLD | 1115 | -----       | -----       | -----       | -----        |

rtrv-gpl:gpl=imtpci

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| IMTPCI | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| IMTPCI | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | -----        |

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| IMTPCI | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| IMTPCI | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| IMTPCI | 1115 | -----       | -----       | -----       | -----        |

11. Verify the cards in the EAGLE 5 ISS using the `rept-stat-gpl` command with the `gpl` parameter.

The value of the `gpl` parameter is the type of application gpl running on the card that contains the flash GPLs being updated. For an HC MIM, enter this command.

```
rept-stat-gpl:gpl=ss7hc
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RUNNING APPROVED TRIAL
SS7HC 1303 132-003-000 132-003-000 132-002-000
SS7HC 2101 132-003-000 132-003-000 132-002-000
SS7HC 2103 132-003-000 132-003-000 132-002-000
SS7HC 2205 132-003-000 132-003-000 132-002-000
SS7HC 2207 132-003-000 132-003-000 132-002-000
SS7HC 2211 132-003-000 132-003-000 132-002-000
```

Command Completed

For an E5-E1T1 card, enter this command.

```
rept-stat-gpl:gpl=ss7epm
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RUNNING APPROVED TRIAL
SS7EPM 1303 132-003-000 132-003-000 132-002-000
SS7EPM 2101 132-003-000 132-003-000 132-002-000
SS7EPM 2103 132-003-000 132-003-000 132-002-000
SS7EPM 2205 132-003-000 132-003-000 132-002-000
SS7EPM 2207 132-003-000 132-003-000 132-002-000
SS7EPM 2211 132-003-000 132-003-000 132-002-000
```

Command Completed

For an E5-ENET card, specify the `gpl` parameter values `iplhc`, `ipghc`, or `ipsg`. Enter this command.

```
rept-stat-gpl:gpl=iplhc
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RUNNING APPROVED TRIAL
IPLHC 1303 132-003-000 132-003-000 132-002-000
IPLHC 2101 132-003-000 132-003-000 132-002-000
IPLHC 2103 132-003-000 132-003-000 132-002-000
IPLHC 2205 132-003-000 132-003-000 132-002-000
IPLHC 2207 132-003-000 132-003-000 132-002-000
IPLHC 2211 132-003-000 132-003-000 132-002-000
```

Command Completed

For an E5-STC card, enter this command.

```
rept-stat-gpl:gpl=erthc
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RUNNING APPROVED TRIAL
ERTHC 1303 132-003-000 132-003-000 132-002-000
ERTHC 2101 132-003-000 132-003-000 132-002-000
ERTHC 2103 132-003-000 132-003-000 132-002-000
ERTHC 2205 132-003-000 132-003-000 132-002-000
ERTHC 2207 132-003-000 132-003-000 132-002-000
ERTHC 2211 132-003-000 132-003-000 132-002-000
```

Command Completed.

For an E5-SLAN card, enter this command.

```
rept-stat-gpl:gpl=slanhc
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RUNNING APPROVED TRIAL
SLANHC 1303 132-003-000 132-003-000 132-002-000
SLANHC 2101 132-003-000 132-003-000 132-002-000
SLANHC 2103 132-003-000 132-003-000 132-002-000
SLANHC 2205 132-003-000 132-003-000 132-002-000
SLANHC 2207 132-003-000 132-003-000 132-002-000
SLANHC 2211 132-003-000 132-003-000 132-002-000
```

Command Completed.

For an E5-SM4G card, enter this command.

```
rept-stat-gpl:gpl=sccphc
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RUNNING APPROVED TRIAL
SCCPHC 1303 132-003-000 132-003-000 132-002-000
SCCPHC 2101 132-003-000 132-003-000 132-002-000
SCCPHC 2103 132-003-000 132-003-000 132-002-000
SCCPHC 2205 132-003-000 132-003-000 132-002-000
SCCPHC 2207 132-003-000 132-003-000 132-002-000
SCCPHC 2211 132-003-000 132-003-000 132-002-000
```

Command Completed

For an E5-IPSM card, enter this command.

```
rept-stat-gpl:gpl=ipshc
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RUNNING APPROVED TRIAL
IPSHC 1303 132-003-000 132-003-000 132-002-000
```



```
IPSHC 2101 132-003-000 132-003-000 132-002-000
IPSHC 2103 132-003-000 132-003-000 132-002-000
IPSHC 2205 132-003-000 132-003-000 132-002-000
IPSHC 2207 132-003-000 132-003-000 132-002-000
IPSHC 2211 132-003-000 132-003-000 132-002-000
```

Command Completed

For an E5-ATM card, enter this command.

```
rept-stat-gpl:gpl=atmhc
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RUNNING APPROVED TRIAL
ATMHC 1303 132-003-000 132-003-000 132-002-000
ATMHC 2101 132-003-000 132-003-000 132-002-000
ATMHC 2103 132-003-000 132-003-000 132-002-000
ATMHC 2205 132-003-000 132-003-000 132-002-000
ATMHC 2207 132-003-000 132-003-000 132-002-000
ATMHC 2211 132-003-000 132-003-000 132-002-000
```

Command Completed

For an E5-TSM card, enter this command.

```
rept-stat-gpl:gpl=glshc
```

This is an example of the possible output.

```
rlghncxa03w 08-12-01 11:40:26 GMT EAGLE5 40.0.0
GPL Auditing ON

GPL CARD RUNNING APPROVED TRIAL
GLSHC 1303 132-003-000 132-003-000 132-002-000
GLSHC 2101 132-003-000 132-003-000 132-002-000
GLSHC 2103 132-003-000 132-003-000 132-002-000
GLSHC 2205 132-003-000 132-003-000 132-002-000
GLSHC 2207 132-003-000 132-003-000 132-002-000
GLSHC 2211 132-003-000 132-003-000 132-002-000
```

Command Completed

12. Choose one of the cards displayed in [Step 11](#) on page 304.

Display the flash GPLs running on the card, using the `rept-stat-gpl` command and specifying the location of the card. For this example, enter this command.

```
rept-stat-gpl:loc=1303
```

For an HC MIM, this is an example of the possible output.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RUNNING APPROVED TRIAL
SS7HC 1203 132-003-000 132-003-000 132-002-000
 IMTPCI 132-002-000 ALM 132-003-000 132-002-000
 BLBIOS 132-002-000 ALM 132-003-000 132-002-000
 BLCPLD 132-002-000 ALM 132-003-000 132-002-000
 BLVXW6 132-002-000 ALM 132-003-000 132-002-000
```

|         |             |     |             |             |
|---------|-------------|-----|-------------|-------------|
| BLDIAG6 | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
| BLROM1  | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
| PLDPMC1 | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
|         |             |     | ACTIVE      | INACTIVE    |
| IMTPCI  | 132-002-000 | ALM | 132-002-000 | -----       |
| BLBIOS  | 132-002-000 | ALM | 132-002-000 | -----       |
| BLCPLD  | 132-002-000 | ALM | 132-002-000 | -----       |
| BLVXW6  | 132-002-000 | ALM | 132-002-000 | -----       |
| BLDIAG6 | 132-002-000 | ALM | 132-002-000 | -----       |
| BLROM1  | 132-002-000 | ALM | 132-002-000 | -----       |
| PLDPMC1 | 132-002-000 | ALM | 132-002-000 | -----       |

Command Completed.

For an E5-E1T1 card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
 GPL Auditing ON

 GPL CARD RUNNING APPROVED TRIAL
 SS7EPM 1203 132-003-000 132-003-000 132-002-000
 IMTPCI 132-002-000 ALM 132-003-000 132-002-000
 BLBEPM 132-002-000 ALM 132-003-000 132-002-000
 BLCPLD 132-002-000 ALM 132-003-000 132-002-000
 BLVXW6 132-002-000 ALM 132-003-000 132-002-000
 BLDIAG6 132-002-000 ALM 132-003-000 132-002-000
 PLDPMC1 132-002-000 ALM 132-003-000 132-002-000

 IMTPCI 132-002-000 ALM 132-002-000 -----
 BLBEPM 132-002-000 ALM 132-002-000 -----
 BLCPLD 132-002-000 ALM 132-002-000 -----
 BLVXW6 132-002-000 ALM 132-002-000 -----
 BLDIAG6 132-002-000 ALM 132-002-000 -----
 PLDPMC1 132-002-000 ALM 132-002-000 -----

```

Command Completed.

For an E5-ENET card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
 GPL Auditing ON

 GPL CARD RUNNING APPROVED TRIAL
 IPLHC 1203 132-003-000 132-003-000 132-002-000
 IMTPCI 132-002-000 ALM 132-003-000 132-002-000
 BLBEPM 132-002-000 ALM 132-003-000 132-002-000
 BLCPLD 132-002-000 ALM 132-003-000 132-002-000
 BLVXW6 132-002-000 ALM 132-003-000 132-002-000
 BLDIAG6 132-002-000 ALM 132-003-000 132-002-000
 PLDPMC1 132-002-000 ALM 132-003-000 132-002-000

 IMTPCI 132-002-000 ALM 132-002-000 -----
 BLBEPM 132-002-000 ALM 132-002-000 -----
 BLCPLD 132-002-000 ALM 132-002-000 -----
 BLVXW6 132-002-000 ALM 132-002-000 -----
 BLDIAG6 132-002-000 ALM 132-002-000 -----
 PLDPMC1 132-002-000 ALM 132-002-000 -----

```

Command Completed.

For an E5-STC card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
 GPL Auditing ON

 GPL CARD RUNNING APPROVED TRIAL
 ERTHC 1203 132-003-000 132-003-000 132-002-000
 IMTPCI 132-002-000 ALM 132-003-000 132-002-000
 BLBEPM 132-002-000 ALM 132-003-000 132-002-000
 BLCPLD 132-002-000 ALM 132-003-000 132-002-000
 BLVXW6 132-002-000 ALM 132-003-000 132-002-000
 BLDIAG6 132-002-000 ALM 132-003-000 132-002-000

 IMTPCI 132-002-000 ALM ACTIVE INACTIVE
 BLBEPM 132-002-000 ALM 132-002-000 -----
 BLCPLD 132-002-000 ALM 132-002-000 -----
 BLVXW6 132-002-000 ALM 132-002-000 -----
 BLDIAG6 132-002-000 ALM 132-002-000 -----
```

Command Completed.

For an E5-SLAN card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
 GPL Auditing ON

 GPL CARD RUNNING APPROVED TRIAL
 SLANHC 1203 132-003-000 132-003-000 132-002-000
 IMTPCI 132-002-000 ALM 132-003-000 132-002-000
 BLBEPM 132-002-000 ALM 132-003-000 132-002-000
 BLCPLD 132-002-000 ALM 132-003-000 132-002-000
 BLVXW6 132-002-000 ALM 132-003-000 132-002-000
 BLDIAG6 132-002-000 ALM 132-003-000 132-002-000

 IMTPCI 132-002-000 ALM ACTIVE INACTIVE
 BLBEPM 132-002-000 ALM 132-002-000 -----
 BLCPLD 132-002-000 ALM 132-002-000 -----
 BLVXW6 132-002-000 ALM 132-002-000 -----
 BLDIAG6 132-002-000 ALM 132-002-000 -----
```

Command Completed.

For an E5-SM4G card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
 GPL Auditing ON

 GPL CARD RUNNING APPROVED TRIAL
 SCCPHC 1203 132-003-000 132-003-000 132-002-000
 IMTPCI 132-002-000 ALM 132-003-000 132-002-000
 BLBSMG 132-002-000 ALM 132-003-000 132-002-000
 BLCPLD 132-002-000 ALM 132-003-000 132-002-000
 BLVXW6 132-002-000 ALM 132-003-000 132-002-000
 BLDIAG6 132-002-000 ALM 132-003-000 132-002-000

 IMTPCI 132-002-000 ALM ACTIVE INACTIVE
 BLBSMG 132-002-000 ALM 132-002-000 -----
 BLCPLD 132-002-000 ALM 132-002-000 -----
 BLVXW6 132-002-000 ALM 132-002-000 -----
 BLDIAG6 132-002-000 ALM 132-002-000 -----
```

Command Completed.

For an E5-IPSM card, this is an example of the possible output.

rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0

GPL Auditing ON

| GPL   | CARD    | RUNNING         | APPROVED    | TRIAL       |
|-------|---------|-----------------|-------------|-------------|
| IPSHC | 1203    | 132-003-000     | 132-003-000 | 132-002-000 |
|       | IMTPCI  | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       | BLBEPM  | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       | BLCPLD  | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       | BLVXW6  | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       | BLDIAG6 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       |         |                 | ACTIVE      | INACTIVE    |
|       | IMTPCI  | 132-002-000 ALM | 132-002-000 | -----       |
|       | BLBEPM  | 132-002-000 ALM | 132-002-000 | -----       |
|       | BLCPLD  | 132-002-000 ALM | 132-002-000 | -----       |
|       | BLVXW6  | 132-002-000 ALM | 132-002-000 | -----       |
|       | BLDIAG6 | 132-002-000 ALM | 132-002-000 | -----       |

Command Completed.

For an E5-ATM card, this is an example of the possible output.

rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0

GPL Auditing ON

| GPL   | CARD    | RUNNING         | APPROVED    | TRIAL       |
|-------|---------|-----------------|-------------|-------------|
| ATMHC | 1203    | 132-003-000     | 132-003-000 | 132-002-000 |
|       | IMTPCI  | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       | BLBEPM  | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       | BLCPLD  | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       | BLVXW6  | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       | BLDIAG6 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       |         |                 | ACTIVE      | INACTIVE    |
|       | IMTPCI  | 132-002-000 ALM | 132-002-000 | -----       |
|       | BLBEPM  | 132-002-000 ALM | 132-002-000 | -----       |
|       | BLCPLD  | 132-002-000 ALM | 132-002-000 | -----       |
|       | BLVXW6  | 132-002-000 ALM | 132-002-000 | -----       |
|       | BLDIAG6 | 132-002-000 ALM | 132-002-000 | -----       |

Command Completed.

For an E5-TSM card, this is an example of the possible output.

rlghncxa03w 08-12-01 07:01:08 GMT EAGLE5 40.0.0

GPL Auditing ON

| GPL   | CARD    | RUNNING         | APPROVED    | TRIAL       |
|-------|---------|-----------------|-------------|-------------|
| GLSHC | 1203    | 132-003-000     | 132-003-000 | 132-002-000 |
|       | IMTPCI  | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       | BLBEPM  | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       | BLCPLD  | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       | BLVXW6  | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       | BLDIAG6 | 132-002-000 ALM | 132-003-000 | 132-002-000 |
|       |         |                 | ACTIVE      | INACTIVE    |
|       | IMTPCI  | 132-002-000 ALM | 132-002-000 | -----       |
|       | BLBEPM  | 132-002-000 ALM | 132-002-000 | -----       |
|       | BLCPLD  | 132-002-000 ALM | 132-002-000 | -----       |
|       | BLVXW6  | 132-002-000 ALM | 132-002-000 | -----       |
|       | BLDIAG6 | 132-002-000 ALM | 132-002-000 | -----       |

Command Completed.

The `flash-card` command will load only those flash GPLs whose approved versions are different from the versions that the card is running. The version of the flash GPL that the card is running is shown in the Running column in the `rept-stat-gpl` output. The approved version of the flash GPL is shown in the approved column of the `rept-stat-gpl` output. If the running and approved versions of a flash GPL are the same, the `flash-card` command will not load that flash GPL.

- Display the status of the card using the `rept-stat-card` command and specifying the location of the card used in [Step 12](#) on page 307.

For this example, enter this command.

```
rept-stat-card:loc=1303
```

For an HC MIM, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 LIME1 SS7HC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBIO5 GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLROM1 GPL version = 132-002-000
PLDPMC1 GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
SIGNALING LINK STATUS
SLK PST LS CLLI
A IS-NR e11303a -----
B IS-NR e11303b -----
A1 IS-NR e11303a -----
B3 IS-NR e11303b -----
```

Command Completed.

For an E5-E1T1 card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 LIME1 SS7EPM IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
PLDPMC1 GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 32C (90F) [ALARM TEMP: 60C (140F)]
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
SIGNALING LINK STATUS
SLK PST LS CLLI
A IS-NR e11303a -----
B IS-NR e11303b -----
A1 IS-NR e11303a -----
```

```

 B3 IS-NR e11303b -----
Command Completed.

```

For an E5-ENET card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 DCM IPLHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
PLDPMC1 GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 32C (90F) [ALARM TEMP: 60C (140F)]
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
SIGNALING LINK STATUS
 SLK PST LS CLLI
 A IS-NR e11303a -----
 B IS-NR e11303b -----
 A1 IS-NR e11303a -----
 B3 IS-NR e11303b -----

```

Command Completed.

For an E5-STC card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 STC ERTHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 61C (142F)
PEAK TEMPERATURE: = 61C (142F) [00-02-14 10:33]
EROUTE % OCCUP = 0%
NTP broadcast = VALID
STC IP PORT A: OOS-MT Unavail -----
ALARM STATUS = ** 0084 IP Connection Unavailable
ERROR STATUS = DHCP Lease. Physical Link.
STC IP PORT B: OOS-MT Unavail -----
ALARM STATUS = ** 0084 IP Connection Unavailable
ERROR STATUS = DHCP Lease. Physical Link.

```

Command Completed.

For an E5-SLAN card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 DCM SLANHCH IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn

```

```
CURRENT TEMPERATURE = 60C (140F)
PEAK TEMPERATURE: = 63C (146F) [00-02-12 21:58]
DLK A PST = IS-NR SST = Avail AST = -----
SLAN % EAGLE CAPACITY = 57%
SLAN % HOST CAPACITY = 49%
```

Command Completed.

For an E5-SM4G card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 DSM SCCPHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBSMG GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 31C (88F)
PEAK TEMPERATURE: = 32C (90F) [07-05-12 15:55]
SCCP % OCCUP = 1%
```

Command Completed.

For an E5-IPSM card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 IPSM IPSHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 32C (90F)
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
Command Completed.
```

For an E5-ATM card, this is an example of the possible output.

```
rlghncxa03w 08-03-01 09:12:36 GMT EAGLE5 38.0.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 LIMATM ATMHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 38C (101F)
PEAK TEMPERATURE: = 38C (101F) [07-11-23 06:10]
SIGNALING LINK STATUS
 SLK PST LS CLLI
 A IS-NR ls1 -----
```

Command Completed.

For an E5-TSM card, this is an example of the possible output.

```
rlghncxa03w 08-12-01 09:12:36 GMT EAGLE5 40.0.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 TSM GLSHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-002-000
BLVXW6 GPL version = 132-002-000
BLDIAG6 GPL version = 132-002-000
BLBEPM GPL version = 132-002-000
BLCPLD GPL version = 132-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 38C (101F)
PEAK TEMPERATURE: = 38C (101F) [07-11-23 06:10]
```

Command Completed.

Continue the procedure by performing one of these actions:

- If card is running one of these application GPLs: SS7HC, SS7EPM, IPLHC, IPGHC, ATMHC, IPSG (shown in the GPL column in the `rept-stat-card` output in [Step 13](#) on page 311), continue the procedure with [Step 14](#) on page 314.
  - If card is running one of these application GPLs: ERTHC, E5-TSM, or SCCPHC, (shown in the GPL column in the `rept-stat-card` output in [Step 13](#) on page 311), continue the procedure with [Step 21](#) on page 318.
  - If the card is running the SLANHC application GPL (shown in the GPL column in the `rept-stat-card` output in [Step 13](#) on page 311), continue the procedure with [Step 16](#) on page 315.
  - If the card is running the IPSHC application GPL, (shown in the GPL column in the `rept-stat-card` output in [Step 13](#) on page 311), continue the procedure with [Step 18](#) on page 316.
14. Display the signaling links associated with the card shown in [Step 13](#) on page 311.

Enter the `rtrv-slk` command with the card location specified in [Step 13](#) on page 311. For this example, enter this command.

```
rtrv-slk: loc=1303
```

This is an example of the possible output for an HC MIM or E5-E1T1 card.

```
rlghncxa03w 09-03-01 21:16:37 GMT EAGLE5 40.1.0

LOC LINK LSN SLC TYPE L2T BPS ECM PCR PCR E1 E1
1303 A e11303a 0 LIME1 1 64000 PCR 76 3800 1303 2 12
1303 B e11303b 0 LIME1 1 56000 BASIC --- ---- 1303 1 2
1303 A1 e11303a 1 LIME1 1 56000 BASIC --- ---- 1303 1 3
1303 B3 e11303b 1 LIME1 1 56000 BASIC --- ---- 1303 1 7
```

This is an example of the possible output for an E5-ENET card.

```
rlghncxa03w 09-03-01 21:16:37 GMT EAGLE5 40.1.0

LOC LINK LSN SLC TYPE IPLIML2
1303 A e11303a 0 IPLIM M2PA
1303 B e11303b 0 IPLIM M2PA
```



```
1303 A1 e11303a 1 IPLIM M2PA
1303 B3 e11303b 1 IPLIM M2PA
```

This is an example of the possible output for an E5-ATM card.

```
rlghncxa03w 09-03-01 21:16:37 GMT EAGLE 38.0.0
```

| LOC  | LINK | LSN | SLC | TYPE   | LP<br>SET | BPS     | ATM<br>TSEL | VCI | VPI | LL |
|------|------|-----|-----|--------|-----------|---------|-------------|-----|-----|----|
| 1303 | A    | ls2 | 2   | LIMATM | 1         | 1544000 | LINE        | 5   | 0   | 0  |
| 1303 | B    | ls1 | 3   | LIMATM | 1         | 1544000 | LINE        | 5   | 0   | 0  |

15. Deactivate the SS7 signaling links on the card using the `dact -s lk` command.

For this example, enter these commands.

```
dact-s lk: loc=1303: link=a
```

```
dact-s lk: loc=1303: link=b
```

```
dact-s lk: loc=1303: link=a1
```

```
dact-s lk: loc=1303: link=b3
```



#### CAUTION

**CAUTION:** These command examples place the signaling links on card 1303 out of service. This will interrupt service on the signaling links on card 1303 and allow the flash GPLs to be loaded on to card 1303.

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:45:18 GMT EAGLE5 40.1.0
Deactivate SLK message sent to card
```

Continue the procedure with [Step 21](#) on page 318.

16. Display the data link, and its status, associated with the card shown in [Step 13](#) on page 311. Enter the `rept -stat -dlk` command with the card location specified in [Step 13](#) on page 311. For this example, enter this command.

```
rept-stat-dlk: loc=1303
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 17:00:36 GMT EAGLE5 40.1.0
DLK PST SST AST
1303 IS-NR Avail ---
```

Command Completed.

17. Deactivate the TCP/IP data link on the card that you wish to load the GPL onto using the `canc-dlk` command. For this example, enter this command.

```
canc-dlk: loc=1303
```



#### CAUTION

**CAUTION:** This command example places the TCP/IP data link on card 1303 out of service. This will interrupt service on the TCP/IP data link on card 1303 and allow the flash GPLs to be loaded on to card 1303.

If there is only one TCP/IP data link in the EAGLE 5 ISS, placing the card out of service will cause the STPLAN feature to be disabled. When this command has successfully completed, this message should appear.

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:45:18 GMT EAGLE5 40.1.0
Deactivate Link message sent to card.
Command Completed.
```

Continue the procedure with [Step 21](#) on page 318.

18. Display the terminal configuration in the database with the `rtrv-trm` command.

The Telnet terminals associated with the card shown in [Step 13](#) on page 311 must be taken out of service. The Telnet terminals are shown in the output with the entry TELNET in the TYPE field. This is an example of the possible output. In this example, the Telnet terminals that must be taken out of service are terminals 17 to 24.

```
rlghncxa03w 09-03-01 16:02:08 GMT EAGLE5 40.1.0
```

| TRM | TYPE    | COMM        | FC   | TMOUT | MXINV | DURAL    |
|-----|---------|-------------|------|-------|-------|----------|
| 1   | VT320   | 9600-7-E-1  | SW   | 30    | 5     | 99:59:59 |
| 2   | KSR     | 9600-7-E-1  | HW   | 30    | 5     | INDEF    |
| 3   | PRINTER | 4800-7-E-1  | HW   | 30    | 0     | 00:00:00 |
| 4   | VT320   | 2400-7-E-1  | BOTH | 30    | 5     | 00:30:00 |
| 5   | VT320   | 9600-7-0-1  | NONE | 30    | 5     | 00:00:30 |
| 6   | OAP     | 19200-7-E-1 | SW   | 0     | 5     | INDEF    |
| 7   | PRINTER | 9600-7-N-2  | HW   | 30    | 5     | 00:30:00 |
| 8   | KSR     | 19200-7-E-2 | BOTH | 30    | 5     | 00:30:00 |
| 9   | OAP     | 19200-7-E-1 | SW   | 0     | 5     | INDEF    |
| 10  | VT320   | 9600-7-E-1  | HW   | 30    | 5     | 00:30:00 |
| 11  | VT320   | 4800-7-E-1  | HW   | 30    | 5     | 00:30:00 |
| 12  | PRINTER | 9600-7-E-1  | HW   | 30    | 4     | 00:30:00 |
| 13  | VT320   | 9600-7-0-1  | NONE | 30    | 5     | 00:30:00 |
| 14  | VT320   | 9600-7-E-2  | SW   | 30    | 8     | 00:30:00 |
| 15  | VT320   | 9600-7-N-2  | HW   | 30    | 5     | 00:30:00 |
| 16  | VT320   | 9600-7-E-2  | BOTH | 30    | 3     | 00:30:00 |

| TRM | TYPE   | LOC  | TMOUT | MXINV | DURAL    |
|-----|--------|------|-------|-------|----------|
| 17  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 18  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 19  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 20  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 21  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 22  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 23  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 24  | TELNET | 1303 | 60    | 5     | 00:30:00 |
| 25  | TELNET | 1203 | 60    | 5     | 00:30:00 |
| 26  | TELNET | 1203 | 60    | 5     | 00:30:00 |
| 27  | TELNET | 1203 | 60    | 5     | 00:30:00 |
| 28  | TELNET | 1203 | 60    | 5     | 00:30:00 |
| 29  | TELNET | 1203 | 60    | 5     | 00:30:00 |
| 30  | TELNET | 1203 | 60    | 5     | 00:30:00 |
| 31  | TELNET | 1203 | 60    | 5     | 00:30:00 |
| 32  | TELNET | 1203 | 60    | 5     | 00:30:00 |
| 33  | TELNET | 1208 | 60    | 5     | 00:30:00 |
| 34  | TELNET | 1208 | 60    | 5     | 00:30:00 |
| 35  | TELNET | 1208 | 60    | 5     | 00:30:00 |
| 36  | TELNET | 1208 | 60    | 5     | 00:30:00 |
| 37  | TELNET | 1208 | 60    | 5     | 00:30:00 |
| 38  | TELNET | 1208 | 60    | 5     | 00:30:00 |
| 39  | TELNET | 1208 | 60    | 5     | 00:30:00 |
| 40  | TELNET | 1208 | 60    | 5     | 00:30:00 |

**Note:** The `rtrv-trm` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-trm` command, see the `rtrv-trm` command description in the *Commands Manual*.

19. Display the status of the terminals with the `rept-stat-trm` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM PST SST AST
1 IS-NR Active -----
2 IS-NR Active -----
3 IS-NR Active -----
4 IS-NR Active -----
5 IS-NR Active -----
6 IS-NR Active -----
7 IS-NR Active -----
8 IS-NR Active -----
9 IS-NR Active -----
10 IS-NR Active -----
11 IS-NR Active -----
12 IS-NR Active -----
13 IS-NR Active -----
14 IS-NR Active -----
15 IS-NR Active -----
16 IS-NR Active -----
17 IS-NR Active -----
18 IS-NR Active -----
19 IS-NR Active -----
20 IS-NR Active -----
21 IS-NR Active -----
22 IS-NR Active -----
23 IS-NR Active -----
24 IS-NR Active -----
25 IS-NR Active -----
26 IS-NR Active -----
27 IS-NR Active -----
28 IS-NR Active -----
29 IS-NR Active -----
30 IS-NR Active -----
31 IS-NR Active -----
32 IS-NR Active -----
33 IS-NR Active -----
34 IS-NR Active -----
35 IS-NR Active -----
36 IS-NR Active -----
37 IS-NR Active -----
38 IS-NR Active -----
39 IS-NR Active -----
40 IS-NR Active -----
```

Command Completed.

20. Place the required terminals out of service using the `rmv-trm` command. For this example, enter these commands.

```
rmv-trm:trm=17
rmv-trm:trm=18
rmv-trm:trm=19
rmv-trm:trm=20
rmv-trm:trm=21
rmv-trm:trm=22
rmv-trm:trm=23
```

```
rmv-trm:trm=24
```

**Note:** If the terminal that is being taken out of service is the last in service SEAS terminal, the `force=yes` parameter must be specified with the `rmv-trm` command for that terminal.



**CAUTION**

**CAUTION:** Placing the Telnet terminals out of service will disable any Telnet sessions running on these terminals.

If the status of any of the terminals shown in the PST field in [Step 19](#) on page 317 is OOS-MT-DSBLD (out-of-service maintenance disabled), the terminal is already out of service and the `rmv-trm` command does not need to be executed for that terminal.

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Inhibit message sent to terminal

rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Command Completed.
```

21. Place the card shown in [Step 13](#) on page 311 out of service using the `rmv-card` command.

For this example, enter this command.

```
rmv-card:loc=1303
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Card has been inhibited.
```

If the card contains the last signaling link in a linkset, the `force=yes` parameter must be specified.

22. Load the approved version of the flash GPLs onto the card inhibited in [Step 21](#) on page 318 using the `flash-card` command with the `code=appr` parameter.

The `flash-card` command will load only those flash GPLs whose approved versions are different from the versions that the card is running. The version of the flash GPL that the card is running is shown in the RUNNING column in the `rept-stat-gpl` output. The approved version of the flash GPL is shown in the APPROVED column of the `rept-stat-gpl` output. If the RUNNING and APPROVED versions of an flash GPL are the same, the `flash-card` command will not load that flash GPL.



**CAUTION**

**CAUTION:** The `force=yes` is an optional parameter of the `flash-card` command. The `force=yes` parameter must be specified if the card was not taken out of service with the `rmv-card` command in [Step 21](#) on page 318. If the `force=yes` parameter is specified with the `flash-card` command, the signaling links on the card will be taken out of service and traffic on these links could be lost.

For this example, enter this command.

```
flash-card:code=appr:loc=1303
```

When this command has successfully completed on an HC MIM, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
```

```
Flash Card: Downloading BLBIOS on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLBIOS complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLDIAG6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLDIAG6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLROM1 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLROM1 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading IMTPCI on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download IMTPCI complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLVXW6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLVXW6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading PLDPMC1 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download PLDPMC1 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLBIOS on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLBIOS complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLDIAG6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLDIAG6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLROM1 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLROM1 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating IMTPCI on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation IMTPCI complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLVXW6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLVXW6 complete.
;
```

```

rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating PLDPMC1 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation PLDPMC1 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLCPLD on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLCPLD complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLCPLD on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLCPLD complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.

```

When this command has successfully completed on an E5-E1T1 or E5-ENET card, these messages should appear.

```

rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLBEPM on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLBEPM complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLDIAG6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLDIAG6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading IMTPCI on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download IMTPCI complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLVXW6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLVXW6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading PLDPMC1 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download PLDPMC1 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLBEPM on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLBEPM complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLDIAG6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0

```

```
Flash Card: Card 1303 activation BLDIAG6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating IMTPCI on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation IMTPCI complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLVXW6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLVXW6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLCPLD on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLCPLD complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLCPLD on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLCPLD complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

When this command has successfully completed on an E5-STC, E5-SLAN, E5-IPSM, E5-TSM, or E5-ATM card, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLBEPM on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLBEPM complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLDIAG6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLDIAG6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading IMTPCI on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download IMTPCI complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLVXW6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLVXW6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLBEPM on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLBEPM complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLDIAG6 on card 1303.
;
```

```

rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLDIAG6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating IMTPCI on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation IMTPCI complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLVXW6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLVXW6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLCPLD on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLCPLD complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLCPLD on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLCPLD complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.

```

When this command has successfully completed on an E5-SM4G card, these messages should appear.

```

rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLBSMG on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLBSMG complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLDIAG6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLDIAG6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading IMTPCI on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download IMTPCI complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLVXW6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLVXW6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLBEPM on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLBEPM complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLDIAG6 on card 1303.

```



```

;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLDIAG6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating IMTPCI on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation IMTPCI complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLVXW6 on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLVXW6 complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Downloading BLCPLD on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 download BLCPLD complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Activating BLCPLD on card 1303.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Flash Card: Card 1303 activation BLCPLD complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.

```

The card specified in the flash-card command will be re-initialized when the flash GPL downloads are complete.

23. Put the card that was taken out of service in [Step 21](#) on page 318 back into service using the rst-card command.

The rst-card command also loads the approved versions of the flash GPLs onto the card.

For this example, enter this command.

```
rst-card: loc=1303
```

When this command has successfully completed, this message should appear.

```

rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Card has been allowed.

```

24. Verify that the flash GPLs from [Step 22](#) on page 318 have loaded and that the card has returned to its in-service normal (IS-NR) state using the rept-stat-card command.

For this example, enter this command.

```
rept-stat-card: loc=1303
```

For an HC MIM, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 LIME1 SS7HC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-003-000
BLCPLD GPL version = 132-003-000
BLDIAG6 GPL version = 132-003-000

```

```

BLBIO5 GPL version = 132-003-000
BLVXW6 GPL version = 132-003-000
BLROM1 GPL version = 132-003-000
PLDPMC1 GPL version = 132-003-000
IMT BUS A = Conn
IMT BUS B = Conn
SIGNALING LINK STATUS
 SLK PST LS CLLI
 A IS-NR e11303a -----
 B IS-NR e11303b -----
 A1 IS-NR e11303a -----
 B3 IS-NR e11303b -----
Command Completed.

```

For an E5-E1T1 card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 LIME1 SS7EPM IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-003-000
BLCPLD GPL version = 132-003-000
BLDIAG6 GPL version = 132-003-000
BLBEPM GPL version = 132-003-000
PLDPMC1 GPL version = 132-003-000
BLVXW6 GPL version = 132-003-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 32C (90F) [ALARM TEMP: 60C (140F)]
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
SIGNALING LINK STATUS
 SLK PST LS CLLI
 A IS-NR e11303a -----
 B IS-NR e11303b -----
 A1 IS-NR e11303a -----
 B3 IS-NR e11303b -----
Command Completed.

```

For an E5-ENET card, this is an example of the possible output.

```

rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 DCM IPLHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-003-000
BLCPLD GPL version = 132-003-000
BLDIAG6 GPL version = 132-003-000
BLBEPM GPL version = 132-003-000
PLDPMC1 GPL version = 132-003-000
BLVXW6 GPL version = 132-003-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 32C (90F) [ALARM TEMP: 60C (140F)]
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
SIGNALING LINK STATUS
 SLK PST LS CLLI
 A IS-NR e11303a -----
 B IS-NR e11303b -----
 A1 IS-NR e11303a -----

```

```
B3 IS-NR e11303b -----
Command Completed.
```

For an E5-STC card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 STC ERTHC IS-NR Active -----
 ALARM STATUS = No Alarms.
 IMTPCI GPL version = 132-003-000
 BLVXW6 GPL version = 132-003-000
 BLDIAG6 GPL version = 132-003-000
 BLBEPM GPL version = 132-003-000
 BLCPLD GPL version = 132-003-000
 IMT BUS A = Conn
 IMT BUS B = Conn
 CURRENT TEMPERATURE = 61C (142F)
 PEAK TEMPERATURE: = 61C (142F) [00-02-14 10:33]
 EROUTE % OCCUP = 0%
 NTP broadcast = VALID
 STC IP PORT A: OOS-MT Unavail -----
 ALARM STATUS = ** 0084 IP Connection Unavailable
 ERROR STATUS = DHCP Lease. Physical Link.
 STC IP PORT B: OOS-MT Unavail -----
 ALARM STATUS = ** 0084 IP Connection Unavailable
 ERROR STATUS = DHCP Lease. Physical Link.
```

Command Completed.

For an E5-SLAN card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 DCM SLANHC IS-NR Active -----
 ALARM STATUS = No Alarms.
 IMTPCI GPL version = 132-003-000
 BLVXW6 GPL version = 132-003-000
 BLDIAG6 GPL version = 132-003-000
 BLBEPM GPL version = 132-003-000
 BLCPLD GPL version = 132-003-000
 IMT BUS A = Conn
 IMT BUS B = Conn
 CURRENT TEMPERATURE = 60C (140F)
 PEAK TEMPERATURE: = 63C (146F) [00-02-12 21:58]
 DLK A PST = IS-NR SST = Avail AST = -----
 SLAN % EAGLE CAPACITY = 57%
 SLAN % HOST CAPACITY = 49%
```

Command Completed.

For an E5-SM4G card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 DSM SCCPHC IS-NR Active -----
 ALARM STATUS = No Alarms.
 IMTPCI GPL version = 132-003-000
 BLVXW6 GPL version = 132-003-000
 BLDIAG6 GPL version = 132-003-000
 BLBSMG GPL version = 132-003-000
 BLCPLD GPL version = 132-003-000
 IMT BUS A = Conn
 IMT BUS B = Conn
 CURRENT TEMPERATURE = 31C (88F)
 PEAK TEMPERATURE: = 32C (90F) [07-05-12 15:55]
 SCCP % OCCUP = 1%
```

Command Completed.

For an E5-IPSM card, this is an example of the possible output.

```
rlghncxa03w 09-03-01 09:12:36 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 IPSM IPSHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-003-000
BLVXW6 GPL version = 132-003-000
BLDIAG6 GPL version = 132-003-000
BLBEPM GPL version = 132-003-000
BLCPLD GPL version = 132-003-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 32C (90F)
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
Command Completed.
```

For an E5-ATM card, this is an example of the possible output.

```
rlghncxa03w 08-03-01 09:12:36 GMT EAGLE5 38.0.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 LIMATM ATMHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-003-000
BLVXW6 GPL version = 132-003-000
BLDIAG6 GPL version = 132-003-000
BLBEPM GPL version = 132-003-000
BLCPLD GPL version = 132-003-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 38C (101F)
PEAK TEMPERATURE: = 38C (101F) [07-11-23 06:10]
SIGNALING LINK STATUS
 SLK PST LS CLLI
 A IS-NR ls1 -----
```

Command Completed.

For an E5-TSM card, this is an example of the possible output.

```
rlghncxa03w 08-12-01 09:12:36 GMT EAGLE5 40.0.0
CARD VERSION TYPE GPL PST SST AST
1303 132-003-000 TSM GLSHC IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 132-003-000
BLVXW6 GPL version = 132-003-000
BLDIAG6 GPL version = 132-003-000
BLBEPM GPL version = 132-003-000
BLCPLD GPL version = 132-003-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 38C (101F)
PEAK TEMPERATURE: = 38C (101F) [07-11-23 06:10]
```

Command Completed.

**Note:** If the any of versions of the flash GPLs shown in the `rept -stat -card` command output are not the versions specified in [Step 9](#) on page 295, contact the Customer Care Center. Refer to [Customer Care Center](#) on page 4 for the contact information.

Continue the procedure by performing one of these actions:

- If card is running one of these application GPLs: SS7HC, SS7EPM, IPLHC, IPGHC, ATMHC, IPSG (shown in the GPL column in the `rept-stat-card` output in [Step 24](#) on page 323), continue the procedure with [Step 25](#) on page 327.
  - If card is running one of these application GPLs: ERTHC, E5-TSM, or SCCPHC, (shown in the GPL column in the `rept-stat-card` output in [Step 24](#) on page 323), continue the procedure with [Step 31](#) on page 329.
  - If the card is running the SLANHC application GPL, (shown in the GPL column in the `rept-stat-card` output in [Step 24](#) on page 323), continue the procedure with [Step 27](#) on page 328.
  - If the card is running the IPSHC application GPL, (shown in the GPL column in the `rept-stat-card` output in [Step 24](#) on page 323), continue the procedure with [Step 29](#) on page 328.
25. Place the signaling links that were deactivated in [Step 15](#) on page 315 back into service using the `act-slk` command.

For this example, enter these commands.

```
act-slk:loc=1303:link=a
act-slk:loc=1303:link=b
act-slk:loc=1303:link=a1
act-slk:loc=1303:link=b3
```

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:55:49 GMT EAGLE5 40.1.0
Activate SLK message sent to card
```

26. Verify that the signaling links activated in [Step 25](#) on page 327 are back in service using the `rept-stat-slk` command with the card location and signaling link.

For this example, enter these commands.

```
rept-stat-slk:loc=1303:link=a
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 13:06:25 GMT EAGLE5 40.1.0
SLK LSN CLLI PST SST AST
1303,A e11303a ----- IS-NR Avail ----
 ALARM STATUS = No Alarms.
 UNAVAIL REASON = --
```

```
rept-stat-slk:loc=1303:link=b
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 13:06:25 GMT EAGLE5 40.1.0
SLK LSN CLLI PST SST AST
1303,B e11303b ----- IS-NR Avail ----
 ALARM STATUS = No Alarms.
 UNAVAIL REASON = --
```

```
rept-stat-slk:loc=1303:link=a1
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 13:06:25 GMT EAGLE5 40.1.0
SLK LSN CLLI PST SST AST
1303,A1 e11303a ----- IS-NR Avail ----
 ALARM STATUS = No Alarms.
 UNAVAIL REASON = --
```

```
rept-stat-slk:loc=1303:link=b3
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 13:06:25 GMT EAGLE5 40.1.0
SLK LSN CLLI PST SST AST
1303,B3 e11303b ----- IS-NR Avail ----
 ALARM STATUS = No Alarms.
 UNAVAIL REASON = --
Command Completed.
```

Continue the procedure with [Step 31](#) on page 329.

27. Place the TCP/IP data link that was deactivated in [Step 17](#) on page 315 back into using the act-dlk command. For this example, enter this command.

```
act-dlk:loc=1303
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:55:49 GMT EAGLE5 40.1.0
Activate Link message sent to card.
```

28. Verify that the TCP/IP data link activated in [Step 27](#) on page 328 is back in service with the rept-stat-dlk command. For this example, enter this command.

```
rept-stat-dlk:loc=1303
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 17:00:36 GMT EAGLE5 40.1.0
DLK PST SST AST
1303 IS-NR Avail ---
Command Completed.
```

Continue the procedure with [Step 31](#) on page 329.

29. Put the required terminals back into service with the rst-trm command. For this example, enter these commands.

```
rst-trm:trm=17
```

```
rst-trm:trm=18
```

```
rst-trm:trm=19
```

```
rst-trm:trm=20
```

```
rst-trm:trm=21
```

```
rst-trm:trm=22
```

```
rst-trm:trm=23
```

```
rst-trm:trm=24
```

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Allow message sent to terminal
```

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Command Completed.
```

30. Verify that the terminals are in service with the `rept-stat-trm` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM PST SST AST
1 IS-NR Active -----
2 IS-NR Active -----
3 IS-NR Active -----
4 IS-NR Active -----
5 IS-NR Active -----
6 IS-NR Active -----
7 IS-NR Active -----
8 IS-NR Active -----
9 IS-NR Active -----
10 IS-NR Active -----
11 IS-NR Active -----
12 IS-NR Active -----
13 IS-NR Active -----
14 IS-NR Active -----
15 IS-NR Active -----
16 IS-NR Active -----
17 IS-NR Active -----
18 IS-NR Active -----
19 IS-NR Active -----
20 IS-NR Active -----
21 IS-NR Active -----
22 IS-NR Active -----
23 IS-NR Active -----
24 IS-NR Active -----
25 IS-NR Active -----
26 IS-NR Active -----
27 IS-NR Active -----
28 IS-NR Active -----
29 IS-NR Active -----
30 IS-NR Active -----
31 IS-NR Active -----
32 IS-NR Active -----
33 IS-NR Active -----
34 IS-NR Active -----
35 IS-NR Active -----
36 IS-NR Active -----
37 IS-NR Active -----
38 IS-NR Active -----
39 IS-NR Active -----
40 IS-NR Active -----
Command Completed.
```

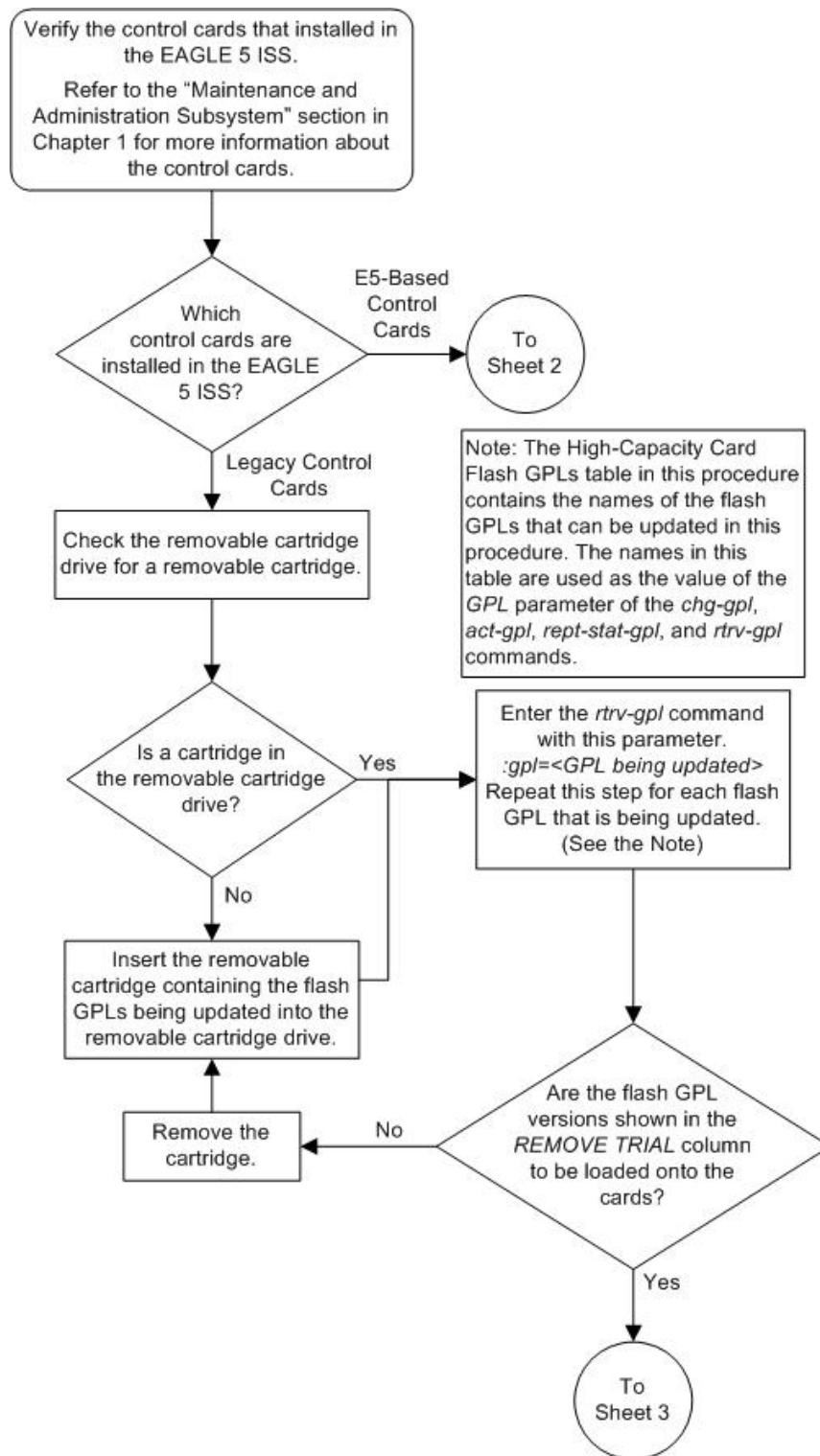
31. This procedure is finished.

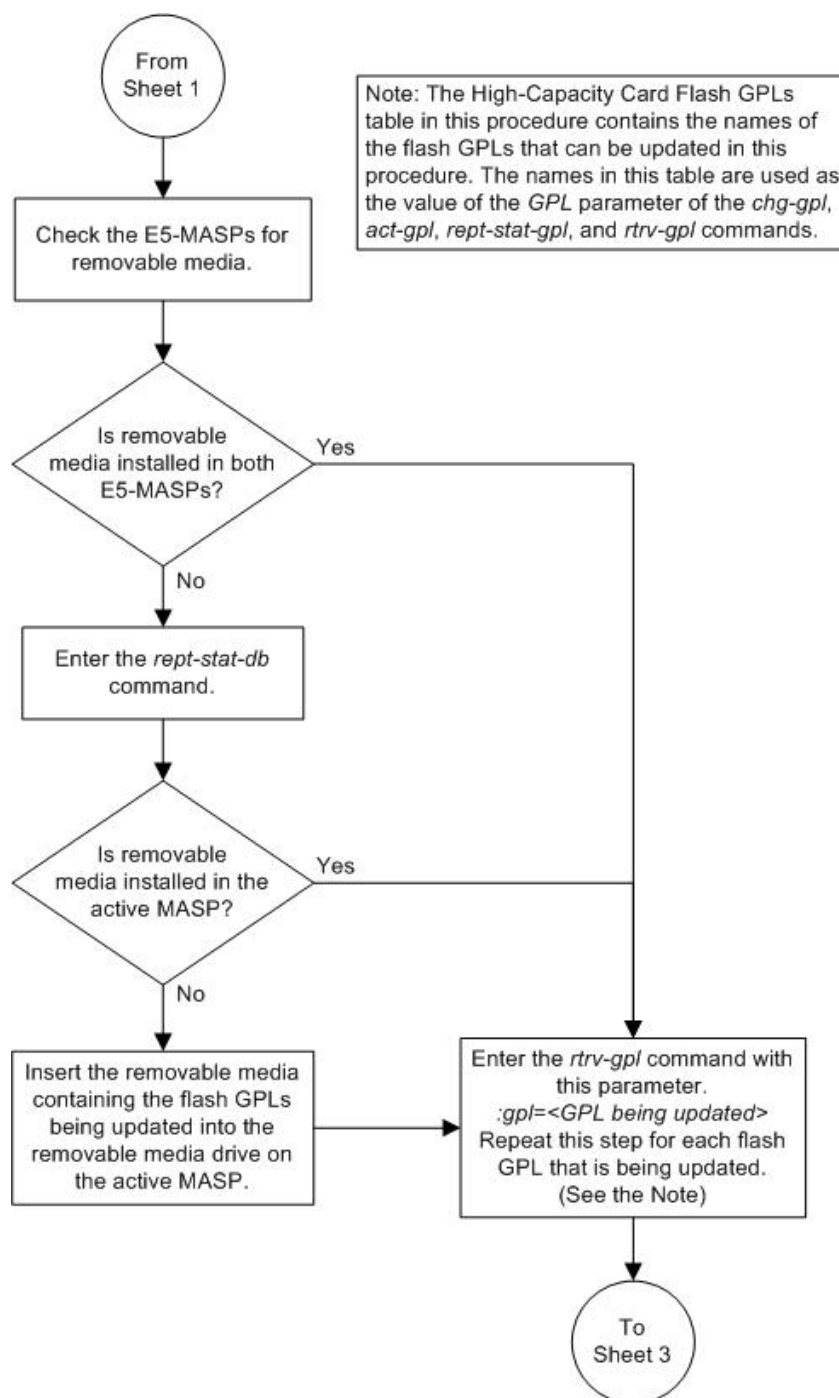
If legacy control cards are installed in the EAGLE 5 ISS, remove the removable cartridge from the removable cartridge drive on the MDAL card. For information about removing the

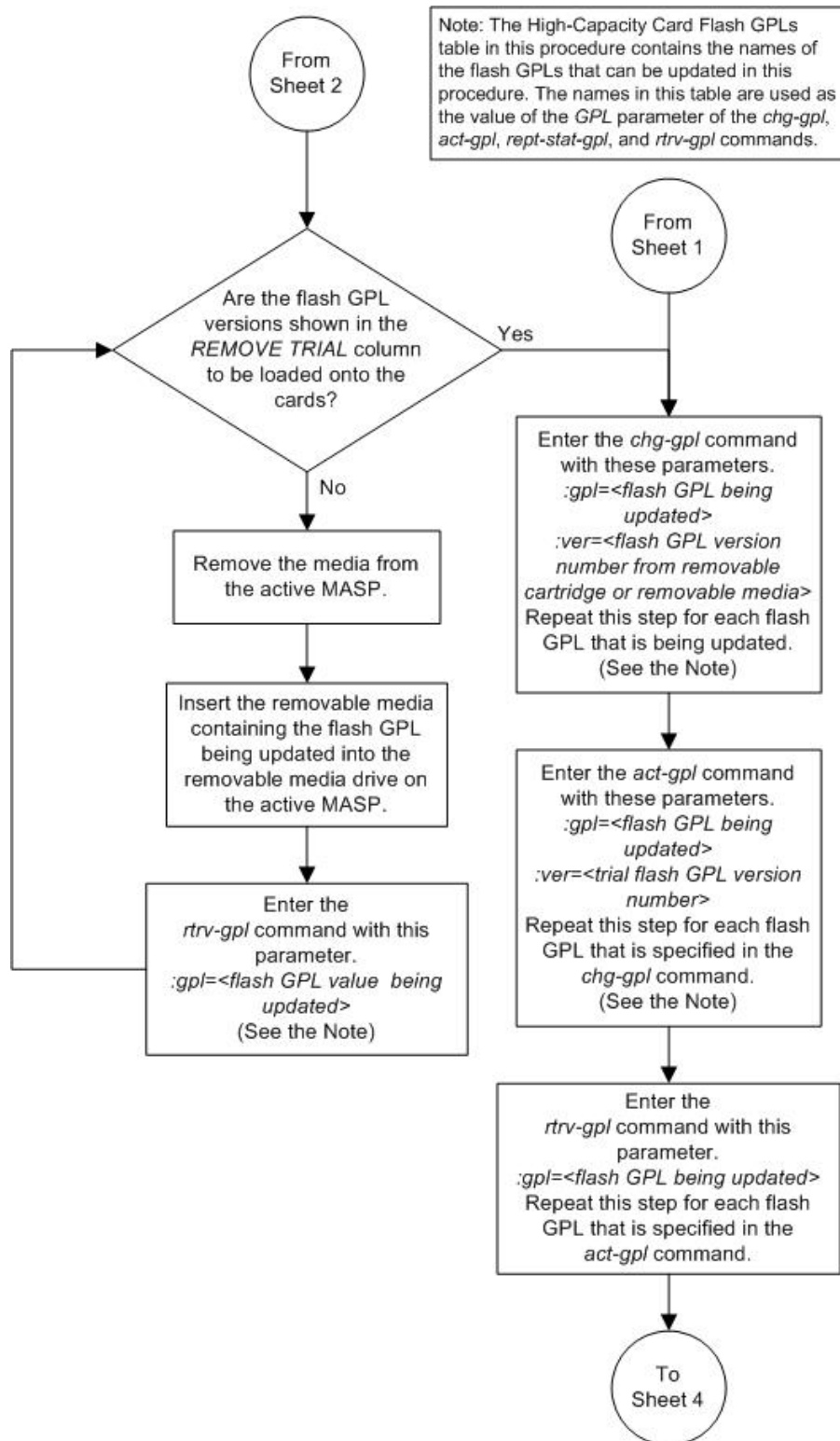
removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

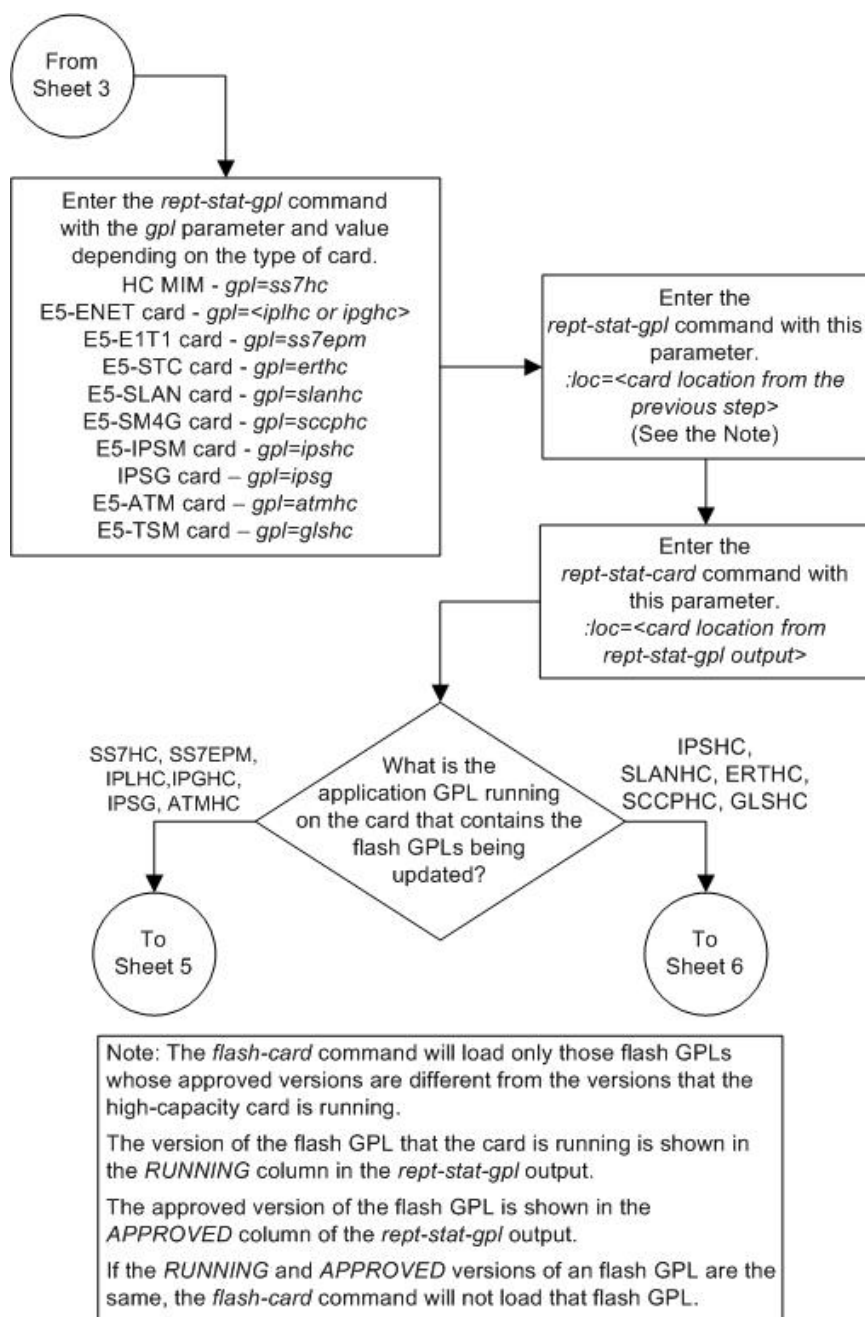
**Figure 30: Updating All the Flash GPLs on the High-Capacity Cards**

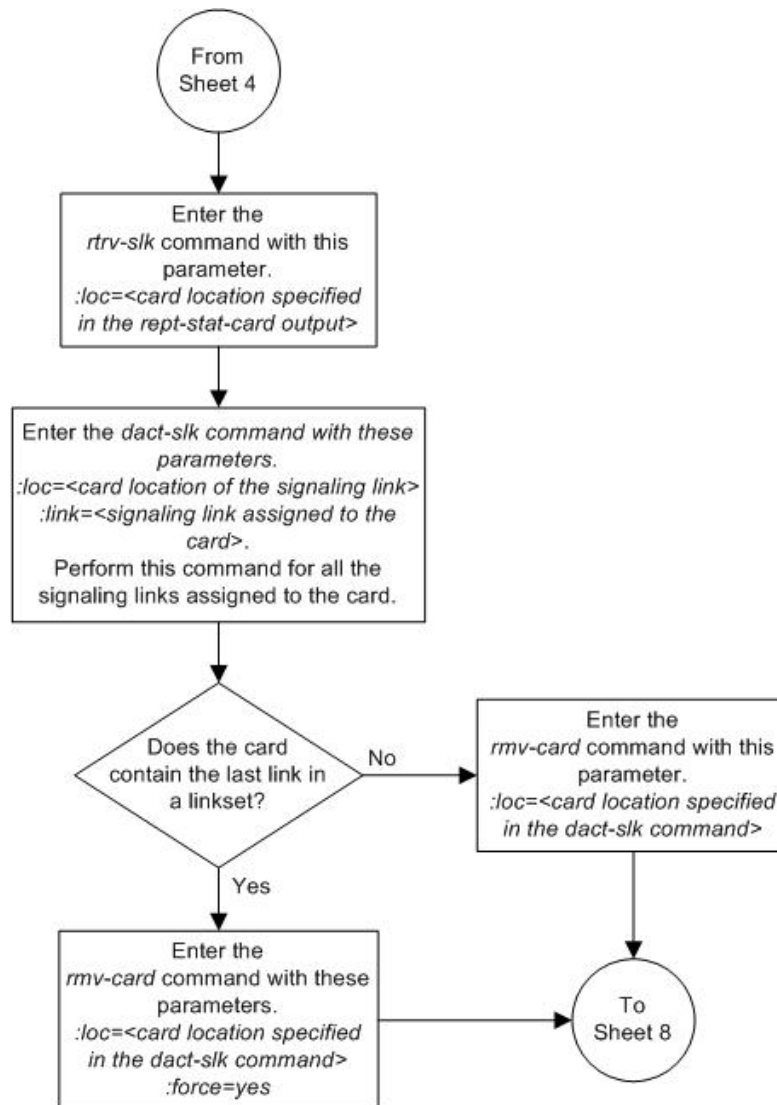


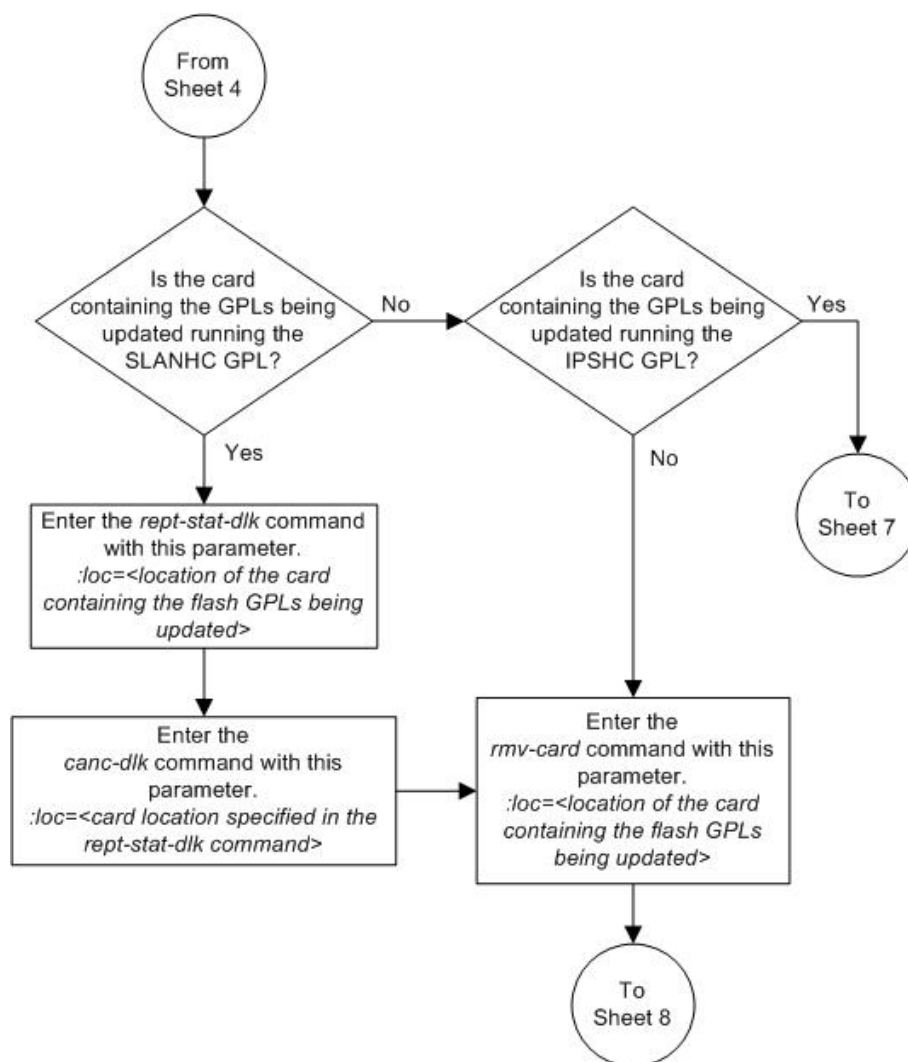


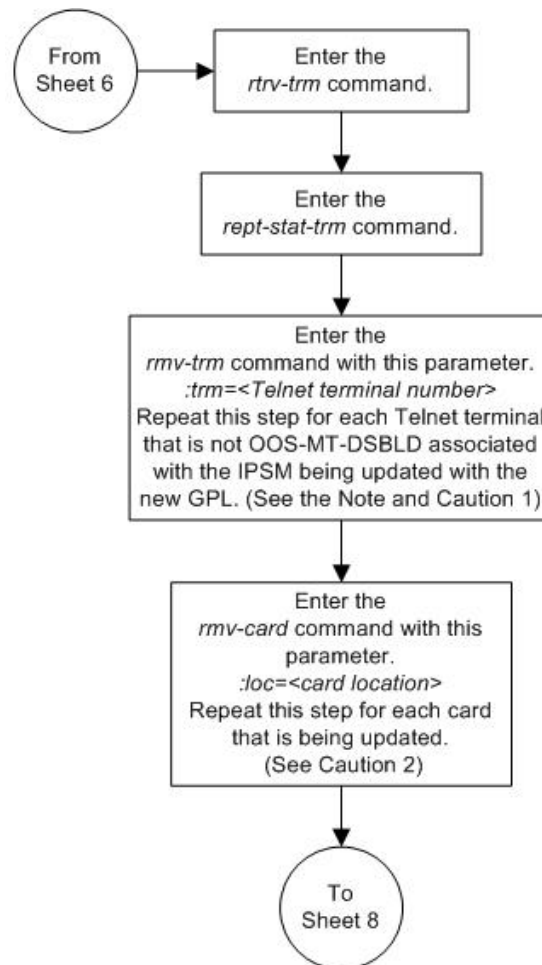








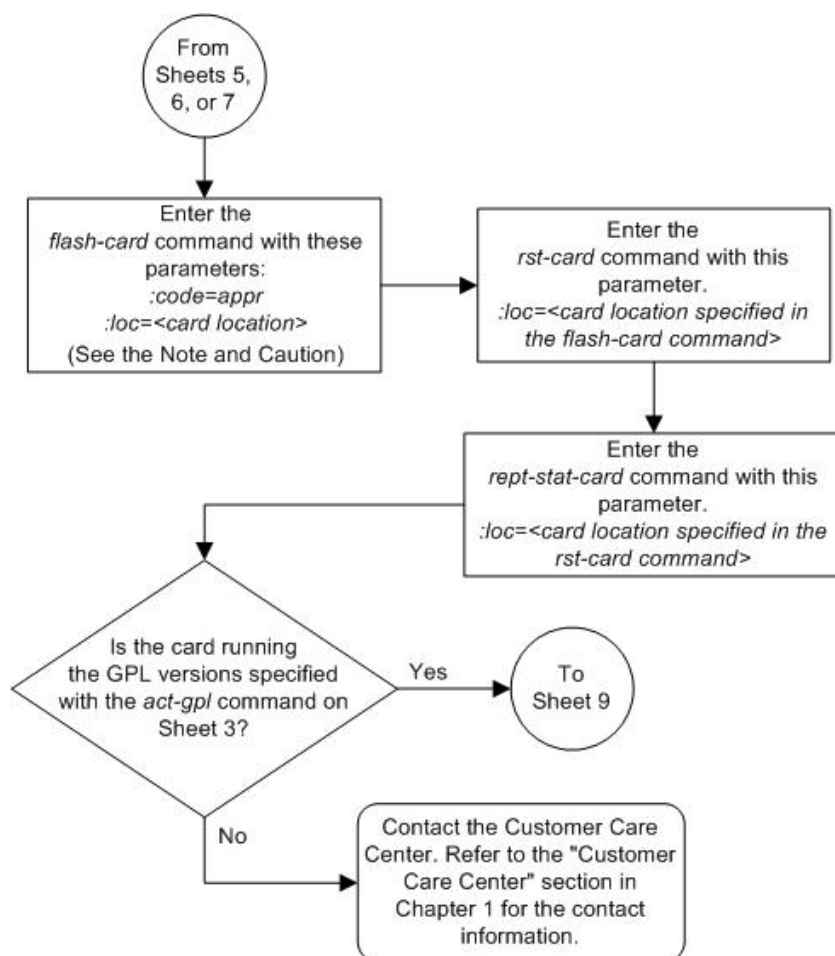




**Note:** Each IPSM has 8 Telnet terminals associated with it. The *rtrv-trm* output shows the Telnet terminals that are associated with each IPSM.

**Cautions:**

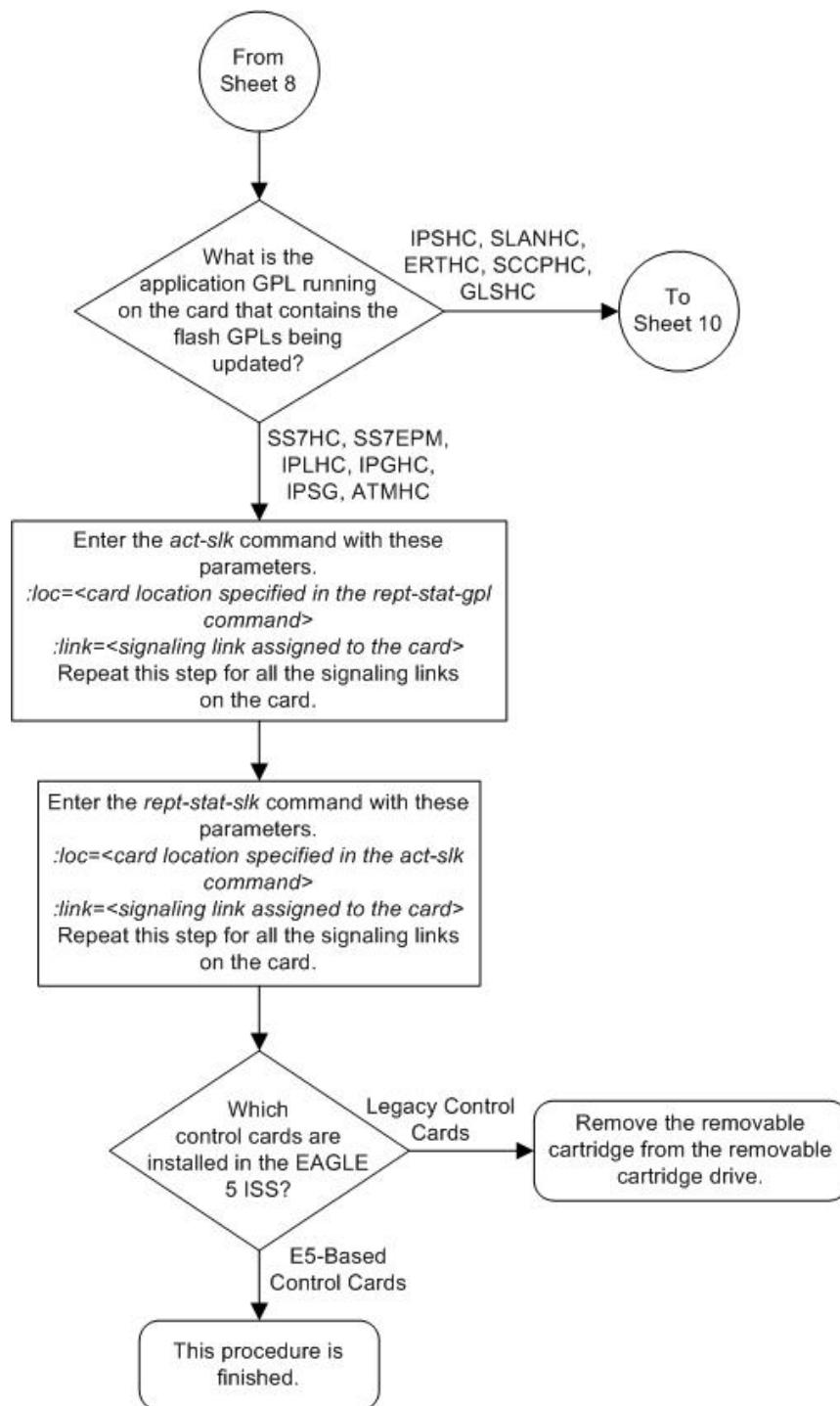
1. Placing the Telnet terminals out of service will disable all Telnet sessions supported by the terminals associated with the IPSM.
2. Multiple cards running the same flash GPL can be updated at the same time with the *init-flash* command. This requires that the cards in the locations specified with the *init-flash* command are out of service. All the IPSMs can be placed out of service at the same time. However, it is recommended that only some of the IPSMs are placed out of service. Placing all the IPSMs out of service will cause the traffic carried by IPSMs to be lost and disable the IP User Interface and FTP Retrieve and Replace features.

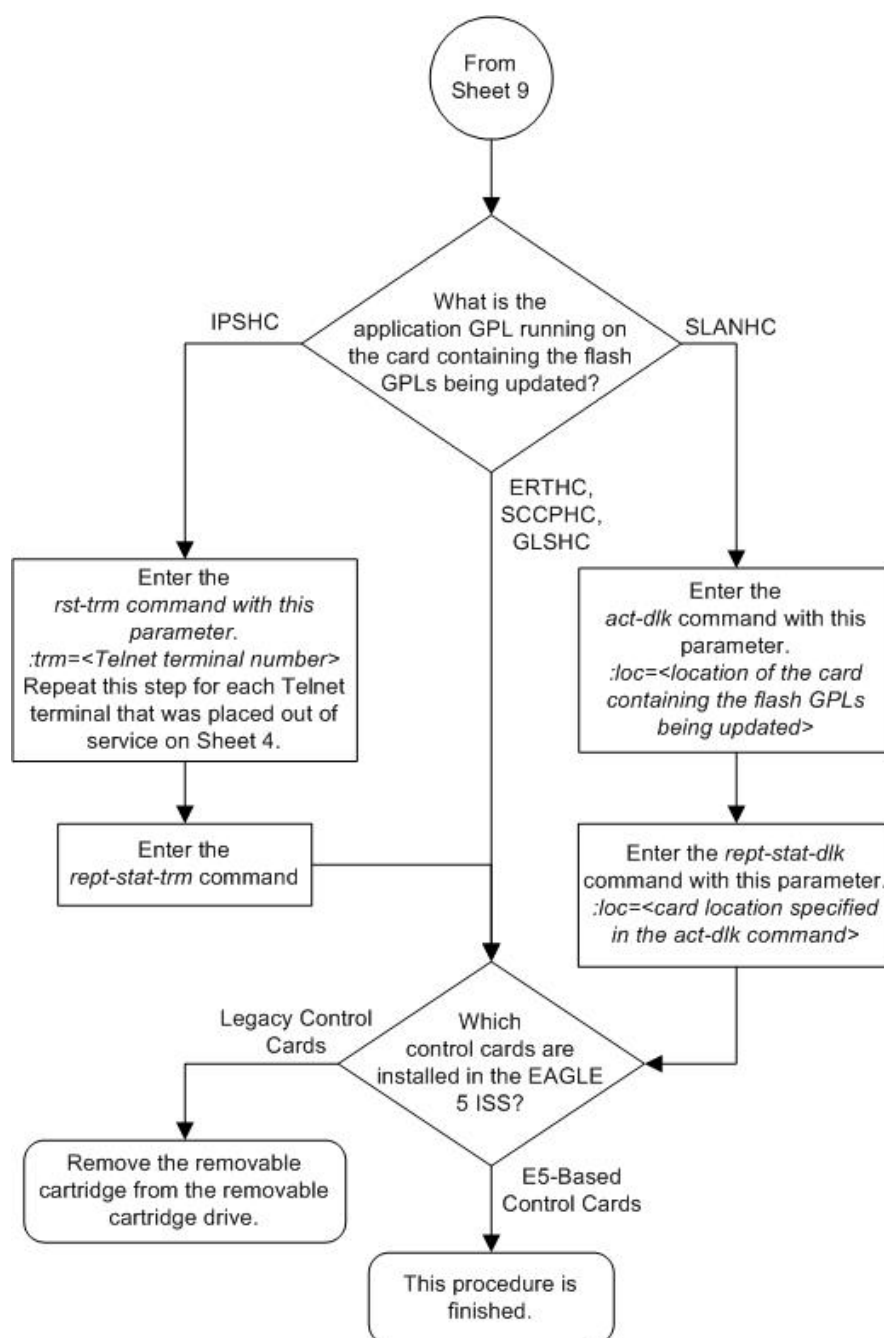


Note: The *flash-card* command will load only those flash GPLs whose approved versions are different from the versions that the high-capacity card is running. The version of the flash GPL that the card is running is shown in the *RUNNING* column in the *rept-stat-gpl* output. The approved version of the flash GPL is shown in the *APPROVED* column of the *rept-stat-gpl* output. If the *RUNNING* and *APPROVED* versions of an flash GPL are the same, the *flash-card* command will not load that flash GPL.

**CAUTION:** The *force=yes* is an optional parameter of the *flash-card* command. The *force=yes* parameter must be specified if the high-capacity card was not taken out of service with the *mv-card* command on Sheets 4 and 5. If the *force=yes* parameter is specified with the *flash-card* command, the high-capacity card will be taken out of service and all traffic hosted by the high-capacity card will be lost.







## Updating the BPHMUX GPL

This section presents the procedure for updating the BPHMUX generic program load (GPL). The BPHMUX GPL is used by the High-Speed Multiplexer (HMUX) card to control the IMT bus and resides on the fixed disk. The HMUX card resides only in slots 9 and 10 in each shelf in the EAGLE 5 ISS.

This section presents the procedure for loading the BPHMUX GPL onto the EAGLE 5 ISS as a trial version from a removable cartridge or removable media, then making the trial version of the BPHMUX GPL the approved version.

If any card is not running the version of the GPL shown in the RELEASE column of the `rtrv-gpl` output, the indicator ALM is displayed next to the GPL version in the RUNNING column of the `rept-stat-gpl` output, and next to the GPL version in the APPROVED column in the `rtrv-gpl` output.

The removable cartridge or removable media that contains the BPHMUX GPL to be loaded on to the EAGLE 5 ISS is required.

1. Verify the control cards that are installed in the EAGLE 5 ISS.

Refer to [Maintenance and Administration Subsystem](#) on page 7 for information about the control cards.

If legacy control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 2](#) on page 341.

If E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 5](#) on page 342.

2. Check the removable cartridge drive on the MDAL card for a removable cartridge.

If there is a removable cartridge in the drive, display the BPHMUX GPLs on the fixed disk and on the removable cartridge using the `rtrv-gpl:gpl=bphmux` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BPHMUX | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| BPHMUX | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | -----        |

If the version of the BPHMUX GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the cartridge and go to [Step 3](#) on page 341. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

If the version of the BPHMUX GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 343.

3. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).

To write protect a removable cartridge, refer to [MO Removable Cartridge Description](#) on page 17.

4. Insert the removable cartridge containing the BPHMUX GPL into the removable cartridge drive on the MDAL card.

For more information on inserting the removable cartridge in the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19. After the removable cartridge has been inserted into the removable cartridge drive, repeat the `rtrv-gpl` command in [Step 2](#) on page 341 and verify the version of the GPL on the removable cartridge that you wish to update.

5. Check the E5-MASPs for removable media.

If removable media is installed in both E5-MASPs, continue the procedure with [Step 7](#) on page 342.

If removable media is not installed in both E5-MASPs, continue the procedure with [Step 6](#) on page 342.

6. Verify the active MASP by entering the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:25:40 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
 TDM 1114 (STDBY) TDM 1116 (ACTV)
 C LEVEL TIME LAST BACKUP C LEVEL TIME LAST BACKUP

FD BKUP Y 36 09-02-19 09:38:25 GMT Y 36 09-02-19 09:38:25 GMT
FD CRNT Y 39 Y 39
 MCAP 1113 MCAP 1115

RD BKUP - - - - Y 36 09-02-19 09:27:17 GMT
USB BKP - - - - Y 3 09-02-07 01:11:22 GMT
```

If removable media is installed in the active MASP, continue the procedure with [Step 7](#) on page 342.

If removable media is not installed in the active MASP, insert the removable media in the removable media drive in the active MASP. For more information about inserting removable media in the removable media drive, refer to [Removable USB Drive](#) on page 20. After the removable media has been inserted in the removable media drive in the active MASP, continue the procedure with [Step 7](#) on page 342.

7. Display the BPHMUX GPLs on the fixed disk and on the removable media using the `rtrv-gpl:gpl=bphmux` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
BPHMUX 1114 132-002-000 132-002-000 132-001-000 132-003-000
BPHMUX 1116 132-002-000 132-002-000 132-001-000 132-003-000
BPHMUX 1115 ----- ----- ----- -----
```

If the version of the BPHMUX GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the removable media from the active MASP.

Insert the removable media that contains the BPHMUX GPL that is being updated into the removable media drive in the active MASP and repeat this step.

For more information about inserting removable media in the removable media drive, or removing removable media from the removable media drive, refer to [Removable USB Drive](#) on page 20.

If the version of the BPHMUX GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 343.

8. Change the GPL, using the `chg-gpl` command and specifying the value for the trial BPHMUX GPL shown in the REMOVE TRIAL column in the output of the `rtrv-gpl` command used in [Step 2](#) on page 341 or [Step 7](#) on page 342.

For this example, enter this command.

```
chg-gpl:gpl=bphmux:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

```
BPHMUX upload on 1114 completed
BPHMUX upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

9. Activate the trial GPL, using the `act-gpl` command and specifying the value for the trial BPHMUX GPL used in [Step 8](#) on page 343.

For this example, enter this command.

```
act-gpl:gpl=bphmux:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
BPHMUX activate on 1114 completed
BPHMUX activate on 1116 completed
```

10. Verify that the BPHMUX GPL on the removable cartridge or removable media is the approved GPL on the fixed disk using the `rtrv-gpl:gpl=bphmux` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BPHMUX | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BPHMUX | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | -----        |

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL    | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|--------|------|-------------|-------------|-------------|--------------|
| BPHMUX | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BPHMUX | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000  |
| BPHMUX | 1115 | -----       | -----       | -----       | -----        |

11. Verify the BPHMUX GPLs on the fixed disk and the cards that are running the BPHMUX GPLs using the `rept-stat-gpl:gpl=bphmux` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL CARD RUNNING APPROVED TRIAL
```

|                   |      |             |     |             |             |
|-------------------|------|-------------|-----|-------------|-------------|
| BPHMUX            | 1109 | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
| BPHMUX            | 1110 | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
| BPHMUX            | 1209 | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
| BPHMUX            | 1210 | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
| BPHMUX            | 1309 | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
| BPHMUX            | 1310 | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
| BPHMUX            | 2109 | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
| BPHMUX            | 2110 | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
| Command Completed |      |             |     |             |             |

12. Load the approved BPHMUX GPL onto a card selected from the cards shown in [Step 11](#) on page 343 using the `init -flash:code=appr` command.

For this example, enter this command.

```
init -flash:code=appr:loc=1109
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Downloading for card 1109 Started.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
BPHMUX Downloading for card 1109 Complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

### Updating more than One HMUX Card at the Same Time

Multiple HMUX cards can be updated at the same time with the `init -flash` command. The multiple HMUX cards being updated must be on the same IMT bus. Specifying card locations XX09 for the `s loc` and `e loc` parameters specifies the HMUX cards on IMT bus A. Specifying card locations XX10 for the `s loc` and `e loc` parameters specifies the HMUX cards on IMT bus B.

To update more than one HMUX card on the same IMT bus, enter the `init -flash` command with these parameters along with the `code=appr` parameter:

`s loc` – the first card location in the range of card locations

`e loc` – the last card location in the range of card locations

`gpl` – bphmux

**Note:** The `s loc`, `e loc`, and `gpl` parameters cannot be specified with the `loc` parameter.

For example, to update the HMUX cards on IMT Bus B shown in [Step 11](#) on page 343 with the approved version of the BPHMUX GPL, enter this command.

```
init -flash:code=appr:sloc=1110:eloc=2110:gpl=bphmux
```

To update the HMUX cards on IMT bus A shown in [Step 11](#) on page 343, the `s loc=1109` and `e loc=2109` parameters would be specified with the `init -flash` command.

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Download for cards 1110 - 2110 Started.
;
rlghncxa03w 09-03-01 13:07:15 GMT EAGLE5 40.1.0
FLASH Memory Download for cards 1110 - 2110 Completed.
LOC 1110 : PASSED
```

```

LOC 1210 : PASSED
LOC 1310 : PASSED
LOC 2110 : PASSED

ALL CARD RESULTS PASSED
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.

```

13. Re-initialize the HMUX cards specified in [Step 12](#) on page 344 using the `init-mux` command with the `loc` parameter.

For this example, enter this command.

```
init-mux:loc=1109
```

If more than one HMUX card was specified in [Step 12](#) on page 344, re-initialize the IMT bus containing the cards specified in [Step 12](#) on page 344 by entering `init-mux` command and specifying the IMT bus (the `bus` parameter) containing the cards specified in [Step 12](#) on page 344. Specifying card locations XX09 for the `s loc` and `e loc` parameters in [Step 12](#) on page 344 requires that IMT bus A is re-initialized. Specifying card locations XX10 for the `s loc` and `e loc` parameters in [Step 12](#) on page 344 requires that IMT bus B is re-initialized.

For this example, enter this command.

```
init-mux:bus=a
```

When this command has successfully completed, this message should appear.

```

rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.

```

**Note:** Executing this command produces two alarms: 0002 - Card is not running approved GPL, indicating that the version of the BPHMUX GPL running on the card is not the approved version, and 0004 - Card is running non-activated GPL, indicating that the new version of the BPHMUX GPL running on the card has not been activated.

14. Verify that the approved BPHMUX GPL from [Step 13](#) on page 345 has loaded and that the state of the card is in-service normal (IS-NR) state using the `rept-stat-card` command.

If more than one card was specified in [Step 12](#) on page 344 and [Step 13](#) on page 345, enter the `rept-stat-card` command for each specified card. For this example, enter this command.

```
rept-stat-card:loc=1109:mode=full
```

```

rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1109 132-003-000 HMUX HMUX IS-NR Active -----
ALARM STATUS = No Alarms
APPROVED VERSION = 132-003-000
FPGA VERSION = 022-005
Command Completed.

```

**Note:** If the version number of the BPHMUX GPL shown in the `rept-stat-card` command output is different than the version specified in [Step 8](#) on page 343, contact the Customer Care Center. Refer to [Customer Care Center](#) on page 4 for the contact information.

15. Activate the approved BPHMUX GPL loaded onto the card in [Step 12](#) on page 344 using the `act-flash` command.

For this example, enter this command.

```
act-flash:loc=1109
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Activation for card 1109 Completed.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

### Activating the BPHMUX GPL on more than One HMUXCard at the Same Time

If more than one HMUX card was specified in [Step 12](#) on page 344, enter the `act-flash` command with these parameters:

`sloc` – the first card location in the range of card locations

`eloc` – the last card location in the range of card locations

`gpl` – `bphmux`

**Note:** The `sloc`, `eloc`, and `gpl` parameters cannot be specified with the `loc` parameter.

For example, to activate the BPHMUX GPL on the HMUX cards on IMT Bus B shown in [Step 11](#) on page 343 with the trial version of the BPHMUX GPL, enter this command.

```
act-flash:sloc=1110:eloc=2110:gpl=bphmux
```

To activate the BPHMUX GPL on the HMUX cards on IMT bus A shown in [Step 11](#) on page 343, the `sloc=1109` and `eloc=2109` parameters would be specified with the `act-flash` command.

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Activation for cards 1110 - 2110 Started.
;
rlghncxa03w 09-03-01 13:07:15 GMT EAGLE5 40.1.0
FLASH Memory Activation for cards 1110 - 2110 Completed.
LOC 1110 : PASSED
LOC 1210 : PASSED
LOC 1310 : PASSED
LOC 2110 : PASSED

ALL CARD RESULTS PASSED
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

16. Verify the BPHMUX GPLs on the fixed disk and the cards that are running the BPHMUX GPL using the `rept-stat-gpl:gpl=bphmux` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL CARD RUNNING APPROVED TRIAL
BPHMUX 1109 132-003-000 132-003-000 132-002-000
BPHMUX 1110 132-002-000 ALM 132-003-000 132-002-000
BPHMUX 1209 132-002-000 ALM 132-003-000 132-002-000
BPHMUX 1210 132-002-000 ALM 132-003-000 132-002-000
BPHMUX 1309 132-002-000 ALM 132-003-000 132-002-000
```



|         |           |             |     |             |             |
|---------|-----------|-------------|-----|-------------|-------------|
| BPHMUX  | 1310      | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
| BPHMUX  | 2109      | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
| BPHMUX  | 2110      | 132-002-000 | ALM | 132-003-000 | 132-002-000 |
| Command | Completed |             |     |             |             |

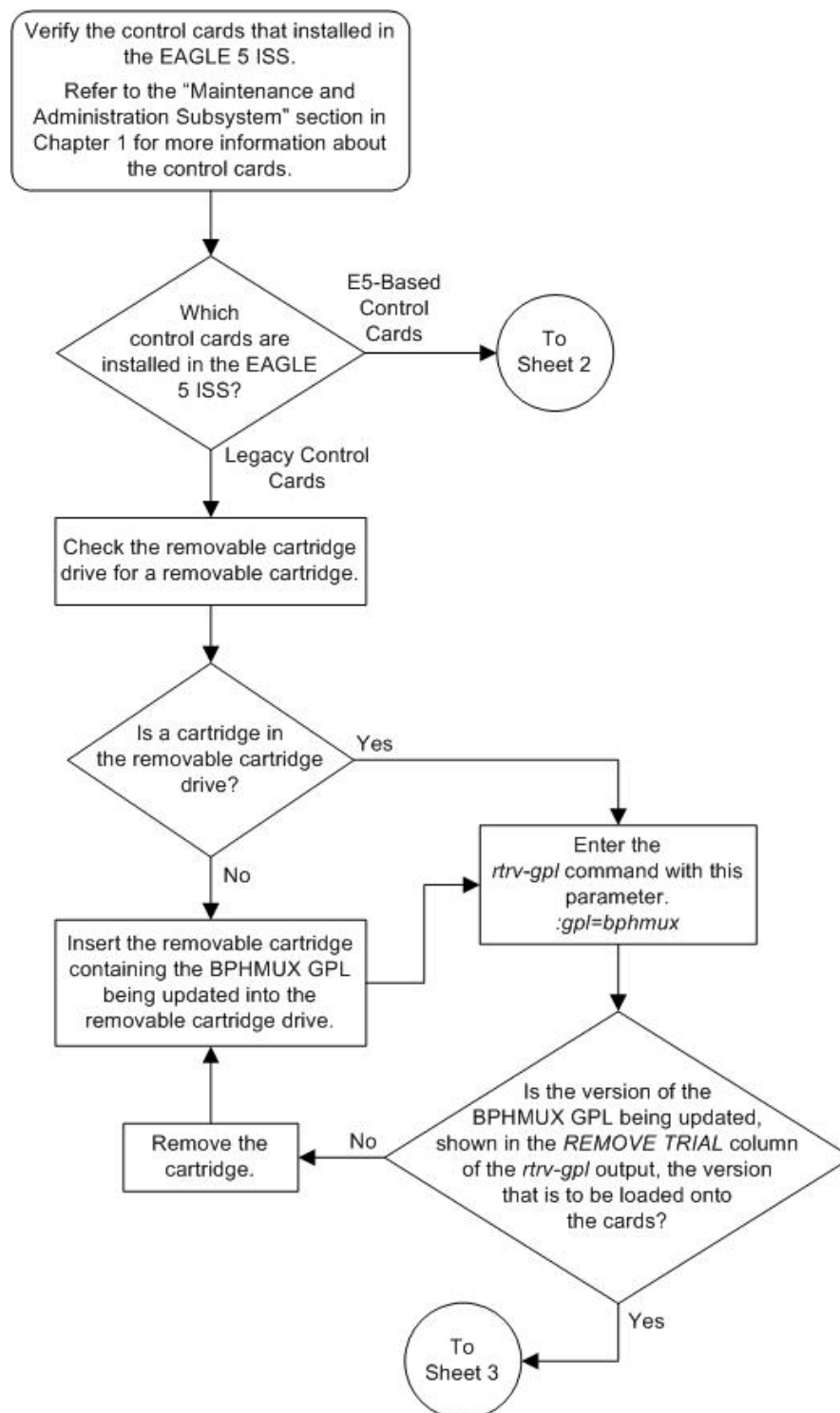
17. Continue the procedure by performing these actions.

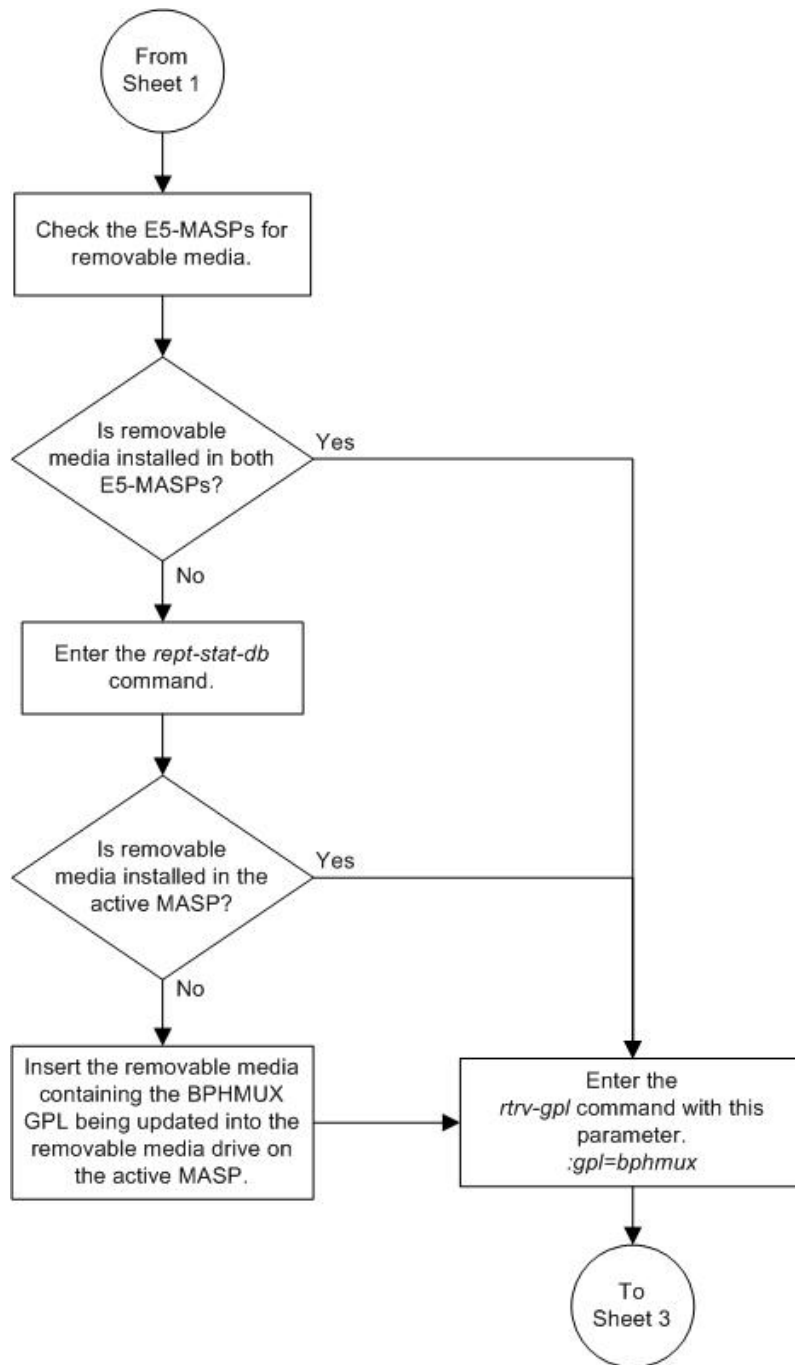
If legacy control cards are installed in the EAGLE 5 ISS, remove the removable cartridge from the removable cartridge drive on the MDAL card. For information about removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

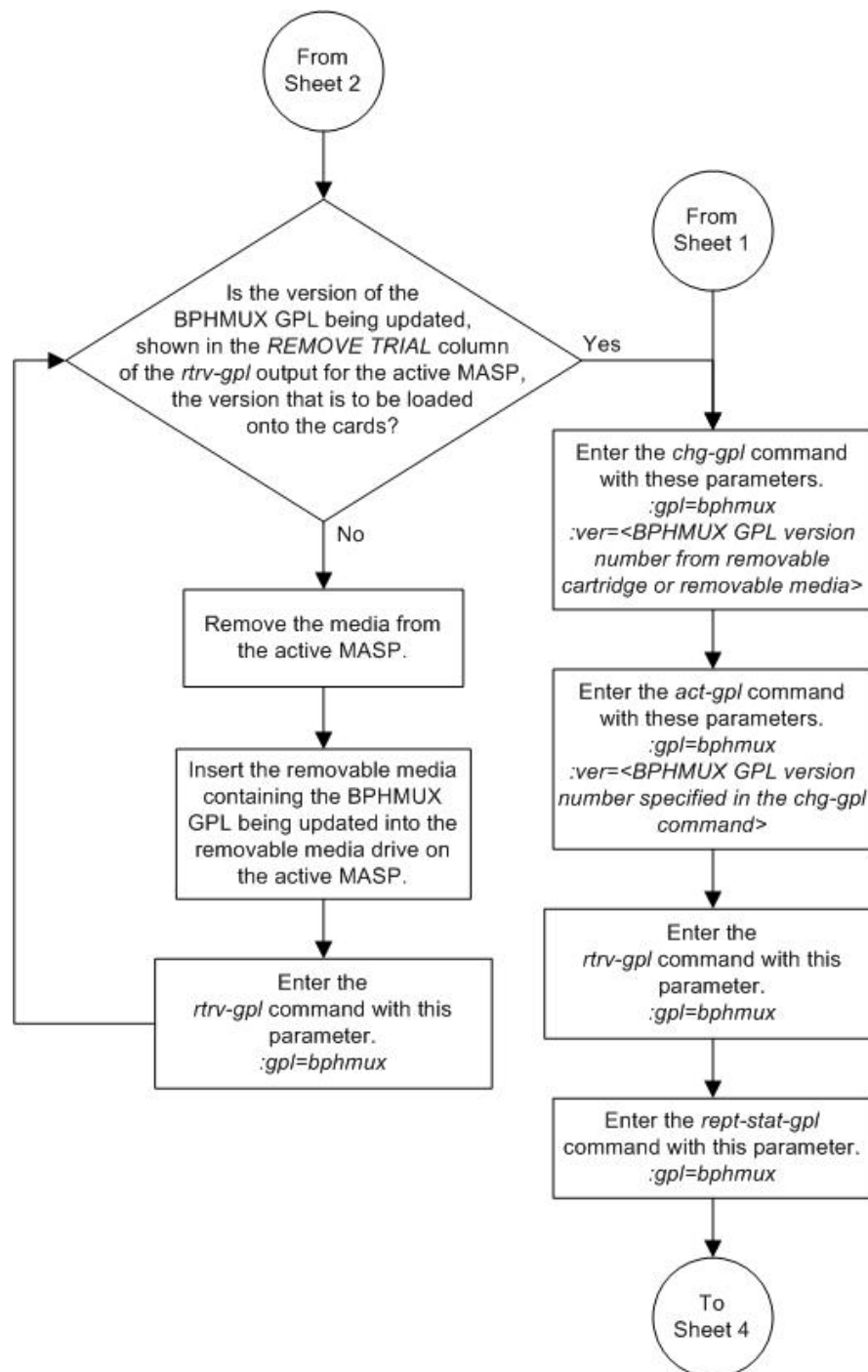
When the removable cartridge has been removed, or if E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure by performing one of these actions.

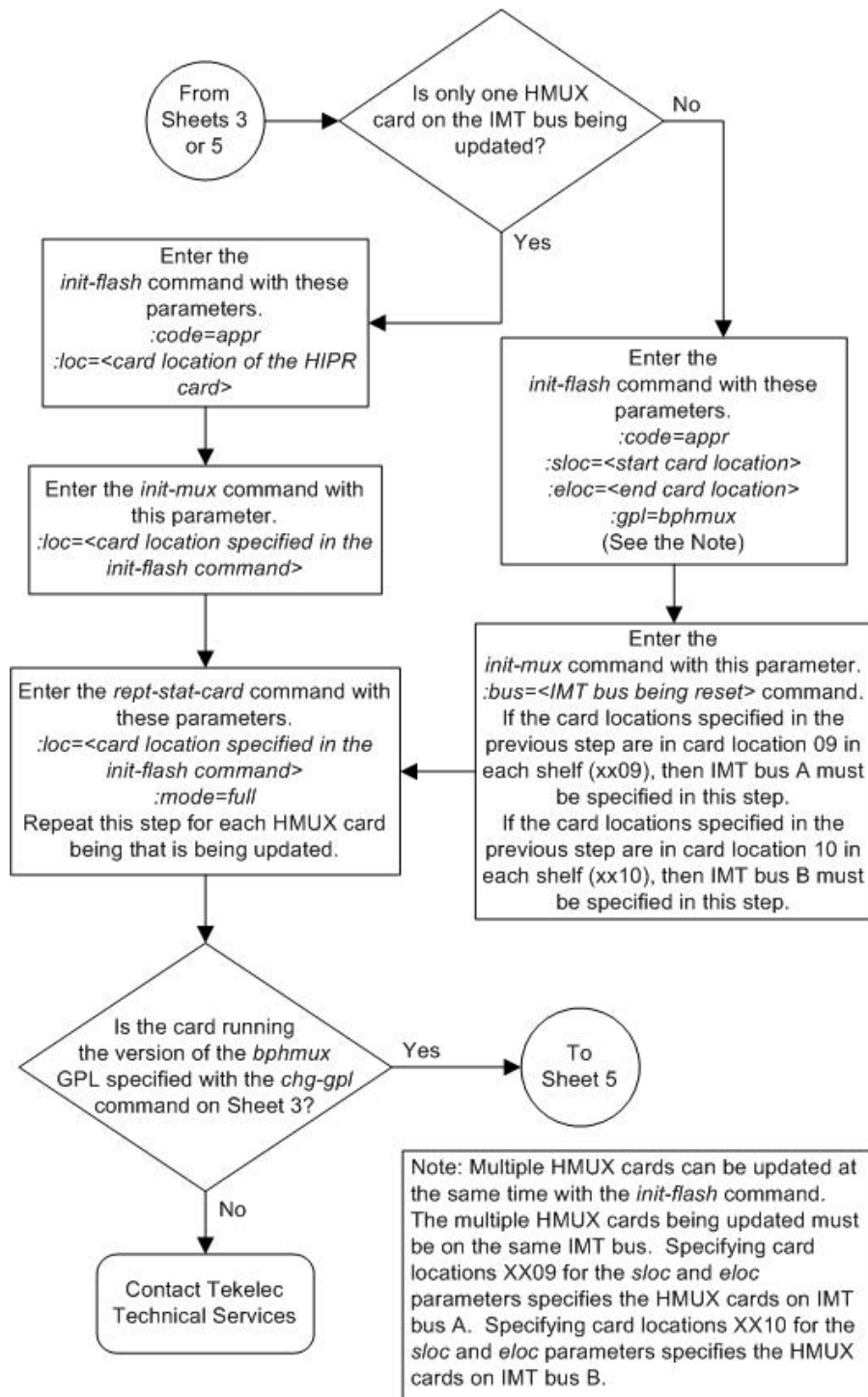
- If you wish to load the new BPHMUX GPL onto the other cards shown in [Step 11](#) on page 343, repeat this procedure from [Step 12](#) on page 344 for each card shown in [Step 11](#) on page 343.
- If the new BPHMUX GPL has been loaded onto all the cards shown in [Step 11](#) on page 343, or if the new BPHMUX GPL will not be loaded onto the other cards shown in [Step 11](#) on page 343, then this procedure is finished.

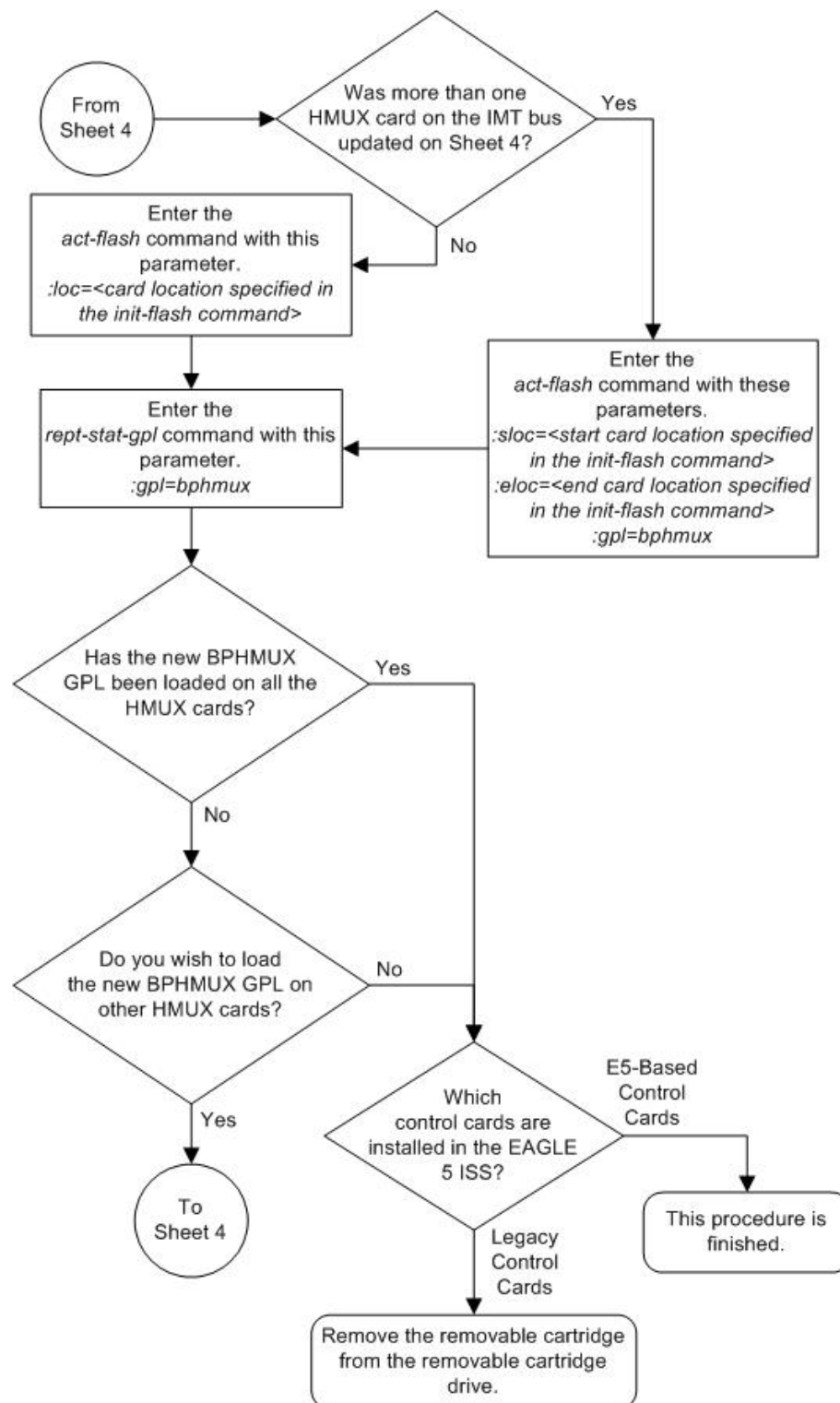
**Figure 31: Updating the BPHMUX GPL**











## Updating the HIPR GPL

This section presents the procedure for updating the HIPR generic program load (GPL). The HIPR GPL is used by the High-Speed IMT Packet Router (HIPR) card to control the IMT bus and resides on the fixed disk. The HIPR card resides only in slots 9 and 10 in each shelf in the EAGLE 5 ISS.

This section presents the procedure for loading the HIPR GPL onto the EAGLE 5 ISS as a trial version from a removable cartridge or removable media, then making the trial version of the HIPR GPL the approved version.

If any card is not running the approved version of the GPL shown in the RELEASE column of the `rtrv-gpl` output, the indicator ALM is displayed next to the GPL version in the RUNNING column of the `rept-stat-gpl` output, and next to the GPL version in the APPROVED column in the `rtrv-gpl` output.

The removable cartridge or removable media that contains the HIPR GPL to be loaded on to the EAGLE 5 ISS is required.

1. Verify the control cards that are installed in the EAGLE 5 ISS.

Refer to [Maintenance and Administration Subsystem](#) on page 7 for information about the control cards.

If legacy control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 2](#) on page 353.

If E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 5](#) on page 354.

2. Check the removable cartridge drive on the MDAL card for a removable cartridge.

If there is a removable cartridge in the drive, display the HIPR GPLs on the fixed disk and on the removable cartridge using the `rtrv-gpl:gpl=hipr` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL  | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|------|------|-------------|-------------|-------------|--------------|
| HIPR | 1114 | 132-002-000 | 132-002-000 | 132-001-000 | 132-003-000  |
| HIPR | 1116 | 132-002-000 | 132-002-000 | 132-001-000 | -----        |

If the version of the HIPR GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the cartridge and go to [Step 3](#) on page 353. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

If the version of the HIPR GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 355.

3. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).

To write protect a removable cartridge, refer to [MO Removable Cartridge Description](#) on page 17.

4. Insert the removable cartridge containing the HIPR GPL into the removable cartridge drive on the MDAL card.

For more information on inserting the removable cartridge in the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19. After the removable cartridge has been inserted into the removable cartridge drive, repeat the `rtrv-gpl` command in [Step 2](#) on page 353 and verify the version of the GPL on the removable cartridge that you wish to update.

5. Check the E5-MASPs for removable media.

If removable media is installed in both E5-MASPs, continue the procedure with [Step 7](#) on page 354.

If removable media is not installed in both E5-MASPs, continue the procedure with [Step 6](#) on page 354.

6. Verify the active MASP by entering the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:25:40 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
 TDM 1114 (STDBY) TDM 1116 (ACTV)
 C LEVEL TIME LAST BACKUP C LEVEL TIME LAST BACKUP

FD BKUP Y 36 09-02-19 09:38:25 GMT Y 36 09-02-19 09:38:25 GMT
FD CRNT Y 39
 MCAP 1113 MCAP 1115

RD BKUP - - - - Y 36 09-02-19 09:27:17 GMT
USB BKP - - - - Y 3 09-02-07 01:11:22 GMT
```

If removable media is installed in the active MASP, continue the procedure with [Step 7](#) on page 354.

If removable media is not installed in the active MASP, insert the removable media in the removable media drive in the active MASP. For more information about inserting removable media in the removable media drive, refer to [Removable USB Drive](#) on page 20. After the removable media has been inserted in the removable media drive in the active MASP, continue the procedure with [Step 7](#) on page 354.

7. Display the HIPR GPLs on the fixed disk and on the removable media using the `rtrv-gpl:gpl=hipr` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON
GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
HIPR 1114 132-002-000 132-002-000 132-001-000 132-003-000
HIPR 1116 132-002-000 132-002-000 132-001-000 132-003-000
HIPR 1115 ----- ----- ----- -----
```

If the version of the HIPR GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the removable media from the active MASP.

Insert the removable media that contains the HIPR GPL that is being updated into the removable media drive in the active MASP and repeat this step.



For more information about inserting removable media in the removable media drive, or removing removable media from the removable media drive, refer to [Removable USB Drive](#) on page 20.

If the version of the HIPR GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 355.

8. Change the GPLs, using the `chg-gpl` command and specifying the value for the trial HIPR GPL shown in the REMOVE TRIAL column in the output of the `rtrv-gpl` command used in [Step 2](#) on page 353 or [Step 7](#) on page 354.

For this example, enter this command.

```
chg-gpl:gpl=hipr:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 11:43:04 GMT EAGLE5 40.1.0
GPL Auditing ON

HIPR upload on 1114 completed
HIPR upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

**Note:** If you wish to leave the HIPR cards running the trial version of the HIPR GPL, continue the procedure with [Step 11](#) on page 356.

9. Activate the trial GPL, using the `act-gpl` command and specifying the value for the trial HIPR GPL shown in [Step 8](#) on page 355.

For this example, enter this command.

```
act-gpl:gpl=hipr:ver=132-003-000
```

These messages should appear.

```
rlghncxa03w 09-03-01 06:54:39 GMT EAGLE5 40.1.0
HIPR activate on 1114 completed
HIPR activate on 1116 completed
```

10. Verify that the HIPR GPL on the removable cartridge or removable media is the approved GPL on the fixed disk using the `rtrv-gpl:gpl=hipr` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
HIPR 1114 132-003-000 132-003-000 132-002-000 132-003-000
HIPR 1116 132-003-000 132-003-000 132-002-000 -----
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
```

|      |      |             |             |             |             |
|------|------|-------------|-------------|-------------|-------------|
| HIPR | 1114 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000 |
| HIPR | 1116 | 132-003-000 | 132-003-000 | 132-002-000 | 132-003-000 |
| HIPR | 1115 | -----       | -----       | -----       | -----       |

11. Verify the HIPR GPLs on the fixed disk and the cards that are running the HIPR GPLs using the `rept-stat-gpl:gpl=hipr` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL CARD RUNNING APPROVED TRIAL
HIPR 1109 132-002-000 ALM 132-003-000 132-002-000
HIPR 1110 132-002-000 ALM 132-003-000 132-002-000
HIPR 1209 132-002-000 ALM 132-003-000 132-002-000
HIPR 1210 132-002-000 ALM 132-003-000 132-002-000
HIPR 1309 132-002-000 ALM 132-003-000 132-002-000
HIPR 1310 132-002-000 ALM 132-003-000 132-002-000
HIPR 2109 132-002-000 ALM 132-003-000 132-002-000
HIPR 2110 132-002-000 ALM 132-003-000 132-002-000
Command Completed
```

12. Load the approved HIPR GPL onto a card selected from the cards shown in [Step 11](#) on page 356 using the `init-flash:code=appr` command.

For this example, enter this command.

```
init-flash:code=appr:loc=1109
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Downloading for card 1109 Started.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
HIPR Downloading for card 1109 Complete.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

### Updating more than One HIPR Card at the Same Time

Multiple HIPR cards can be updated at the same time with the `init-flash` command. The multiple HIPR cards being updated must be on the same IMT bus. Specifying card locations XX09 for the `sloc` and `eloc` parameters specifies the HIPR cards on IMT bus A. Specifying card locations XX10 for the `sloc` and `eloc` parameters specifies the HIPR cards on IMT bus B.

To update more than one HIPR card on the same IMT bus, enter the `init-flash` command with these parameters along with the `code=appr` parameter:

`sloc` – the first card location in the range of card locations

`eloc` – the last card location in the range of card locations

`gpl` – hipr

**Note:** The `sloc`, `eloc`, and `gpl` parameters cannot be specified with the `loc` parameter.

For example, to update the HIPR cards on IMT Bus B shown in [Step 11](#) on page 356 with the approved version of the HIPR GPL, enter this command.

```
init-flash:code=appr:sloc=1110:eloc=2110:gpl=hipr
```

To update the HIPR cards on IMT bus A shown in [Step 11](#) on page 356, the `sloc=1109` and `eloc=2109` parameters would be specified with the `init-flash` command.

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Download for cards 1110 - 2110 Started.
;
rlghncxa03w 09-03-01 13:07:15 GMT EAGLE5 40.1.0
FLASH Memory Download for cards 1110 - 2110 Completed.
LOC 1110 : PASSED
LOC 1210 : PASSED
LOC 1310 : PASSED
LOC 2110 : PASSED

ALL CARD RESULTS PASSED
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

13. Re-initialize the HIPR cards specified in [Step 12](#) on page 356 using the `init-mux` command with the `loc` parameter.

For this example, enter this command.

```
init-mux:loc=1109
```

If more than one HMUX card was specified in [Step 12](#) on page 356, re-initialize the IMT bus containing the cards specified in [Step 12](#) on page 356 by entering `init-mux` command and specifying the IMT bus (the `bus` parameter) containing the cards specified in [Step 12](#) on page 356. Specifying card locations XX09 for the `sloc` and `eloc` parameters in [Step 12](#) on page 356 requires that IMT bus A is re-initialized. Specifying card locations XX10 for the `sloc` and `eloc` parameters in [Step 12](#) on page 356 requires that IMT bus B is re-initialized.

For this example, enter this command.

```
init-mux:bus=a
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

**Note:** Executing this command produces two alarms: 0002 - Card is not running approved GPL, indicating that the version of the HIPR GPL running on the card is not the approved version, and 0004 - Card is running non-activated GPL, indicating that the new version of the HIPR GPL running on the card has not been activated.

14. Verify that the approved HIPR GPL from [Step 13](#) on page 357 has loaded and that the state of the card is in-service normal (IS-NR) state using the `rept-stat-card` command.

If more than one card was specified in [Step 12](#) on page 356 and [Step 13](#) on page 357, enter the `rept-stat-card` command for each specified card. For this example, enter this command.

```
rept-stat-card:loc=1109:mode=full
```

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1109 132-003-000 HIPR HIPR IS-NR Active -----
```

```
ALARM STATUS = No Alarms
TRIAL VERSION = 132-003-000
FPGA VERSION = 022-005
Command Completed.
```

**Note:** If the version number of the HIPR GPL shown in the `rept-stat-card` command output is different than the version specified in [Step 8](#) on page 355, contact the Customer Care Center. Refer to [Customer Care Center](#) on page 4 for the contact information.

15. Activate the approved HIPR GPL loaded onto the card in [Step 12](#) on page 356 using the `act-flash` command.

For this example, enter this command.

```
act-flash:loc=1109
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Activation for card 1109 Completed.
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

#### Activating the HIPR GPL on more than One HIPR card at the Same Time

If more than one HIPR card was specified in [Step 12](#) on page 356, enter the `act-flash` command with these parameters:

`sloc` – the first card location in the range of card locations

`eloc` – the last card location in the range of card locations

`gpl` – `hipr`

**Note:** The `sloc`, `eloc`, and `gpl` parameters cannot be specified with the `loc` parameter.

For example, to activate the HIPR GPL on the HIPR cards on IMT Bus B shown in [Step 11](#) on page 356 with the trial version of the HIPR GPL, enter this command.

```
act-flash:sloc=1110:eloc=2110:gpl=hipr
```

To activate the HIPR GPL on the HIPR cards on IMT bus A shown in [Step 11](#) on page 356, the `sloc=1109` and `eloc=2109` parameters would be specified with the `act-flash` command.

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
FLASH Memory Activation for cards 1110 - 2110 Started.
;
rlghncxa03w 09-03-01 13:07:15 GMT EAGLE5 40.1.0
FLASH Memory Activation for cards 1110 - 2110 Completed.
LOC 1110 : PASSED
LOC 1210 : PASSED
LOC 1310 : PASSED
LOC 2110 : PASSED

ALL CARD RESULTS PASSED
;
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Command Completed.
```

16. Verify the HIPR GPLs on the fixed disk and the cards that are running the HIPR GPLs using the `rept-stat-gpl:gpl=hipr` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:40:26 GMT EAGLE5 40.1.0
GPL CARD RUNNING APPROVED TRIAL
HIPR 1109 132-003-000 132-003-000 132-002-000
HIPR 1110 132-002-000 ALM 132-003-000 132-002-000
HIPR 1209 132-002-000 ALM 132-003-000 132-002-000
HIPR 1210 132-002-000 ALM 132-003-000 132-002-000
HIPR 1309 132-002-000 ALM 132-003-000 132-002-000
HIPR 1310 132-002-000 ALM 132-003-000 132-002-000
HIPR 2109 132-002-000 ALM 132-003-000 132-002-000
HIPR 2110 132-002-000 ALM 132-003-000 132-002-000
Command Completed
```

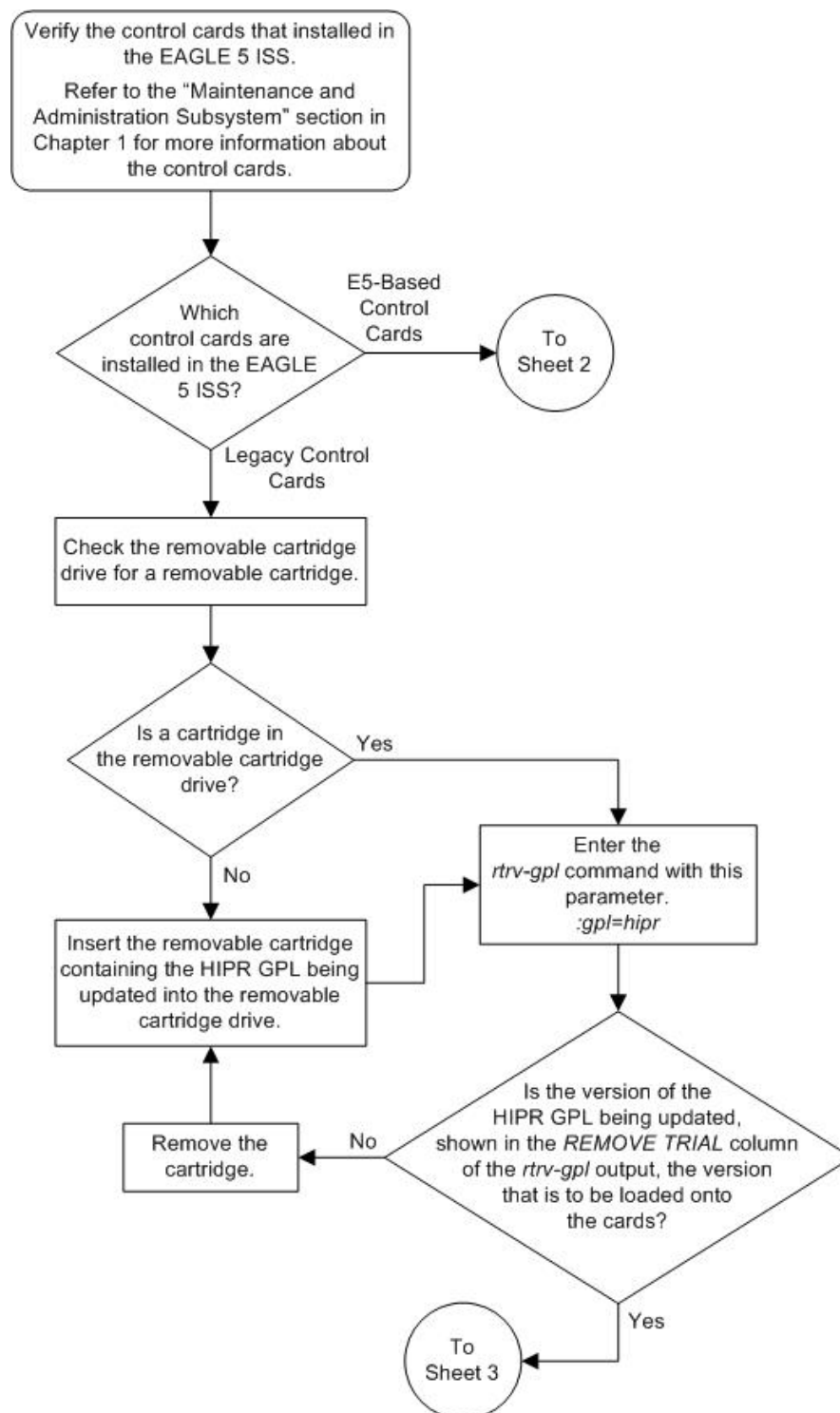
17. Continue the procedure by performing these actions.

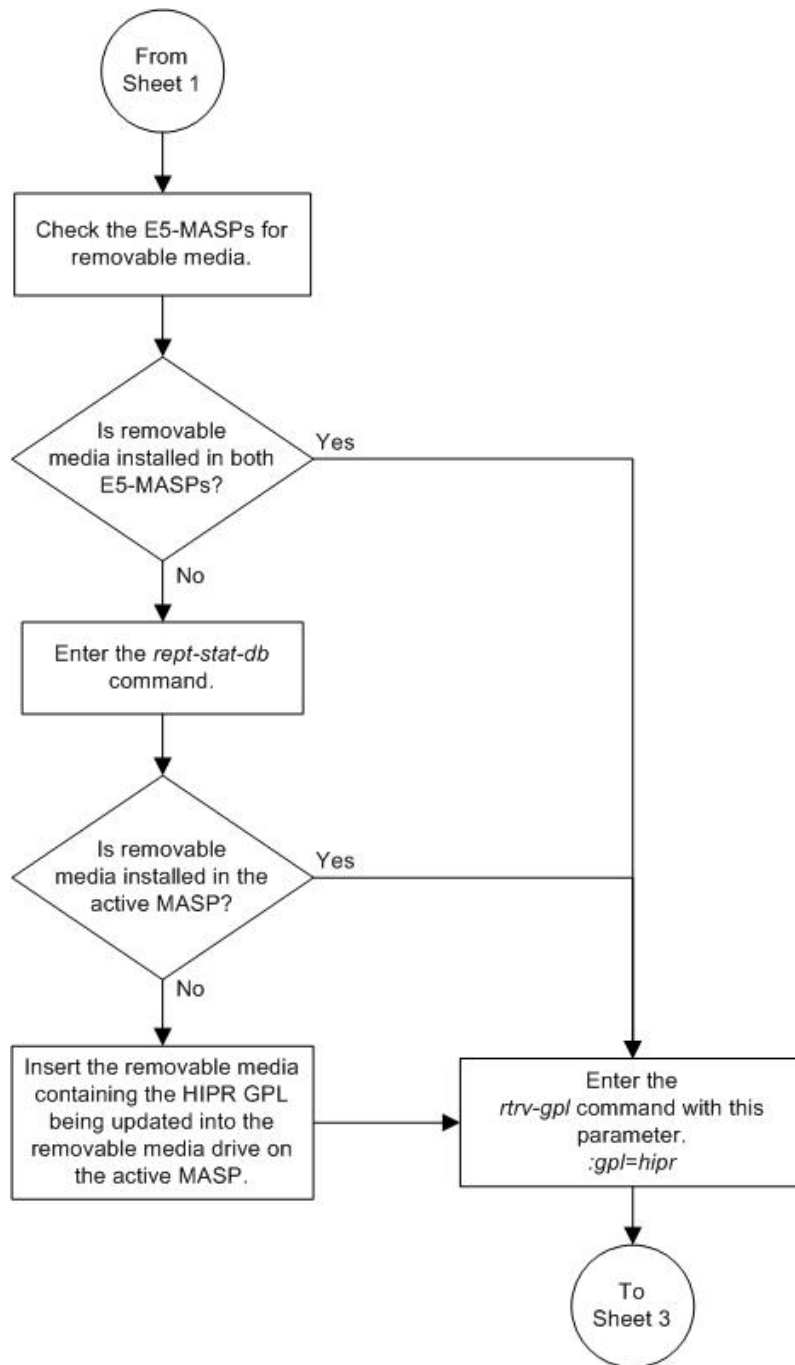
If legacy control cards are installed in the EAGLE 5 ISS, remove the removable cartridge from the removable cartridge drive on the MDAL card. For information about removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

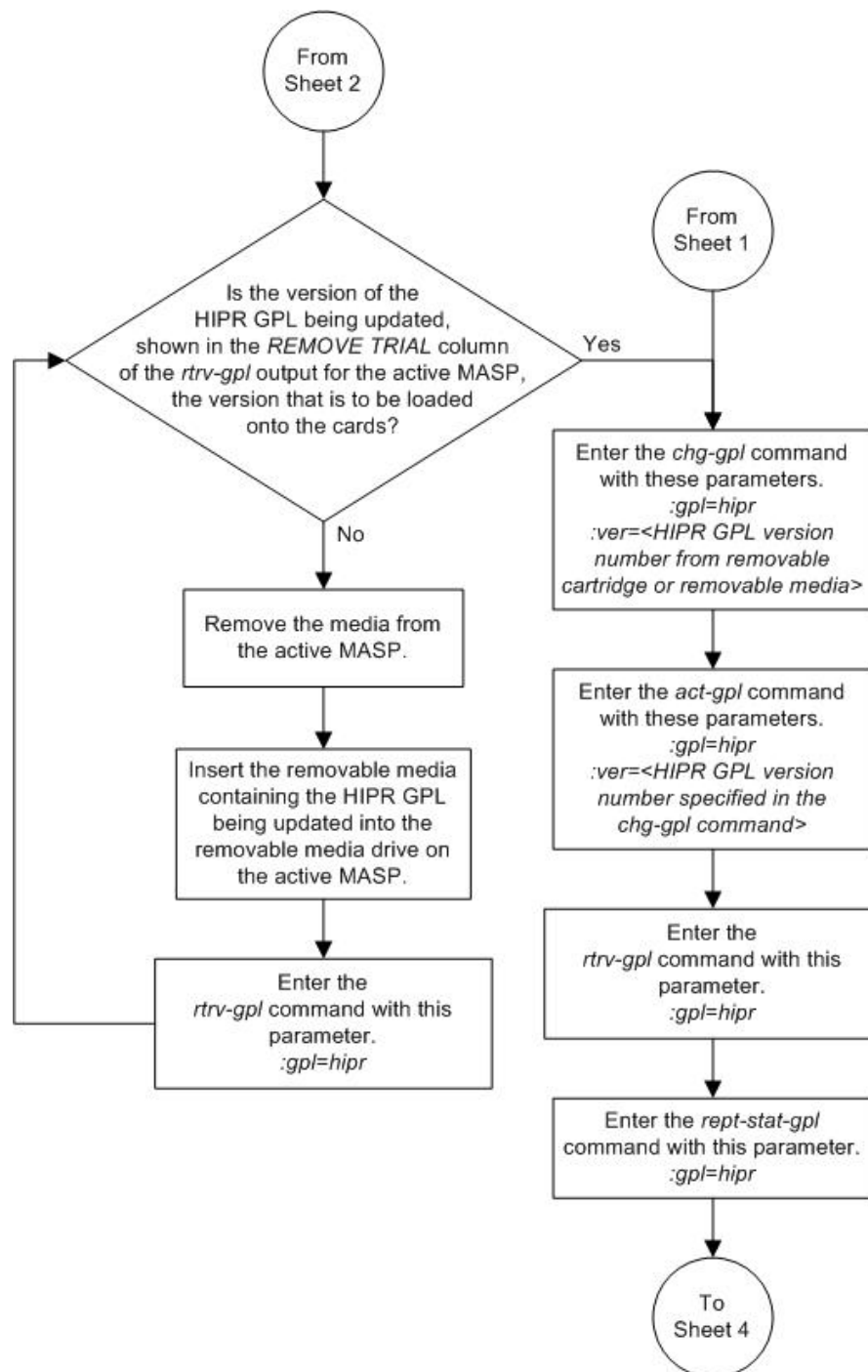
When the removable cartridge has been removed, or if E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure by performing one of these actions.

- If you wish to load the new HIPR GPL onto the other cards shown in [Step 11](#) on page 356, repeat this procedure from [Step 12](#) on page 356 for each card shown in [Step 11](#) on page 356.
- If the new HIPR GPL has been loaded onto all the cards shown in [Step 11](#) on page 356, or if the new HIPR GPL will not be loaded onto the other cards shown in [Step 11](#) on page 356, then this procedure is finished.

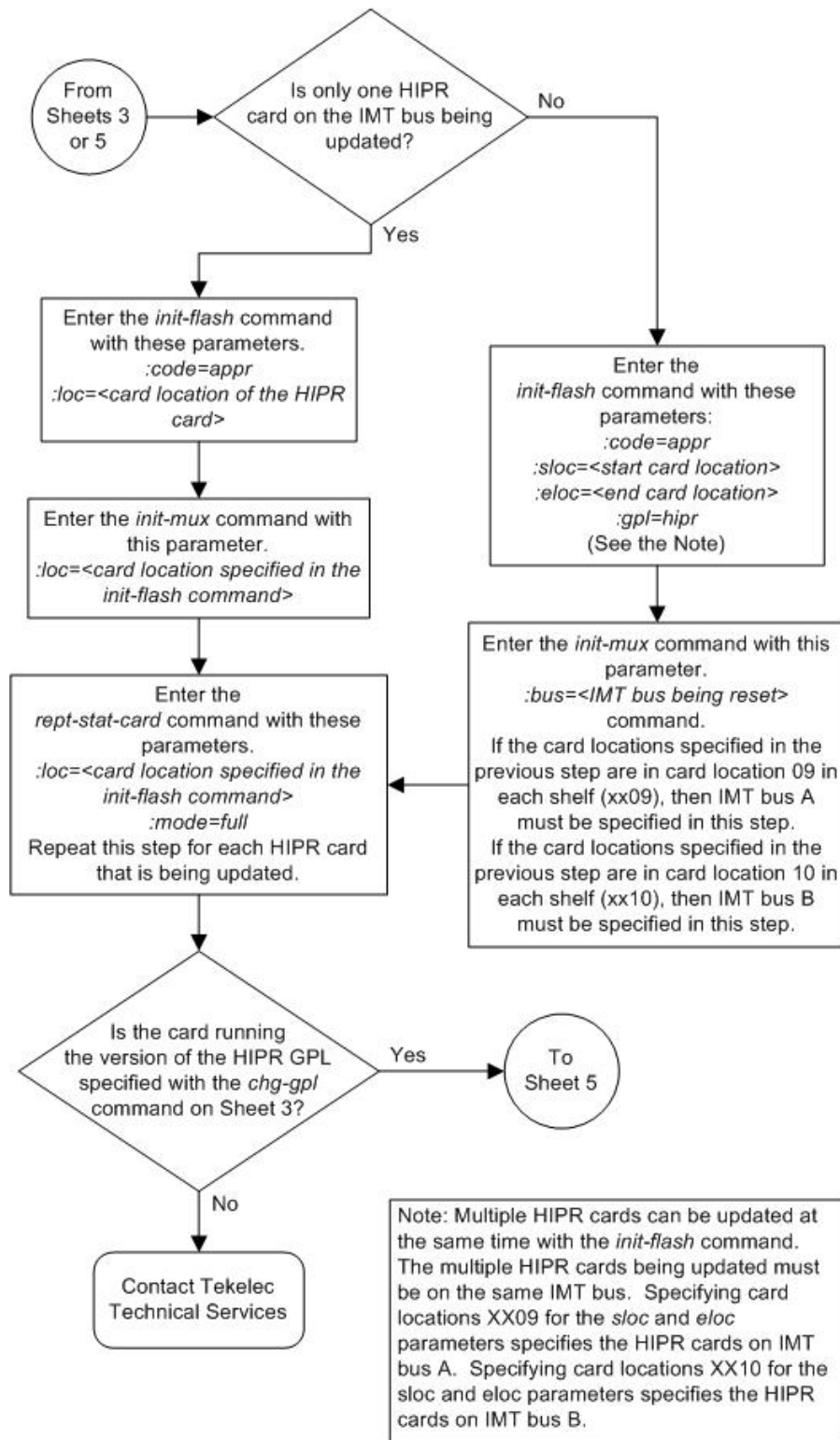
**Figure 32: Updating the HIPR GPL**

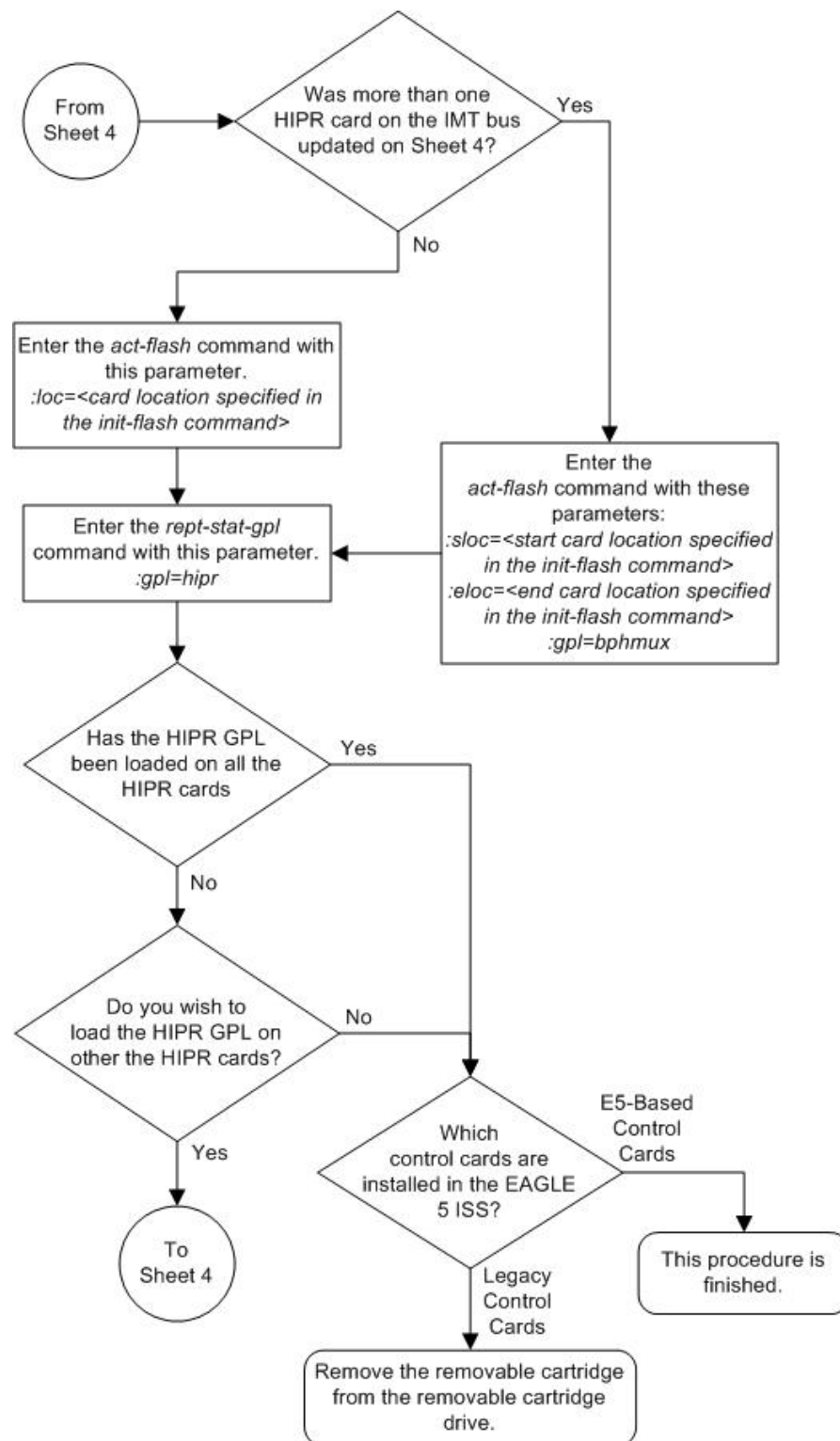












## Making the Trial Utility GPL the Approved Utility GPL

This procedure is used to make the trial UTILITY generic program load (GPL) the approved UTILITY GPL.

The UTILITY GPL cannot be loaded and run from the removable cartridge like the other GPLs. The approved version of the UTILITY GPL is on the fixed disk. The trial version of the UTILITY GPL is located on the removable cartridge or removable media. This procedure loads the trial UTILITY GPL from the removable cartridge to the fixed disk and makes it the approved UTILITY GPL.

The removable cartridge or removable media that contains the UTILITY GPL to be loaded on to the EAGLE 5 ISS is required.

When the UTILITY GPL is displayed with the `rtrv-gpl` command, the entry CDU appears in the GPL column of the `rtrv-gpl` output.

1. Verify the control cards that are installed in the EAGLE 5 ISS.

Refer to [Maintenance and Administration Subsystem](#) on page 7 for information about the control cards.

If legacy control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 2](#) on page 365.

If E5-based control cards are installed in the EAGLE 5 ISS, continue the procedure with [Step 5](#) on page 366.

2. Check the removable cartridge drive on the MDAL card for a removable cartridge.

If there is a removable cartridge in the drive, display the UTILITY GPLs on the fixed disk and on the removable cartridge using the `rtrv-gpl:gpl=utility` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
GPL Auditing ON
```

| GPL | CARD | RELEASE     | APPROVED    | TRIAL       | REMOVE TRIAL |
|-----|------|-------------|-------------|-------------|--------------|
| CDU | 1114 | 162-000-000 | 162-000-000 | 162-001-000 | 162-001-000  |
| CDU | 1116 | 162-000-000 | 162-000-000 | -----       | -----        |

If the version of the UTILITY GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the cartridge and go to [Step 3](#) on page 365. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19see the section.

If the version of the UTILITY GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 367.

If there is a removable cartridge in the drive, remove it. For more information on removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

3. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).

To write protect a removable cartridge, refer to [MO Removable Cartridge Description](#) on page 17.

4. Insert the removable cartridge containing the UTILITY GPL into the removable cartridge drive on the MDAL card.

For more information on inserting the removable cartridge in the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19. After the removable cartridge has been inserted into the removable cartridge drive, repeat the `rtrv-gpl` command in [Step 2](#) on page 365 and verify the version of the GPL on the removable cartridge that you wish to update.

5. Check the E5-MASPs for removable media.

If removable media is installed in both E5-MASPs, continue the procedure with [Step 7](#) on page 366.

If removable media is not installed in both E5-MASPs, continue the procedure with [Step 6](#) on page 366.

6. Verify the active MASP by entering the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:25:40 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
 TDM 1114 (STDBY)
 C LEVEL TIME LAST BACKUP
 - - - - - -
FD BKUP Y 36 09-02-19 09:38:25 GMT
FD CRNT Y 39
 MCAP 1113
 - - - - - -
RD BKUP - - - -
USB BKP - - - -
 TDM 1116 (ACTV)
 C LEVEL TIME LAST BACKUP
 - - - - - -
Y 36 09-02-19 09:38:25 GMT
Y 39
 MCAP 1115
 - - - - - -
Y 36 09-02-19 09:27:17 GMT
Y 3 09-02-07 01:11:22 GMT
```

If removable media is installed in the active MASP, continue the procedure with [Step 7](#) on page 366.

If removable media is not installed in the active MASP, insert the removable media in the removable media drive in the active MASP. For more information about inserting removable media in the removable media drive, refer to [Removable USB Drive](#) on page 20. After the removable media has been inserted in the removable media drive in the active MASP, continue the procedure with [Step 7](#) on page 366.

7. Display the UTILITY GPLs on the fixed disk and on the removable media using the `rtrv-gpl:gpl=utility` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
GPL Auditing ON
GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
CDU 1114 162-000-000 162-000-000 162-001-000 162-001-000
CDU 1116 162-000-000 162-000-000 162-001-000 162-001-000
CDU 1115 ----- ----- ----- -----
```

If the version of the UTILITY GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is not the version that is to be loaded onto the cards, remove the removable media from the active MASP.

Insert the removable media that contains the UTILITY GPL that is being updated into the removable media drive in the active MASP and repeat this step.

For more information about inserting removable media in the removable media drive, or removing removable media from the removable media drive, refer to [Removable USB Drive](#) on page 20.

If the version of the UTILITY GPL shown in the REMOVE TRIAL column of the `rtrv-gpl` output is the version that is to be loaded onto the cards, continue the procedure with [Step 8](#) on page 367.

8. Change the GPLs, using the `chg-gpl` command and specifying the value for the trial UTILITY GPL shown in the output of the `rtrv-gpl` command used in [Step 2](#) on page 365 or [Step 7](#) on page 366.

For this example, enter this command.

```
chg-gpl:gpl=utility:ver=162-001-000
```

This message should appear.

```
rlghncxa03w 09-03-01 06:52:20 GMT EAGLE5 40.1.0
GPL Auditing ON

UTILITY upload to 1114 completed
UTILITY upload to 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed
```

9. Display the UTILITY GPLs on the fixed disk and on the removable cartridge using the `rtrv-gpl:gpl=utility` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
GPL Auditing ON

GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
CDU 1114 162-001-000 162-001-000 162-001-000 162-001-000
CDU 1116 162-001-000 162-001-000 ----- -----
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

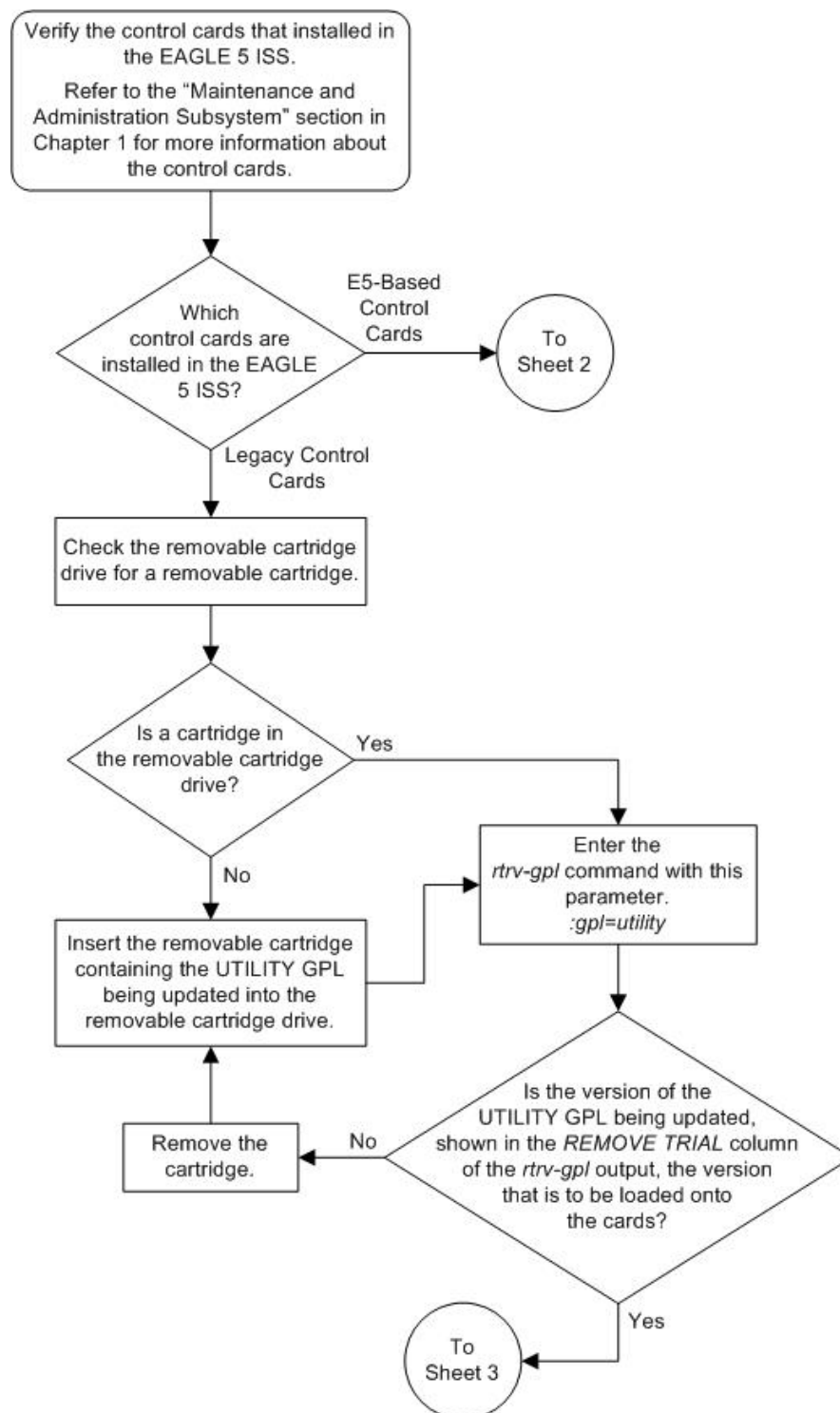
```
rlghncxa03w 09-03-01 07:01:08 GMT EAGLE5 40.1.0
GPL Auditing ON

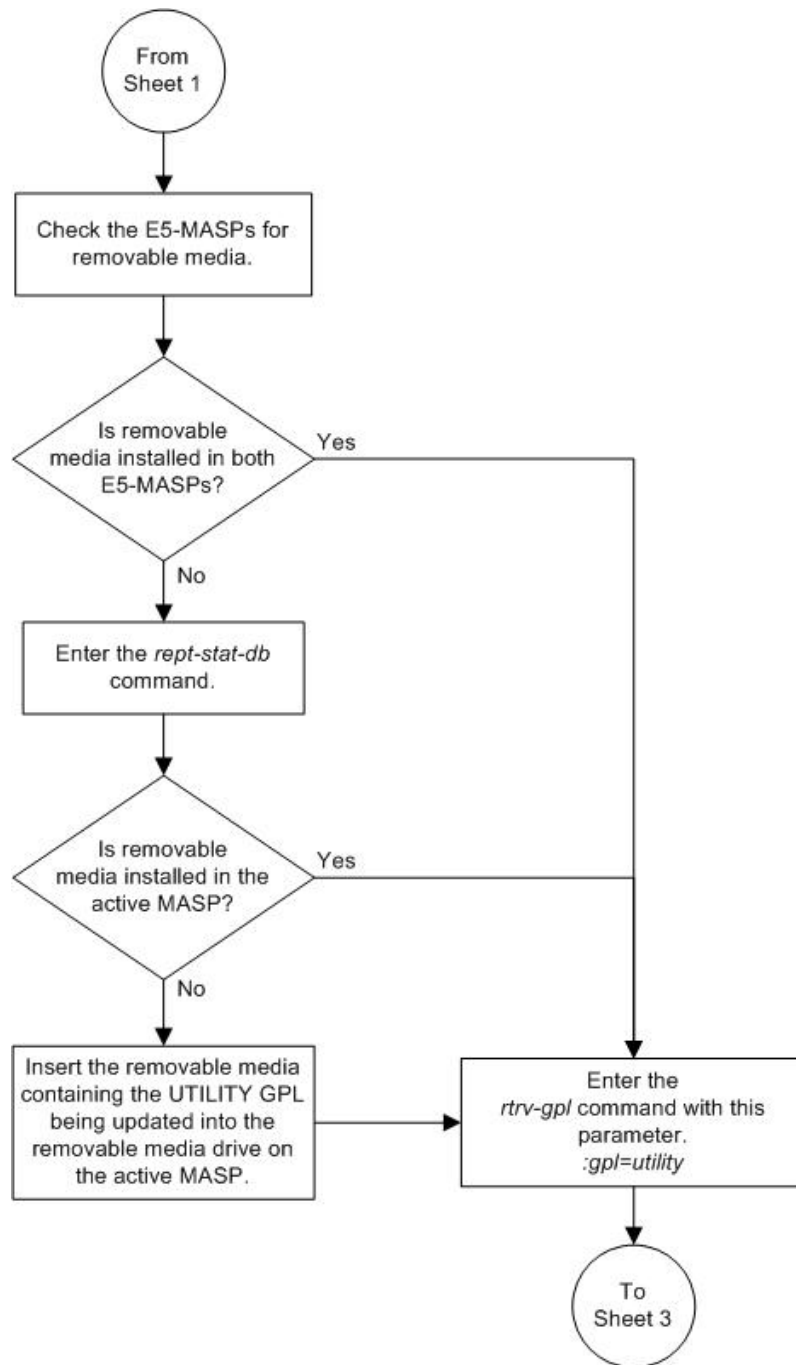
GPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL
CDU 1114 162-001-000 162-001-000 162-001-000 162-001-000
CDU 1116 162-001-000 162-001-000 162-001-000 162-001-000
CDU 1115 ----- ----- ----- -----
```

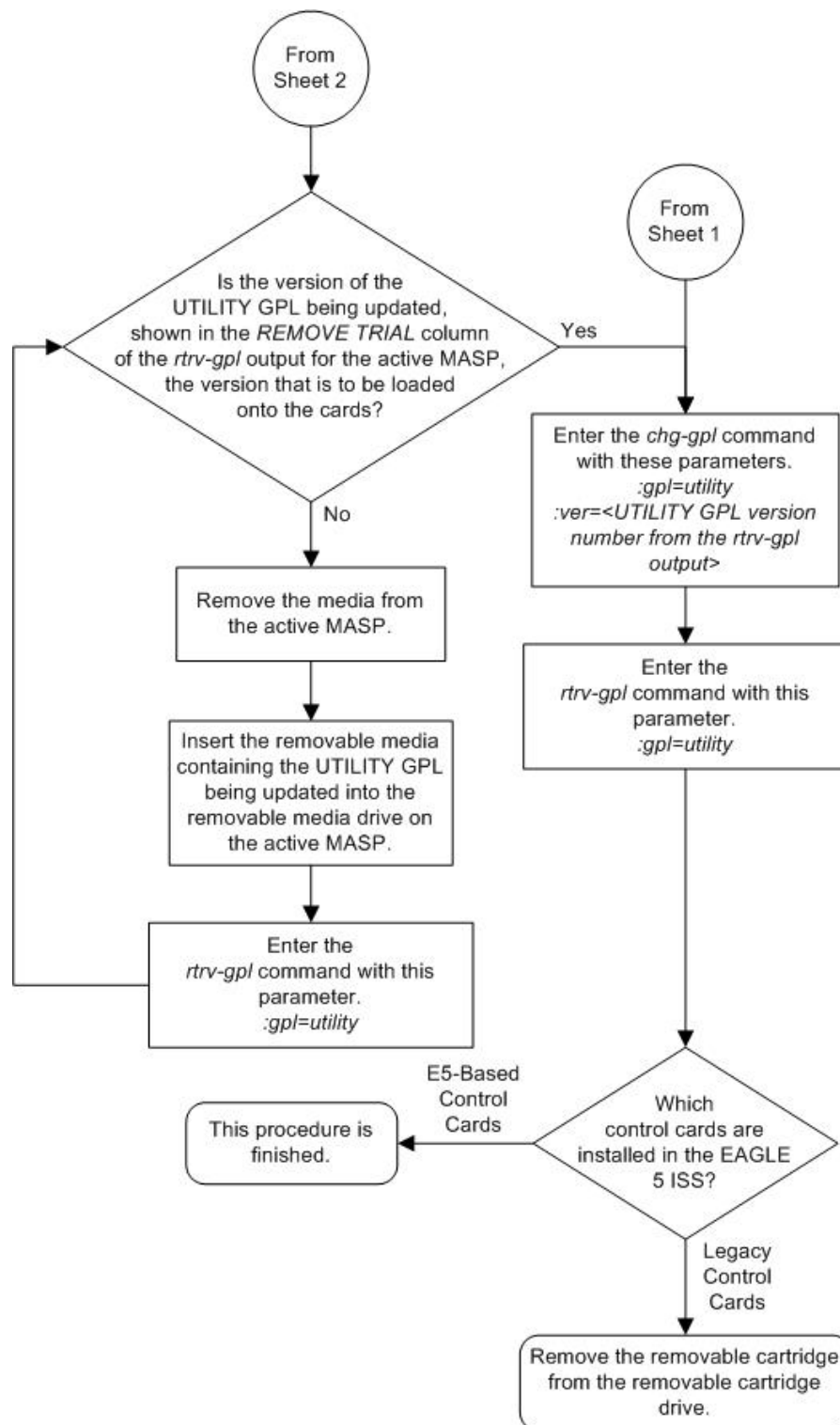
10. This procedure is finished.

If legacy control cards are installed in the EAGLE 5 ISS, remove the removable cartridge from the removable cartridge drive on the MDAL card. For information about removing the removable cartridge from the removable cartridge drive, refer to [MO Cartridge Removal Procedure](#) on page 19.

**Figure 33: Making the Trial Utility GPL the Approved Utility GPL**









## Reloading the TDM LCA Clock Bitfile

This procedure is used to reload the clock LCA (logic cell array) bitfile on the TDMs using the `init-card` command. To reload the TDM clock LCA bitfile, the GPSM-II or E5-MCAP card associated with the TDM being reloaded is initialized by entering the `init-card` command with the `initclk=yes` parameter.

It is recommended that the card specified in the `init-card` command is the GPSM-II or E5-MCAP card in the standby MASP. The `rept-stat-db` output in [Step 7](#) on page 375 shows which TDM is the standby TDM with the indicator ( STDBY ) after the TDM's card location. If the TDM in card location 1114 is the standby TDM, card location 1113 must be specified. If the TDM in card location 1116 is the standby TDM, card location 1115 must be specified.

The TDM clock LCA bitfile can be reloaded only on TDMs with part numbers 870-0774-15 or later. If the EAGLE 5 ISS contains older TDMs, these TDMs must be replaced with TDMs 870-0774-15 or later to perform this procedure.

**Note:** Contact the Customer Care Center before replacing the TDMs. Refer to [Customer Care Center](#) on page 4 for the contact information.

The `init-card` also contains the `force=yes` parameter. The `force=yes` parameter can be used only with the `initclk=yes` parameter. The `force=yes` parameter must be used if reloading the TDM clock LCA bitfile would cause a system clock outage.



### CAUTION

**CAUTION:** A system clock outage can be caused by either the EAGLE 5 ISS having only one TDM (a simplex MASP configuration) or if the status of the high-speed clocks, shown in the `rept-stat-clk` output in [Step 1](#) on page 371, on the TDM which is not being reset is Fault. A system clock outage will result in a loss of traffic on some or all signaling links.

1. Verify the status of the high-speed clocks by entering the `rept-stat-clk` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
COMPOSITE
 SYSTEM CLOCK
 IS-NR
 SST Active
 AST -----
ALARM STATUS = No Alarms.
 Primary Comp Clk 1114 (CLK A) IS-NR Active -----
 Primary Comp Clk 1116 (CLK B) IS-NR Active -----
 Secondary Comp Clk 1114 (CLK A) IS-NR Idle -----
 Secondary Comp Clk 1116 (CLK B) IS-NR Idle -----

Clock Using Bad
CLK A 9 0
CLK B 0 0
CLK I 0 --

HIGH SPEED
 SYSTEM CLOCK
 IS-NR
 SST Idle
 AST -----
ALARM STATUS = No Alarms.
 Primary HS Clk 1114 (HS CLK A) IS-NR Active -----
 Primary HS Clk 1116 (HS CLK B) IS-NR Active -----
 Secondary HS Clk 1114 (HS CLK A) IS-NR Idle -----
 Secondary HS Clk 1116 (HS CLK B) IS-NR Idle -----

HS CLK TYPE 1114 = RS422
```

```

HS CLK LINELEN 1114 = LONGHAUL
HS CLK TYPE 1116 = RS422
HS CLK LINELEN 1116 = LONGHAUL

```

```

Clock Using Bad
HS CLK A 2 0
HS CLK B 0 0
HS CLK I 0 --

```

Command Completed

If the `rept-stat-clk` output does not show any high-speed clocks (HIGH SPEED SYSTEM CLOCK, Primary HS Clk, Secondary HS Clk, HS CLK TYPE, and HS CLK LINELEN fields), the EAGLE 5 ISS does not contain any cards that are capable of using high-speed master timing.

- If the HS CLK TYPE and HS CLK LINELEN values shown in [Step 1](#) on page 371 are set to the system default values (HS CLK TYPE = RS422 and HS CLK LINELEN = LONGHAUL), continue the procedure with [Step 3](#) on page 372.
  - If the HS CLK TYPE and HS CLK LINELEN values shown in [Step 1](#) on page 371 are not set to the system default values (HS CLK TYPE = RS422 and HS CLK LINELEN = LONGHAUL), continue the procedure with [Step 2](#) on page 372.
2. Visually verify the part numbers of both TDMs in the EAGLE 5 ISS. To load the TDM clock LCA bitfile, the part numbers of both TDMs must be 870-0774-15 or later.

If the TDM part numbers are 870-0774-15 or later, continue the procedure with [Step 3](#) on page 372.

If the TDM part numbers are not 870-0774-15 or later, the TDMs must be replaced with TDM part numbers 870-0774-15 or later. Contact the Customer Care Center before replacing the TDMs. Refer to [Customer Care Center](#) on page 4 for the contact information. If the older TDMs are not replaced, this procedure cannot be performed.

3. Display the terminal configuration in the database with the `rtrv-trm` command.

If any OAP or SEAS terminals are present, they must be taken out of service. The OAP terminals are shown in the output with the entry OAP in the TYPE field. The SEAS terminals are shown in the output with the entry SEAS in the TYPE field. If no OAP or SEAS terminals are shown in the `rtrv-trm` command output, continue the procedure with [Step 7](#) on page 375.

This is an example of the possible output. In this example, the OAP terminals are terminals 6 and 9, and the SEAS terminals are terminals 18 and 27.

```

rlghncxa03w 09-03-01 16:02:08 GMT EAGLE5 40.1.0
TRM TYPE COMM FC TMOUT MXINV DURAL
1 VT320 9600-7-E-1 SW 30 5 99:59:59
2 KSR 9600-7-E-1 HW 30 5 INDEF
3 PRINTER 4800-7-E-1 HW 30 0 00:00:00
4 VT320 2400-7-E-1 BOTH 30 5 00:30:00
5 VT320 9600-7-0-1 NONE 30 5 00:00:30
6 OAP 19200-7-E-1 SW 0 5 INDEF
7 PRINTER 9600-7-N-2 HW 30 5 00:30:00
8 KSR 19200-7-E-2 BOTH 30 5 00:30:00
9 OAP 19200-7-E-1 SW 0 5 INDEF
10 VT320 9600-7-E-1 HW 30 5 00:30:00
11 VT320 4800-7-E-1 HW 30 5 00:30:00
12 PRINTER 9600-7-E-1 HW 30 4 00:30:00
13 VT320 9600-7-0-1 NONE 30 5 00:30:00
14 VT320 9600-7-E-2 SW 30 8 00:30:00

```

|     |        |            |      |       |       |          |        |
|-----|--------|------------|------|-------|-------|----------|--------|
| 15  | VT320  | 9600-7-N-2 | HW   | 30    | 5     | 00:30:00 |        |
| 16  | VT320  | 9600-7-E-2 | BOTH | 30    | 3     | 00:30:00 |        |
| TRM | TYPE   | LOC        |      | TMOUT | MXINV | DURAL    | SECURE |
| 17  | TELNET | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 18  | SEAS   | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 19  | TELNET | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 20  | TELNET | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 21  | TELNET | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 22  | TELNET | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 23  | TELNET | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 24  | TELNET | 1201       |      | 60    | 5     | 00:30:00 | yes    |
| 25  | TELNET | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 26  | TELNET | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 27  | SEAS   | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 28  | TELNET | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 29  | TELNET | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 30  | TELNET | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 31  | TELNET | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 32  | TELNET | 1203       |      | 60    | 5     | 00:30:00 | yes    |
| 33  | TELNET | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 34  | TELNET | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 35  | TELNET | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 36  | TELNET | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 37  | TELNET | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 38  | TELNET | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 39  | TELNET | 1205       |      | 60    | 5     | 00:30:00 | yes    |
| 40  | TELNET | 1205       |      | 60    | 5     | 00:30:00 | yes    |

**Note:** The `rtrv-trm` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-trm` command, see the `rtrv-trm` command description in the *Commands Manual*.

4. Display the status of the terminals with the `rept-stat-trm` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM PST SST AST
1 IS-NR Active -----
2 IS-NR Active -----
3 IS-NR Active -----
4 IS-NR Active -----
5 IS-NR Active -----
6 IS-NR Active -----
7 IS-NR Active -----
8 IS-NR Active -----
9 IS-NR Active -----
10 IS-NR Active -----
11 IS-NR Active -----
12 IS-NR Active -----
13 IS-NR Active -----
14 IS-NR Active -----
15 IS-NR Active -----
16 IS-NR Active -----
17 IS-NR Active -----
18 IS-NR Active -----
19 IS-NR Active -----
20 IS-NR Active -----
21 IS-NR Active -----
22 IS-NR Active -----
23 IS-NR Active -----
24 IS-NR Active -----
25 IS-NR Active -----
26 IS-NR Active -----
```

|    |       |        |       |
|----|-------|--------|-------|
| 27 | IS-NR | Active | ----- |
| 28 | IS-NR | Active | ----- |
| 29 | IS-NR | Active | ----- |
| 30 | IS-NR | Active | ----- |
| 31 | IS-NR | Active | ----- |
| 32 | IS-NR | Active | ----- |
| 33 | IS-NR | Active | ----- |
| 34 | IS-NR | Active | ----- |
| 35 | IS-NR | Active | ----- |
| 36 | IS-NR | Active | ----- |
| 37 | IS-NR | Active | ----- |
| 38 | IS-NR | Active | ----- |
| 39 | IS-NR | Active | ----- |
| 40 | IS-NR | Active | ----- |

Command Completed.

- Place the OAP or SEAS terminals out of service using the `rmv - trm` command with the number of the terminal displayed in [Step 4](#) on page 373 whose state is not OOS-MT-DSBLD.

The `force=yes` parameter must be used when placing the last OAP or SEAS terminal out of service.

If OAP terminals are shown in the `rtrv - trm` output in [Step 3](#) on page 372, for this example, enter these commands.

```
rmv - trm: trm=6
```

```
rmv - trm: trm=9: force=yes
```

If SEAS terminals are shown in the `rtrv - trm` output in [Step 3](#) on page 372, for this example, enter these commands.

```
rmv - trm: trm=18
```

```
rmv - trm: trm=27: force=yes
```



#### CAUTION

**CAUTION:** Placing the OAP and SEAS terminals out of service will disable the SEAS feature on the EAGLE 5 ISS.

If the status of any of the terminals shown in the PST field in [Step 4](#) on page 373 is OOS-MT-DSBLD (out-of-service maintenance disabled), the terminal is already out of service and the `rmv - trm` command does not need to be executed for that terminal.

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Inhibit message sent to terminal
```

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Command Completed.
```

- [Step 6](#) on page 375 is performed only if the OAP or SEAS terminals were placed out of service in this step. If the OAP or SEAS terminals were not placed out of service in this step, continue the procedure with [Step 7](#) on page 375.
- If the OAP or SEAS terminals were placed out of service in this step, continue the procedure with [Step 6](#) on page 375.

- Change the terminal type of the OAP or SEAS terminals to NONE with the `chg-trm` command, the `type=none` parameter, and with the values of the OAP or SEAS terminals used in [Step 5](#) on page 374.

If OAP terminals are shown in the `rtrv-trm` output in [Step 3](#) on page 372, for this example, enter these commands.

```
chg-trm:trm=6:type=none
```

```
chg-trm:trm=9:type=none
```

If SEAS terminals are shown in the `rtrv-trm` output in [Step 3](#) on page 372, for this example, enter these commands.

```
chg-trm:trm=18:type=none
```

```
chg-trm:trm=27:type=none
```

This message should appear when these commands have successfully completed.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
CHG-TRM: MASP B - COMPLTD
```

- Enter the `rept-stat-db` command, to determine which MASP is active, This is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
 TDM 1114 (ACTV)
 C LEVEL TIME LAST BACKUP
 - - - - - -
FD BKUP Y 35 09-02-19 10:19:18 GMT
FD CRNT Y 106
 MDAL 1117
 - - - - - -
RD BKUP - - - -
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
 TDM 1114 (ACTV)
 C LEVEL TIME LAST BACKUP
 - - - - - -
FD BKUP Y 35 09-02-19 10:19:18 GMT
FD CRNT Y 106
 MCAP 1113
 - - - - - -
RD BKUP - - - -
USB BKP - - - -
 TDM 1116 (STDBY)
 C LEVEL TIME LAST BACKUP
 - - - - - -
FD BKUP Y 35 09-02-19 10:19:18 GMT
FD CRNT Y 106
 MCAP 1115
 - - - - - -
RD BKUP - - - -
USB BKP Y 3 09-02-07 01:11:22 GMT
```

The output of the `rept-stat-db` command shows which MASP is active with the indicator ( ACTV ) following the TDM card location. The indicator ( STDBY ) following the TDM card location shows which MASP is standby.

For this example, the MASP associated with TDM 1114 is active and the MASP associated with TDM 1116 is standby.

- Place the GPSM-II or E5-MCAP card in the standby MASP out of service using the `rmv-card` command.

The `rept-stat-db` output in [Step 7](#) on page 375 shows which TDM is the standby TDM with the entry (Standby ) after the TDMs card location. If the TDM in card location 1114 is the standby TDM, card location 1113 must be specified in this step. If the TDM in card location 1116 is the standby TDM, card location 1115 must be specified in this step.

For this example, enter this command.

```
rmv-card:loc=1115
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Card has been inhibited.
```

9. Load the TDM clock LCA bitfile onto the TDM associated with the GPSM-II or E5-MCAP card inhibited in [Step 8](#) on page 375 using the `init-card` command with the `initclk=yes` parameter and the card location of the standby GPSM-II or E5-MCAP card.



#### CAUTION

If reloading the TDM clock LCA bitfile would cause a system clock outage, the `force=yes` parameter must be used with the `init-card` command. A system clock outage can be caused by either the EAGLE 5 ISS having only one TDM (a simplex MASP configuration) or if the status of the high-speed clocks, shown in the `rept-stat-clk` output in [Step 1](#) on page 371, on the TDM which is not being reset is Fault. A system clock outage will result in a loss of traffic on some or all signaling links.

For this example, enter this command.

```
init-card:initclk=yes:loc=1115
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 09-03-01 13:01:59 GMT EAGLE5 40.1.0
Init Card command issued to card 1115
;
rlghncxa03w 09-03-01 13:01:59 GMT EAGLE5 40.1.0
* 3021.0013 * CARD 1115 EOAM Card is isolated from the system
;
rlghncxa03w 09-03-01 13:03:10 GMT EAGLE5 40.1.0
3022.0014 CARD 1115 EOAM Card is present
ASSY SN: 1216115
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the possible output.

```
rlghncxa03w 09-03-01 13:01:59 GMT EAGLE5 40.1.0
Init Card command issued to card 1115
;
rlghncxa03w 09-03-01 13:01:59 GMT EAGLE5 40.1.0
* 3021.0013 * CARD 1115 OAMHC Card is isolated from the system
;
rlghncxa03w 09-03-01 13:03:10 GMT EAGLE5 40.1.0
3022.0014 CARD 1115 OAMHC Card is present
ASSY SN: 1216115
```

10. Put the GPSM-II or E5-MCAP card that was inhibited in [Step 9](#) on page 376 back into service using the `rst-card` command with the card location specified in [Step 9](#) on page 376. For this example, enter this command.

```
rst-card:loc=1115
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Card has been allowed.
```

- If the TDM clock LCA bitfile will not be loaded on the other TDM in the EAGLE 5 ISS, continue the procedure with [Step 12](#) on page 377.
- If the TDM clock LCA bitfile will be loaded on the other TDM in the EAGLE 5 ISS, continue the procedure with [Step 11](#) on page 377.

11. If you wish to load the TDM clock LCA bitfile onto the TDM making up the active MASP, enter the `init-card` command specifying the location of the GPSM-II or E5-MCAP card making up active MASP. Initializing the GPSM-II or E5-MCAP card of the active MASP makes the MASPs switch roles. The active MASP becomes the standby MASP, and the standby (text is missing from this point)

For this example, enter the `init-card:loc=1113` command. This message should appear.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
Init Card command issued to card 1113
```

After the `init-card` command has completed, repeat the procedure from [Step 8](#) on page 375, specifying the card location used in the `init-card` command.

12. Verify the status of the high-speed clocks by entering the `rept-stat-clk` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 11:34:04 GMT EAGLE5 40.1.0
COMPOSITE PST SST AST
 SYSTEM CLOCK IS-NR Active -----
ALARM STATUS = No Alarms.
 Primary Comp Clk 1114 (CLK A) IS-NR Active -----
 Primary Comp Clk 1116 (CLK B) IS-NR Active -----
 Secondary Comp Clk 1114 (CLK A) IS-NR Idle -----
 Secondary Comp Clk 1116 (CLK B) IS-NR Idle -----

Clock Using Bad
CLK A 9 0
CLK B 0 0
CLK I 0 --

HIGH SPEED PST SST AST
 SYSTEM CLOCK IS-NR Idle -----
ALARM STATUS = No Alarms.
 Primary HS Clk 1114 (HS CLK A) IS-NR Active -----
 Primary HS Clk 1116 (HS CLK B) IS-NR Active -----
 Secondary HS Clk 1114 (HS CLK A) IS-NR Idle -----
 Secondary HS Clk 1116 (HS CLK B) IS-NR Idle -----

HS CLK TYPE 1114 = RS422
HS CLK LINELEN 1114 = LONGHAUL
HS CLK TYPE 1116 = RS422
HS CLK LINELEN 1116 = LONGHAUL

Clock Using Bad
HS CLK A 2 0
HS CLK B 0 0
HS CLK I 0 --
```

#### Command Completed

- If [Step 6](#) on page 375 was not performed, continue the procedure with [Step 16](#) on page 379.
- If [Step 6](#) on page 375 was performed, continue the procedure with [Step 13](#) on page 378.

13. Change the terminal type of the terminals that were changed to NONE in [Step 6](#) on page 375 to the terminal type OAP or SEAS with the `chg - trm` command and either the `type=oap` (for OAP terminals) or `type=seas` (for SEAS terminals) parameter. The terminal type is shown in the TYPE field in the `rtrv - trm` command output in [Step 3](#) on page 372.

If OAP terminals were changed in [Step 6](#) on page 375, for this example, enter these commands.

```
chg - trm: trm=6: type=oap
```

```
chg - trm: trm=9: type=oap
```

If SEAS terminals were changed in [Step 6](#) on page 375, for this example, enter these commands.

```
chg - trm: trm=18: type=seas
```

```
chg - trm: trm=27: type=seas
```

This message should appear when these commands have successfully completed.

```
rlghncxa03w 09-03-01 11:11:28 GMT EAGLE5 40.1.0
CHG-TRM: MASP B - COMPLTD
```

14. Put the OAP or SEAS terminals back into service using the `rst - trm` command with the number of the terminals specified in [Step 13](#) on page 378. For this example, enter these commands.

```
rst - trm: trm=6
```

```
rst - trm: trm=9
```

```
rst - trm: trm=18
```

```
rst - trm: trm=27
```

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Allow message sent to terminal

rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
Command Completed.
```

15. Verify that the terminals are in service with the `rept - stat - trm` command. This is an example of the possible output.

```
rlghncxa03w 09-03-01 15:08:45 GMT EAGLE5 40.1.0
TRM PST SST AST
1 IS-NR Active -----
2 IS-NR Active -----
3 IS-NR Active -----
4 IS-NR Active -----
5 IS-NR Active -----
6 IS-NR Active -----
7 IS-NR Active -----
8 IS-NR Active -----
9 IS-NR Active -----
10 IS-NR Active -----
11 IS-NR Active -----
12 IS-NR Active -----
13 IS-NR Active -----
```



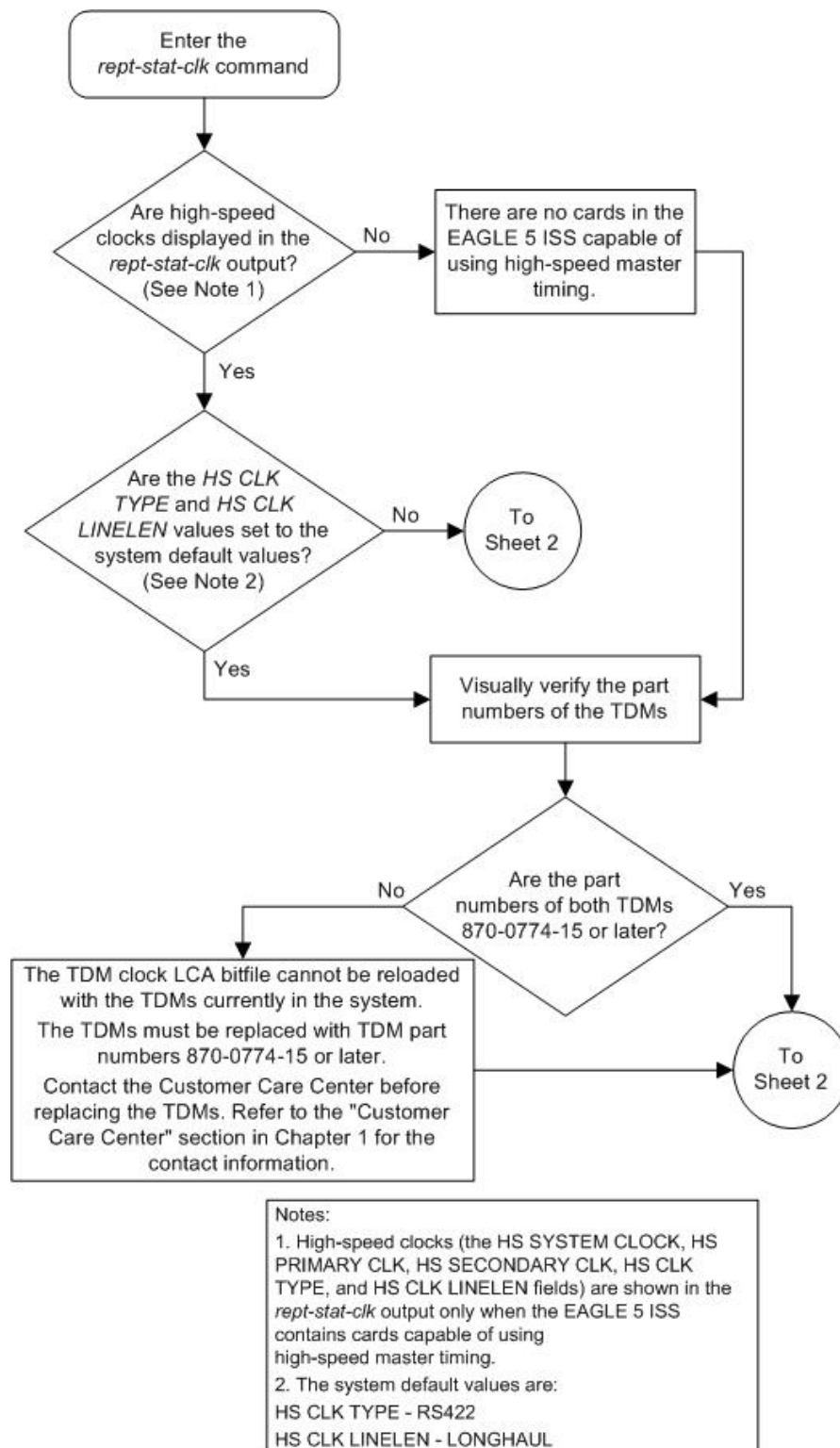
```
14 IS-NR Active -----
15 IS-NR Active -----
16 IS-NR Active -----
17 IS-NR Active -----
18 IS-NR Active -----
19 IS-NR Active -----
20 IS-NR Active -----
21 IS-NR Active -----
22 IS-NR Active -----
23 IS-NR Active -----
24 IS-NR Active -----
25 IS-NR Active -----
26 IS-NR Active -----
27 IS-NR Active -----
28 IS-NR Active -----
29 IS-NR Active -----
30 IS-NR Active -----
31 IS-NR Active -----
32 IS-NR Active -----
33 IS-NR Active -----
34 IS-NR Active -----
35 IS-NR Active -----
36 IS-NR Active -----
37 IS-NR Active -----
38 IS-NR Active -----
39 IS-NR Active -----
40 IS-NR Active -----
```

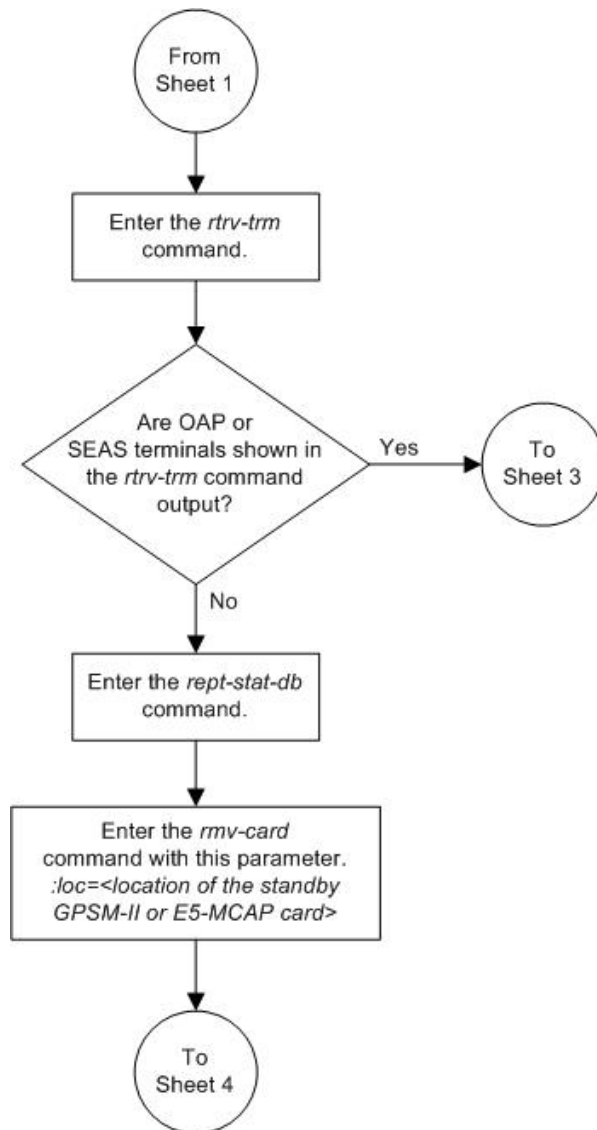
Command Completed.

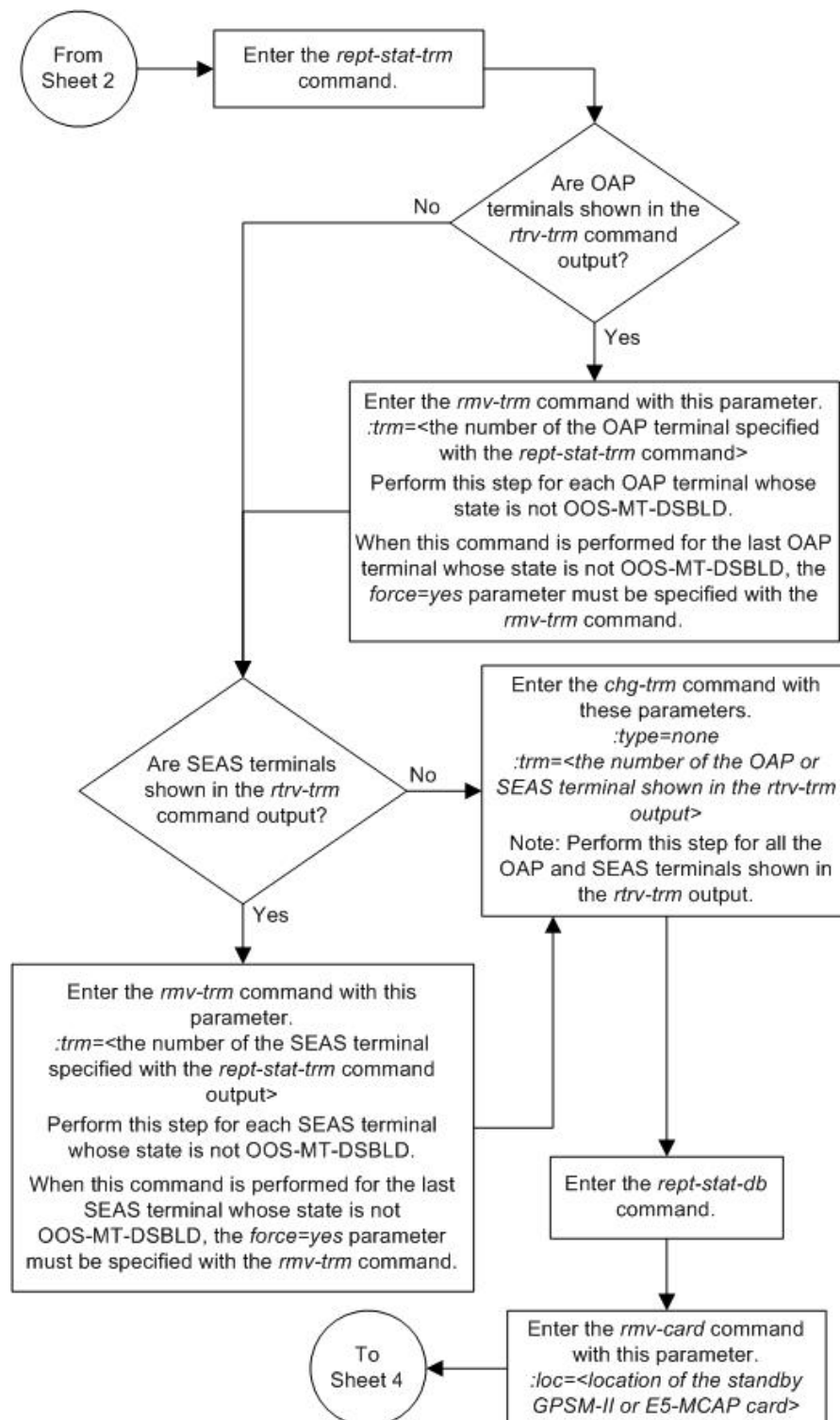
16. Back up the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

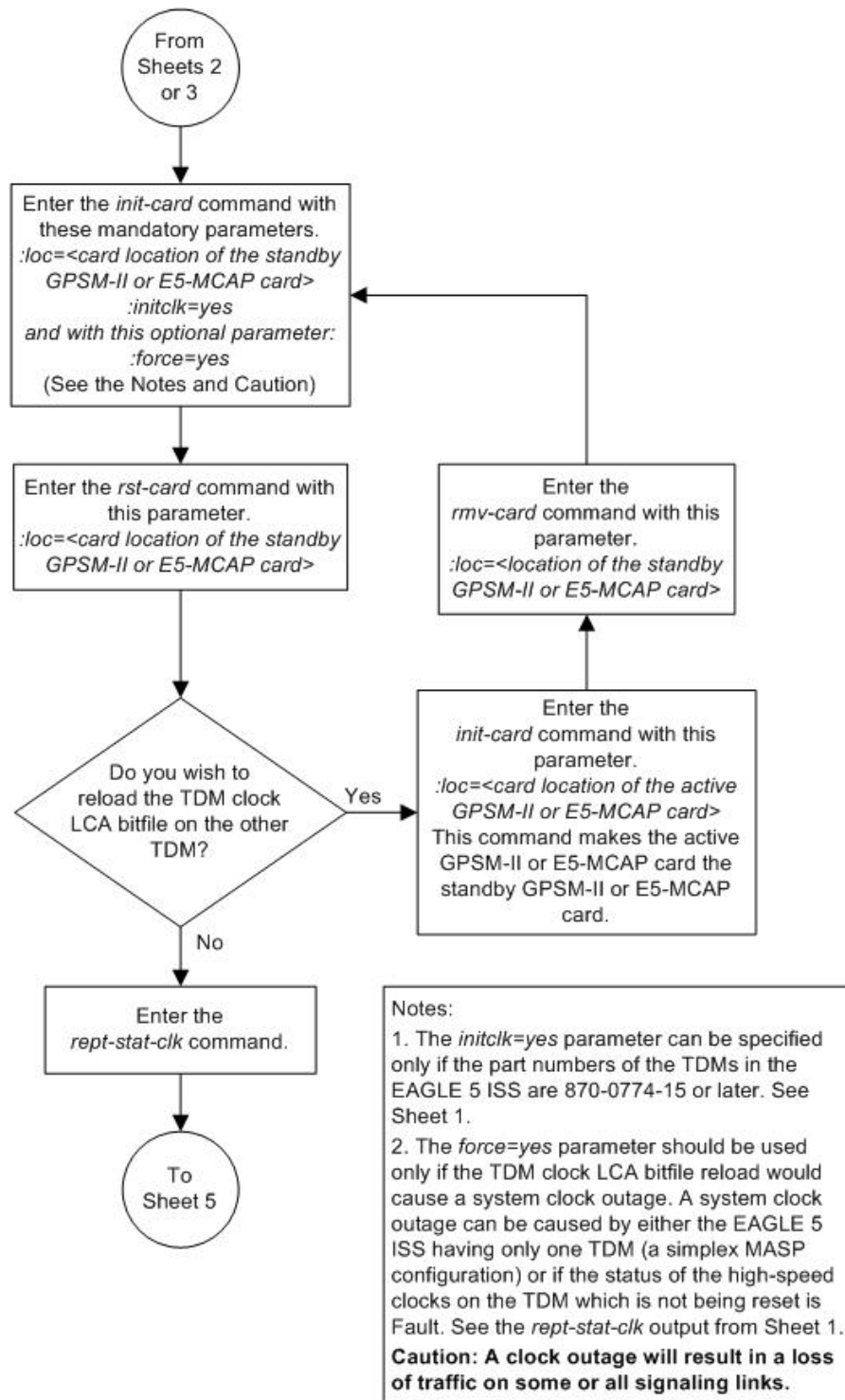
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

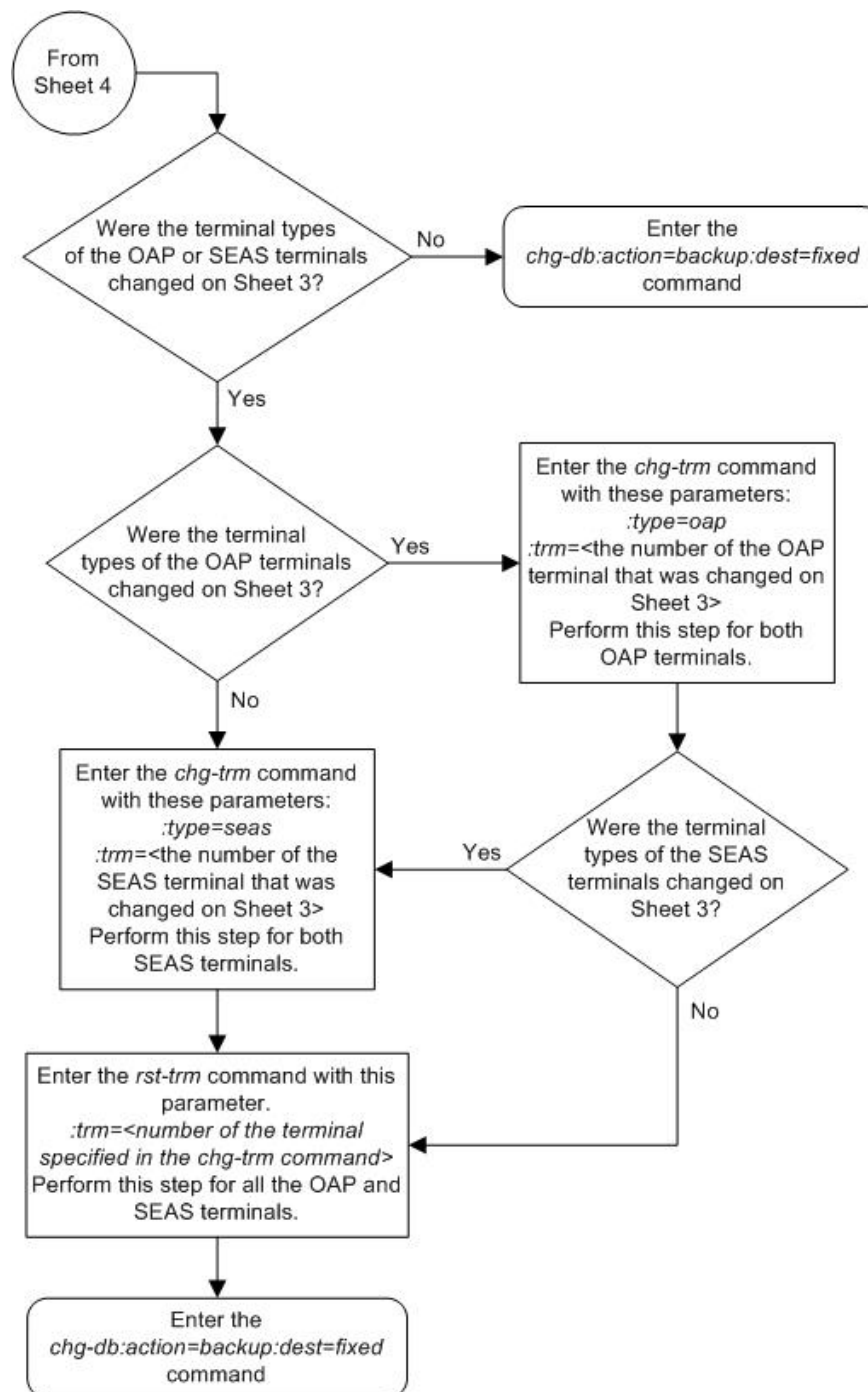
**Figure 34: Reloading the TDM LCA Clock Bitfile**











# Chapter 4

## System Administration Procedures

---

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Chapter 4, System Administration Procedures, describes the procedures used to administer the items shown in the [Introduction](#) on page 387.

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## Introduction

This chapter contains system administration procedures. The items discussed in this section are:

- The date and time
- User IDs and passwords
- Terminal configuration
- Shelves
- Cards
- Security Log
- Unauthorized Use Warning Message
- UIM Thresholds
- MCPMs, IP links, and FTP servers for the Measurements Platform
- IPSMs for the IP User Interface (Telnet) feature
- Configuring the Network Security Options
- Configuring the Restore Device State Option
- Configuring the Frame Power Alarm Threshold

The procedures shown in this chapter use a variety of commands. If more information on these commands is needed, go to the *Commands Manual* to find the required information.

## Setting the Clock and Date on the EAGLE 5 ISS

This procedure is used to set the EAGLE 5 ISS's clock and date.

1. To set the date, use the `set -date` command.

The date must be entered in the form YYMMDD (YY for the year, MM for the month, and DD for the day of the month). For example, to set the date to March 7, 2003, enter this command.

```
set-date:date=030307
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:33:19 GMT EAGLE5 36.0.0
Date set complete.
```

2. To set the clock, use the `set -time` command.

The time must be entered in the form HHMM (HH for the hour, and MM for the minutes). The hour is based on a 24-hour clock. The time zone can also be specified. If the time zone is not specified, then the EAGLE 5 ISS uses the time zone that was entered with the previous `set -time` command. The values for the time zone parameter are shown in [Table 10: Time Zones](#) on page 388. The entry in the Abbreviation column of [Table 10: Time Zones](#) on page 388 is the value to be specified for the time zone parameter.

**Table 10: Time Zones**

| Time Zone                    | Abbreviation | Offset from GMT (hours) |
|------------------------------|--------------|-------------------------|
| Greenwich Mean Time          | GMT          | 0                       |
| US Eastern Daylight Time     | EDT          | - 4                     |
| US Eastern Standard Time     | EST          | - 5                     |
| US Pacific Daylight Time     | PDT          | - 7                     |
| US Pacific Standard Time     | PST          | - 8                     |
| US Mountain Daylight Time    | MDT          | - 6                     |
| US Mountain Standard Time    | MST          | - 7                     |
| US Central Daylight Time     | CDT          | - 5                     |
| US Central Standard Time     | CST          | - 6                     |
| US Hawaiian Daylight Time    | HDT          | - 9                     |
| US Hawaiian Standard Time    | HST          | - 10                    |
| Atlantic Daylight Time       | ADT          | - 3                     |
| Atlantic Standard Time       | AST          | - 4                     |
| Western European Time        | WET          | 0                       |
| Universal Time Coordinated   | UTC          | 0                       |
| British Summer Time          | BST          | + 1                     |
| Western European Summer Time | WEST         | + 1                     |
| Central European Time        | CET          | + 1                     |
| Central European Summer Time | CEST         | + 2                     |
| Eastern European Time        | EET          | + 2                     |

| Time Zone                        | Abbreviation | Offset from GMT (hours) |
|----------------------------------|--------------|-------------------------|
| Eastern European Summer Time     | EEST         | + 3                     |
| French Summer Time               | FST          | + 2                     |
| French Winter Time               | FWT          | + 1                     |
| Brazil Standard Time             | BRA          | - 3                     |
| Middle European Time             | MET          | + 1                     |
| Middle European Summer Time      | MEST         | + 2                     |
| Moscow Time                      | MSK          | + 3                     |
| Moscow Summer Time               | MSD          | + 4                     |
| Australian Eastern Standard Time | AEST         | + 10                    |
| Australian Eastern Daylight Time | AEDT         | + 11                    |
| Australian Western Standard Time | AWST         | + 8                     |
| Australian Western Daylight Time | AWDT         | + 9                     |
| Australian Central Standard Time | ACST         | + 9.5                   |
| Australian Central Daylight Time | ACDT         | + 10.5                  |
| New Zealand Standard Time        | NZST         | + 12                    |
| New Zealand Daylight Time        | NZDT         | + 13                    |
| South African Standard Time      | SAST         | + 2                     |
| China Coast Time                 | CCT          | + 8                     |
| Republic of Korea                | ROK          | + 9                     |
| India Standard Time              | IST          | + 5.5                   |

| Time Zone                  | Abbreviation | Offset from GMT (hours) |
|----------------------------|--------------|-------------------------|
| India Daylight Time        | IDT          | + 6.5                   |
| Alaska Standard Time       | AKST         | -9                      |
| Alaska Daylight Time       | AKDT         | -8                      |
| Newfoundland Standard Time | NST          | -3.5                    |
| Newfoundland Daylight Time | NDT          | -2.5                    |

For example, to set the time to 14:20 (2:20 PM) in the Greenwich Mean time zone, enter this command.

```
set-time:time = 1420:tz=gmt
```

When this command has successfully completed, this message should appear.

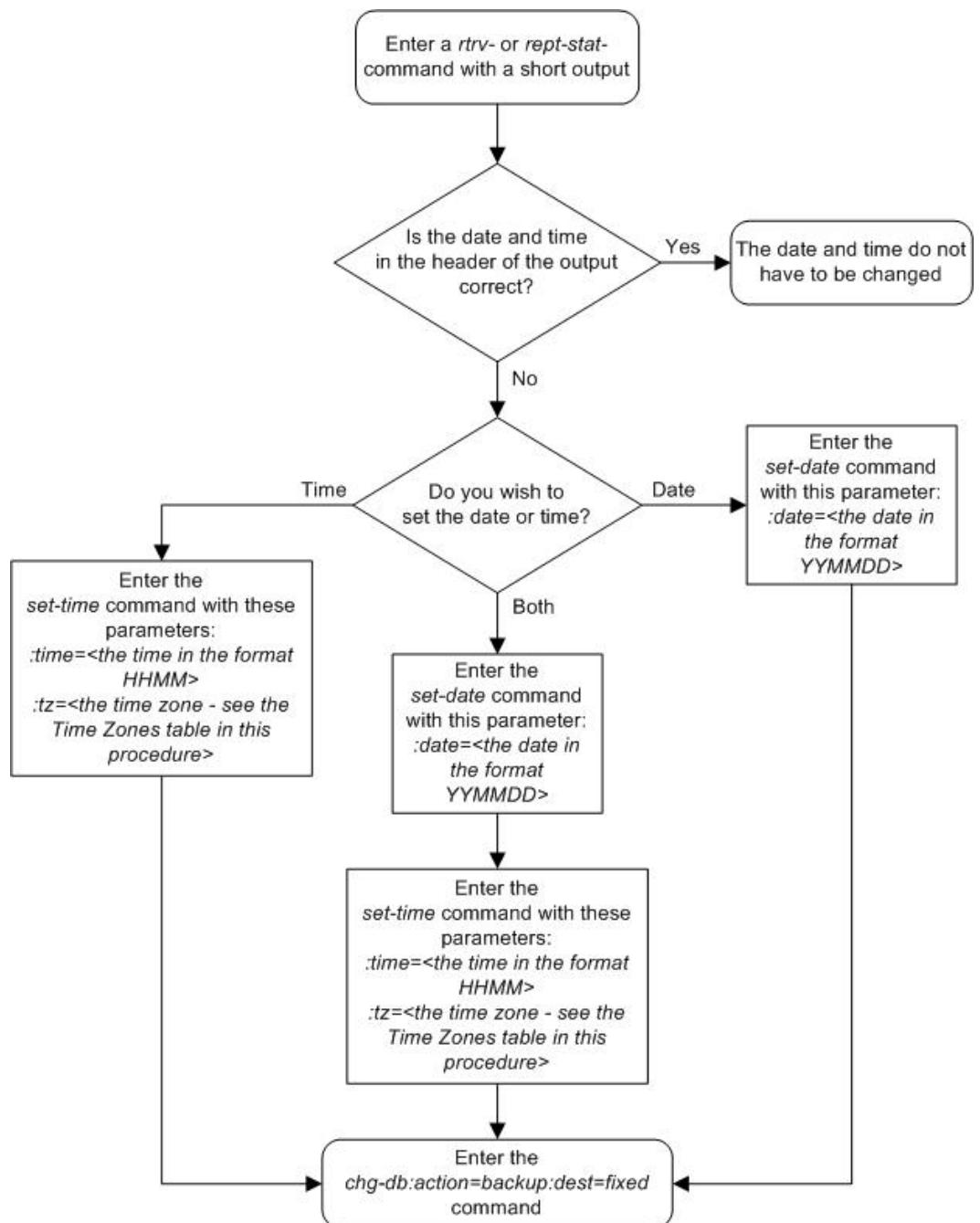
```
rlghncxa03w 06-10-01 14:20:00 GMT EAGLE5 36.0.0
Time set complete.
```

3. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 35: Setting the System Clock and Date**



## Changing the Security Defaults

This procedure is used to change the user ID and password requirements for the EAGLE 5 ISS using the `chg-secu-dflt` command. The `chg-secu-dflt` command uses these parameters.

:page – The amount of time, in days, that the specified user's password can be used before the user must change their password. The value of this parameter applies to all EAGLE 5 ISS user IDs unless a different value is specified for a specific user ID with the `ent-user` or `chg-user` command.

:uout – The number of consecutive days that a user ID can remain active in the EAGLE 5 ISS and not be used. When the user ID has not been used for the number of days specified by the `uout` parameter, that user ID is no longer valid and the EAGLE 5 ISS rejects any attempt to log into the EAGLE 5 ISS with that user ID. The value of this parameter applies to all user IDs in the EAGLE 5 ISS unless a different value is specified for a specific user ID with the `ent-user` or `chg-user` command.

:multlog – are the user IDs allowed to log on to more than one terminal at any given time.

:minlen – the minimum length of the password

:alpha – the minimum number of alpha characters (a - z)

:num – the minimum number of numeric characters (0 - 9)

:punc – the minimum number of punctuation characters (any printable character that is not an alphabetic character, a numeric character, the space bar)

The `chg-secu-dflt` command also contains the `wrnln`, `wrntx`, and `clwrntx` parameters. These parameters are used to configure the unauthorized use warning message that is displayed when a user logs into the EAGLE 5 ISS. To configure the unauthorized use warning message, go to the [Configuring the Unauthorized Use Warning Message](#) on page 394 procedure.

Even though the `minlen` parameter specifies the minimum length of a password, the password must also contain the minimum number characters defined by the `alpha`, `num`, and `punc` parameters.

The examples in this procedure are used to change the security defaults to these values.

page = 100 days

uout = 50 days

multlog = yes, to allow the user IDs in the EAGLE 5 ISS to log onto more than one terminal at any given time.

minlen = 12 characters

alpha = 2 characters

num = 2 characters

punc = 2 characters

**Note:**

When the EAGLE 5 ISS is delivered to the user, the database will contain these security default values.

:page = 90 days

:uout = 90 days

:multlog = no

:minlen = 8 characters

:alpha = 1 character

:num = 1 character

:punc = 1 character

The `rtrv-secu-dflt` command uses the `msg` parameter to specify whether the unauthorized use warning message text is displayed in the command output. The `msg` parameter has two values.

`yes` – the unauthorized use warning message text is displayed.

`no` – the unauthorized use warning message text is not displayed.

The default value for this parameter is `no`.

Regardless of the value specified for the `msg` parameter, the user ID and password security defaults are displayed in the `rtrv-secu-dflt` command output.

1. Display the current security defaults by entering the `rtrv-secu-dflt` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
SECURITY DEFAULTS

PAGE 60
UOUT 90
MULTLOG NO
MINLEN 8
ALPHA 1
NUM 1
PUNC 1
```

2. Change the current security defaults by entering the `chg-secu-dflt` command.

For this example, enter this command.

```
chg-secu-dflt:page=100:uout=50:multlog=yes:minlen=12:alpha=2
:num=2:punc=2
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
CHG-SECU-DFLT: MASP A - COMPLTD
```

3. Verify the changes with the `rtrv-secu-dflt` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
SECURITY DEFAULTS

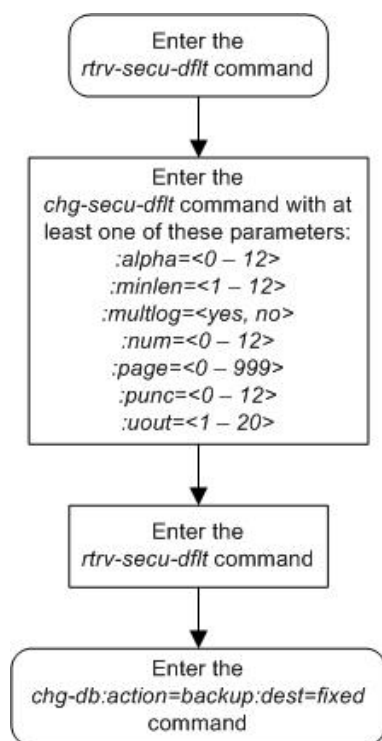
PAGE 100
UOUT 50
MULTLOG YES
MINLEN 12
ALPHA 2
NUM 2
PUNC 2
```

4. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 36: Changing the System's Security Defaults**



## Configuring the Unauthorized Use Warning Message

This procedure is used to configure the unauthorized use warning message that is displayed after a user successfully logs into the EAGLE 5 ISS.

These parameters are used in this procedure.

**:wrn ln** – the line number of the text of the unauthorized use warning message. The unauthorized use warning message can contain from 1 to 20 lines of text.

**:wrntx** – the text of the line number of the unauthorized use warning message. The each line of text can contain up to 70 alphanumeric characters and must be enclosed in quotes (" "). A blank line is specified with this text string, " ", the blank space character enclosed in double quotes.

**:clwrntx** – This parameter specifies whether or not the text of the warning message is removed and will not be displayed. This parameter has three values.

- **no** - the text of a specific line in the warning message is not removed.



- **yes** - the text of a specific line in the warning message is removed and will not be displayed.
- **all** - the text in all the lines of the warning message are removed and no warning message will be displayed.

The `clrwrtx=yes` parameter can be specified only with the `wrnln` parameter.

`chg-secu-dflt` command also contains these parameters: `page`, `uout`, `multlog`, `minlen`, `alpha`, `num`, and `punc`. These parameters are used to change the user ID and password security defaults on the EAGLE 5 ISS. To change the user ID and password security defaults, go to the [Changing the Security Defaults](#) on page 391 procedure.

**Note:** When the EAGLE 5 ISS is delivered to the user, the database will contain this login warning message.

NOTICE: This is a private computer system.  
Unauthorized access or use may lead to prosecution.

The example in this procedure is used to change the unauthorized use warning message from the system default message to this message.

```

* NOTICE: This is a private computer system. *
* UNAUTHORIZED ACCESS OR USE WILL BE PROSECUTED *
* *
* *
* 03/17/08 Notice!!! System will be upgraded between *
* the hours of 2am-3am on 04/01/08 *
* *
* *

```

The `rtrv-secu-dflt` command uses the `msg` parameter to specify whether the unauthorized use warning message text is displayed in the command output. The `msg` parameter has two values.

**yes** – the unauthorized use warning message text is displayed.

**no** – the unauthorized use warning message text is not displayed.

The default value for this parameter is **no**.

Regardless of the value specified for the `msg` parameter, the user ID and password security defaults are displayed in the `rtrv-secu-dflt` command output.

1. Display the current text of the unauthorized use warning message by entering the `rtrv-secu-dflt` command with the `msg=yes` parameter.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
SECURITY DEFAULTS

PAGE 60
UOUT 90
MULTLOG NO
MINLEN 8
ALPHA 1
NUM 1
PUNC 1
WARNING MESSAGE

1:"NOTICE: This is a private computer system."
2:"Unauthorized access or use may lead to prosecution."
3:" "
```

```

4: ""
5: ""
6: ""
7: ""
8: ""
9: ""
10: ""
11: ""
12: ""
13: ""
14: ""
15: ""
16: ""
17: ""
18: ""
19: ""
20: ""

```

2. Change the unauthorized use warning message by entering the `chg-secu-dflt` command with the `wrnln`, `wrntx`, and `clrwrntx` parameters.

For this example, to configure a new warning message, enter these commands.

```

chg-secu-dflt:wrnln=1:wrntx="*****"
chg-secu-dflt:wrnln=2:wrntx="* NOTICE: This is a private computer
system. *"
chg-secu-dflt:wrnln=3:wrntx="* UNAUTHORIZED ACCESS OR USE WILL BE
PROSECUTED *"
chg-secu-dflt:wrnln=4:wrntx="*.....*"
chg-secu-dflt:wrnln=5:wrntx=".....*"
chg-secu-dflt:wrnln=6:wrntx="* 03/17/08 Notice!!! System will be
upgraded between*"
chg-secu-dflt:wrnln=7:wrntx="* the hours of 2am-3am on 04/01/08 *"
chg-secu-dflt:wrnln=8:wrntx="*.....*"
chg-secu-dflt:wrnln=9:wrntx="*.....*"
chg-secu-dflt:wrnln=10:wrntx="*****"
chg-secu-dflt:wrnln=11:wrntx=" "
chg-secu-dflt:wrnln=12:clrwrntx=yes
chg-secu-dflt:wrnln=13:clrwrntx=yes
chg-secu-dflt:wrnln=14:clrwrntx=yes
chg-secu-dflt:wrnln=15:clrwrntx=yes
chg-secu-dflt:wrnln=16:clrwrntx=yes
chg-secu-dflt:wrnln=17:clrwrntx=yes
chg-secu-dflt:wrnln=18:clrwrntx=yes
chg-secu-dflt:wrnln=19:clrwrntx=yes
chg-secu-dflt:wrnln=20:clrwrntx=yes

```

If you wish to remove the current warning message, enter this command.

```
chg-secu-dflt:clrwrntx=all
```

If you wish to configure a new warning message after removing the current warning message, repeat this step with the `wrnln`, `wrntx`, and `clrwrntx=yes` parameters as needed.

When each of these commands has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
CHG-SECU-DFLT: MASP A - COMPLTD
```

3. Verify the changes with the `rtrv-secu-dflt:msg=yes` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
SECURITY DEFAULTS

PAGE 60
UOUT 90
MULTLOG NO
MINLEN 8
ALPHA 1
NUM 1
PUNC 1
WARNING MESSAGE

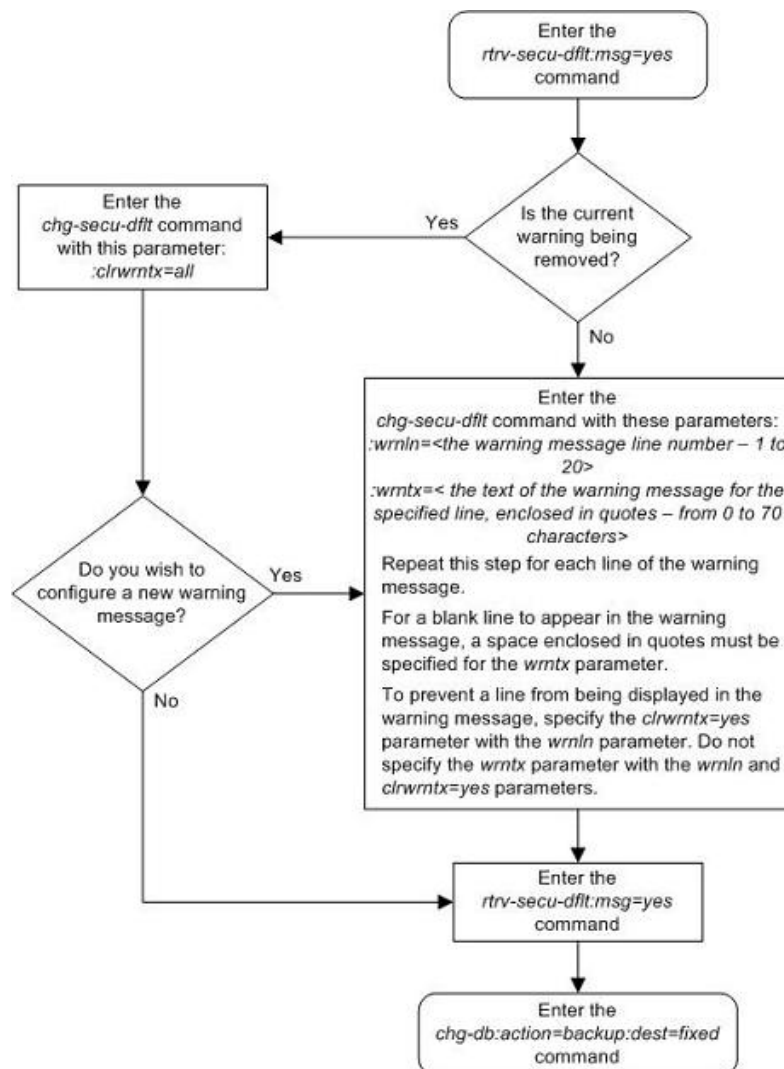
1:"*****"
2:"* NOTICE: This is a private computer system. *"
3:"* UNAUTHORIZED ACCESS OR USE WILL BE PROSECUTED *"
4:"*"
5:"*"
6:"* 03/17/08 Notice!!! System will be upgraded between *"
7:"* the hours of 2am-3am on 04/01/08 *"
8:"*"
9:"*"
10:"*****"
11:" "
12:""
13:""
14:""
15:""
16:""
17:""
18:""
19:""
20:""
```

4. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 37: Configuring the Unauthorized Use Warning Message**



## Changing the Security Log Characteristics

This procedure is used to change the characteristics of the EAGLE 5 ISS's security log using the `chg-attr-seclog` command. The `chg-attr-seclog` command uses these parameters.

`:upldalm` – whether the security log alarms are on. The security log alarms are:

- upload required – the percentage of the maximum capacity of the security log exceeds the value of the `ups lg` parameter. The security log entries need to be copied to the file transfer area of the fixed disk.
- log overflowed – the security log has become 100% full and log entries are being lost. The security log entries must be copied to the file transfer area of the fixed disk.
- standby log contains >0 un-uploaded entries – the security log on the standby fixed disk contains entries that have not been copied to the file transfer area of the fixed disk. Usually, the security

log on the standby fixed disk contains no entries, but for some reason, for example, a MASP switchover resulting in the active MASP security log becoming the standby MASP security log, the security log on the standby fixed disk contains uncopied security log entries.

The `upldalm=yes` parameter turns the security log alarms on. The `upldalm=no` turns the security log alarms off. If a security log alarm has been generated, the `upldalm=no` parameter lowers the alarm.

:`upslg` – the threshold at which the EAGLE 5 ISS generates the upload required security log alarm, if the `upldalm=yes` parameter has been specified. The threshold is the percentage of the maximum capacity of the security log.

When the EAGLE 5 ISS is delivered to the user, the security log characteristics will be set to these values:

:`upldalm` = yes

:`upslg` = 90

1. Display the current characteristics of the security log by entering the `rtrv-attr-secu log` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
Security log attributes

UPLDALM no
UPSLG 80
```

2. Change the characteristics of the security log by entering the `chg-attr-secu log` command.

For this example, enter this command.

`chg-attr-secu log:upldalm=yes:upslg=90`

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
CHG-ATTR-SECULOG: MASP A - COMPLTD
```

3. Verify the changes with the `rtrv-attr-secu log` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
Security log attributes

UPLDALM yes
UPSLG 90
```

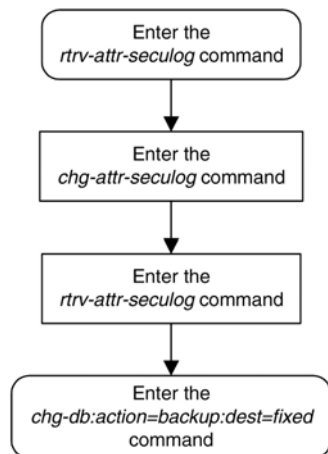
4. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
```

BACKUP (FIXED) : MASP A - Backup starts on standby MASP.  
 BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.

Figure 38: Changing the Security Log Characteristics



## Copying the Security Log to the File Transfer Area

This procedure is used to copy the EAGLE 5 ISS's security log to the file transfer area of the fixed disk using the `copy - secu log` command. The `copy - secu log` command uses these parameters.

**:dfile** – the name of the file created in the file transfer area containing the security log entries copied with the `copy - secu log` command.

The filename can contain from 1 to 32 characters. If the filename contains special characters such as blank spaces, colons, dashes, periods, ampersands (&), etc. (for example, `eagle123.doc`), the filename must be enclosed in double quotes. For example, `:dfile="eagle123.doc"`.

If a filename is not specified, the EAGLE 5 ISS specifies its own filename with this format, `yymmddx.log`, where `yymmdd` are the current year/month/day that the security log file was created, and `x` is either `a` if the security log on the active fixed disk is copied (`slog=act`) or `s` if the security log on the standby fixed disk is copied (`slog=stb`).

**:slog** – the security log that is copied to the file transfer area, the security log on the active fixed disk (`slog=act`) or the standby fixed disk (`slog=stb`). The default value for this parameter is `act`.

**:dloc** – the file transfer area that is receiving the copy of the security log, the file transfer area on the active fixed disk (`dloc=act`) or the file transfer area on the standby fixed disk (`dloc=stb`). The default value for this parameter is `act`.

If a filename is not specified, the EAGLE 5 ISS specifies its own filename with this format, `yymmddx.log`, where `yymmdd` are the current year/month/day that the security log file was created, and `x` is either `a` for the copy of the security log on the active fixed disk or `s` for the copy of the security log on the standby fixed disk.

The `copy - secu log` command can be specified with no parameters. If the `copy - secu log` command is specified with no parameters, the security log on the active fixed disk is copied to

the file transfer area on the active fixed disk and is given a default name. The default name is in this format, `yymmddda.log`, where `yymmdd` are the current year/month/day that the security log file was created, and `a` for the copy of the security log on the active fixed disk.

1. Verify the card that is card location 1113 by entering this command.

```
rept-stat-card:loc=1113
```

This is an example of the possible output.

```
rlghncxa03w 09-03-28 21:15:37 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1113 132-013-000 E5MCAP OAMHC IS-NR Active -----
 ALARM STATUS = No Alarms.
 BLMCAP GPL version = 132-005-000
 IMT BUS A = Conn
 IMT BUS B = Conn
 CURRENT TEMPERATURE = 30C (86F)
 PEAK TEMPERATURE: = 33C (92F) [02-01-05 07:18]
```

Command Completed.

2. Verify the card that is in card location 1115 by entering this command.

```
rept-stat-card:loc=1115
```

This is an example of the possible output.

```
rlghncxa03w 09-03-28 21:15:37 GMT EAGLE5 40.1.0
CARD VERSION TYPE GPL PST SST AST
1113 132-013-000 E5MCAP OAMHC IS-NR Active -----
 ALARM STATUS = No Alarms.
 BLMCAP GPL version = 132-005-000
 IMT BUS A = Conn
 IMT BUS B = Conn
 CURRENT TEMPERATURE = 30C (86F)
 PEAK TEMPERATURE: = 33C (92F) [02-01-05 07:18]
```

Command Completed.

If the outputs in [Step 1](#) on page 401 and this step show a GPSM-II card in one card location (for example, card location 1113) and an E5-MCAP card in the other card location (for example, card location 1115), this procedure cannot be performed. Both card locations must contain the same type of card. If a GPSM-II card is in one card location and an E5-MCAP card is in the other card location, contact the Customer Care Center to correct the EAGLE 5 ISS configuration before continuing this procedure. Refer to [Customer Care Center](#) on page 4 for the contact information. After the EAGLE 5 ISS configuration has been corrected, continue the procedure with [Step 3](#) on page 401.

If both card locations contain the same type of card, continue the procedure with [Step 3](#) on page 401.

3. Display the current characteristics of the security log by entering the `rept-stat-secu log` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-04 16:02:05 GMT EAGLE5 40.1.0
-- SINCE LAST UPLOAD -- OLDEST NEWEST LAST
LOC ROLE ENTRIES %FULL OFLO FAIL RECORD RECORD UPLOAD
1114 Active 8312 84 No No 09-01-25 09-03-04 09-02-15
```

```

 08:25:21 09:02:44 02:47:17
1116 Standby 693 7 No No 09-01-25 09-03-04 09-02-15
 08:25:21 09:02:44 02:47:17

```

4. Copy the security log to the file transfer area by entering the `copy-secu log` command.

For this example, copy the security log on the active fixed disk to the file transfer area on the fixed disk. Enter this command.

```
copy-secu log: dfile=security1.log: slog=act: dloc=act
```

When this command has successfully completed, this message should appear.

```

rlghncxa03w 09-03-04 16:02:37 GMT EAGLE5 40.1.0
Security log on TDM 1114 copied to file security1.log on TDM 1114

```

5. Verify the changes with the `rept-stat-secu log` command.

This is an example of the possible output.

```

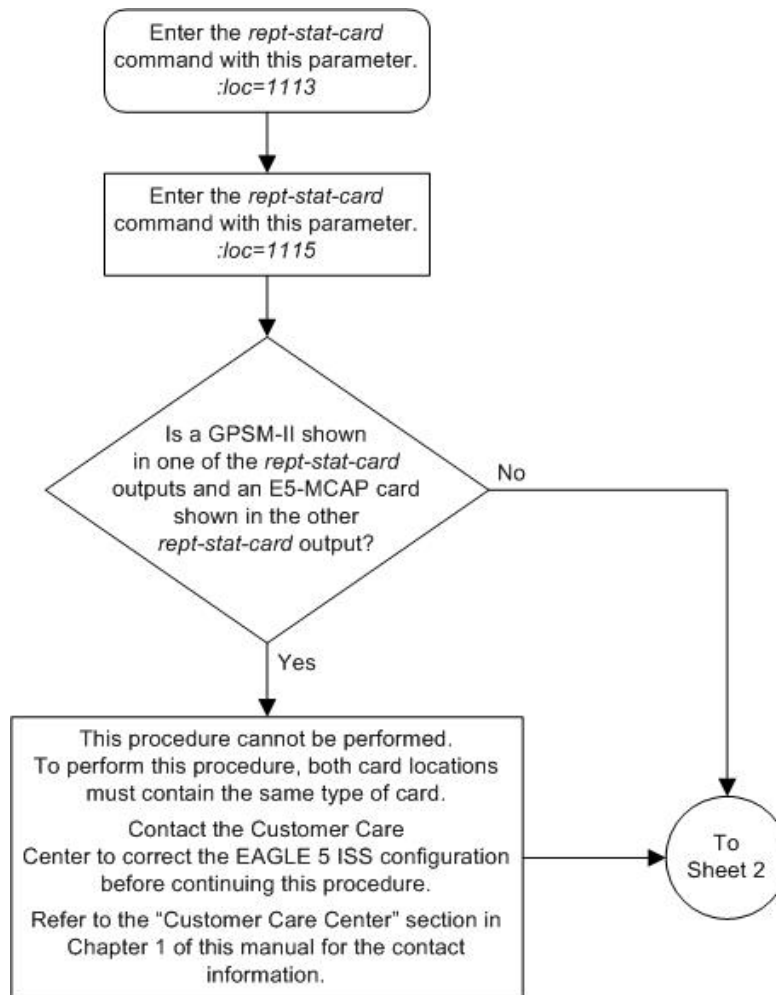
rlghncxa03w 09-03-04 16:04:43 GMT EAGLE5 40.1.0
-- SINCE LAST UPLOAD -- OLDEST NEWEST LAST
LOC ROLE ENTRIES %FULL OFLO FAIL RECORD RECORD UPLOAD
1114 Active 1 1 No No 09-03-04 09-03-04 09-03-04
 09:02:44 09:02:44 16:02:37

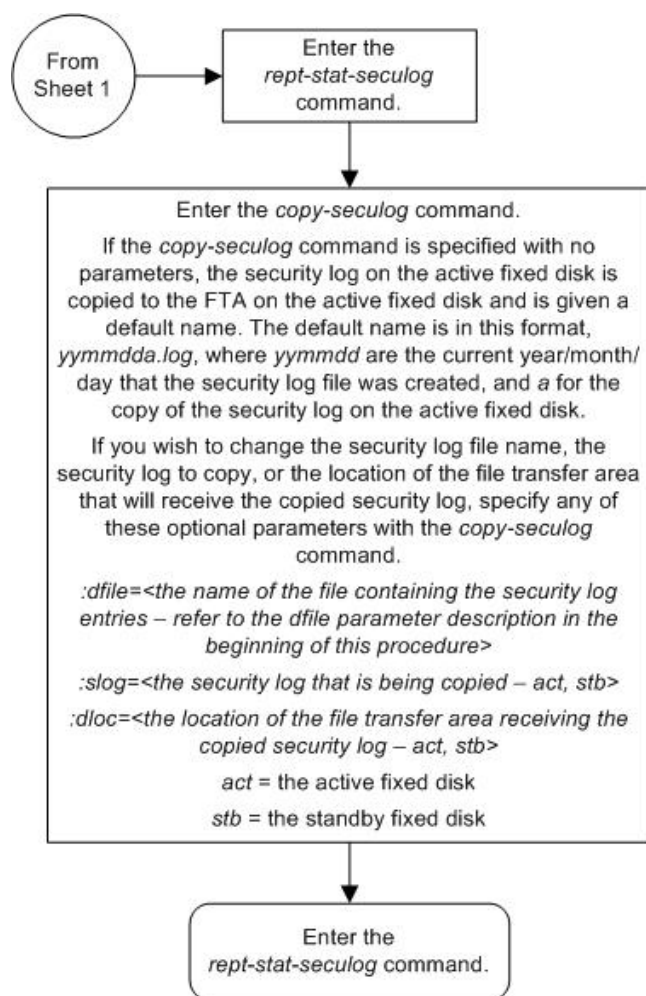
1116 Standby 0 0 No No 09-01-25 09-03-04 09-02-15
 08:25:21 09:02:44 02:47:17

```

**Figure 39: Copying the Security Log to the File Transfer Area**







## Adding a User to the System

This procedure is used to add a user to the EAGLE 5 ISS using the *ent -user* command. This procedure can only be performed if you have been assigned the command class "Security Administration." If the user ID does not exist in the database, the user's characteristics cannot be changed.

**Note:** This procedure can be performed on all terminals (1 - 40) if the Eagle OA&M IP Security Enhancements feature is on. If this feature is on, the entry YES is shown for terminals 17 through 40 in the SECURE column in the *rtrv -trm* output. The output of the *rtrv -ctrl -feat* command also shows if this feature is on or off. If this feature is off, this procedure can be performed only on terminals 1 through 16. If you wish to use the Eagle OA&M IP Security Enhancements feature, and the feature is not on, perform [Activating the Eagle OA&M IP Security Enhancement Controlled Feature](#) on page 614 to enable and turn on this feature.

The *ent -user* command uses these parameters.

*:uid* – The user ID to be added to the database

:all – The user has access to all commands in all non-configurable command classes (dbg, link, sys, sa, pu, db).

:dbg – The user has access to all commands in the command class “Debug.”

:link – The user has access to all commands in the command class “Link Maintenance.”

:sys – The user has access to all commands in the command class “System Maintenance.”

:sa – The user has access to all commands in the command class “Security Administration.”

:pu – The user has access to all commands in the command class “Program Update.”

:db – The user has access to all commands in the command class “Database Administration.”

:cc1 - :cc8 – Eight configurable command classes. These parameters specified whether or not the user has access to the commands in the specified configurable command class. The value of these parameters consist of the configurable command class name (1 alphabetic character followed by 2 alphanumeric characters), and either yes or no. The command class name and the yes or no values are separated by a dash. For example, to assign a user the permission to use the commands in configurable command class db1, the cc1=db1-yes parameter would be specified.

To specify any configurable command classes, the Command Class Management feature must be enabled and turned on. Enter the `rtrv-ctrl-feat` command to verify whether or not the Command Class Management feature is enabled. If the Command Class Management feature is not enabled or turned on, perform [Activating Controlled Features](#) on page 606 to enable and turn on the Command Class Management feature. Up to 32 configurable command classes can be assigned to users. When the Command Class Management feature is enabled and turned on, the configurable command class names are given the names u01 - u32. These command class names, the descriptions of these command classes, and the commands assigned to these command classes can be changed using [Configuring Command Classes](#) on page 459.

The `ent-user` command allows up to eight configurable command classes to be assigned to the user. Perform [Changing User Information](#) on page 415 to assign the other 24 configurable command classes to the user, if desired.

:page – The amount of time, in days, that the specified user’s password can be used before the user must change their password.

If the `page` parameter is not specified with the `ent-user` command, the EAGLE 5 ISS uses the value configured for the `page` parameter specified by the `chg-secu-dflt` command to determine the age of the user’s password.

:uout – The number of consecutive days that a user ID can remain active in the EAGLE 5 ISS and not be used. When the user ID has not been used for the number of days specified by the `uout` parameter, that user ID is no longer valid and the EAGLE 5 ISS rejects any attempt to log into the EAGLE 5 ISS with that user ID.

If the `uout` parameter is not specified with the `ent-user` command, the EAGLE 5 ISS uses the value configured for the `uout` parameter specified by the `chg-secu-dflt` command to determine the number of consecutive days that a user ID can remain active on the EAGLE 5 ISS and not be used

:revoke – Is the specified user ID in service? Any login attempts using a revoked user ID are rejected by the EAGLE 5 ISS. The `revoke=yes` parameter cannot be specified for a user ID assigned to the security administration command class.

The words `seas` or `none` cannot be used for user IDs to prevent any conflict with the use of these words in the UID field of the security log. The word `none` in the UID field of the security log refers

to any command that was logged that had no user ID associated with it. The word **seas** refers to any command logged in the security log that entered the EAGLE 5 ISS on either the OAP terminals or SEAS terminals.

This example shows an **rtrv-secu-user** command output when the Command Class Management feature is enabled and turned on. If the Command Class Management feature is not enabled and turned on, the 32 configurable command classes, shown in the following example as fields **U01 - U32**, are not shown in the **rtrv-secu-user** command output.

An asterisk (\*) displayed after the value in the **PAGE** or **UOUT** fields indicates that the system-wide default **page** or **uout** parameter values, as configured on the **chg-secu-dflt** command, is in effect for the user ID.

```
rlghncxa03w 09-03-01 08:33:48 GMT EAGLE5 40.1.0

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
frodo 750 0 0 NO YES YES YES YES YES YES
 U01 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES NO
 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 YES YES YES YES YES YES YES YES YES YES YES NO NO NO NO YES

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
manny 36 60 60 NO YES YES YES YES YES YES
 U01 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 NO NO NO NO YES YES YES YES YES YES YES YES YES YES YES YES
 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 YES YES YES YES YES YES YES YES YES YES YES NO NO NO NO YES

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
moe 100 30 60 YES YES YES YES YES YES YES
 U01 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES NO
 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 YES YES YES YES YES YES YES YES YES YES YES YES YES NO NO NO

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
jack 10 30 * 30 * NO YES YES YES YES YES YES
 U01 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES
 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 YES YES YES YES YES YES NO NO NO YES YES YES YES YES YES NO
```

### Canceling the **RTRV-SECU-USER** Command

Because the **rtrv-secu-user** command used in this procedure can output information for a long period of time, the **rtrv-secu-user** command can be canceled and the output to the terminal stopped. There are three ways that the **rtrv-secu-user** command can be canceled.

- Press the F9 function key on the keyboard at the terminal where the **rtrv-secu-user** command was entered.
- Enter the **canc-cmd** without the **trm** parameter at the terminal where the **rtrv-secu-user** command was entered.

- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rtrv-secu-user` command was entered, from another terminal other than the terminal where the `rtrv-secu-user` command was entered. To enter the `canc-cmd:trm=<xx>` command, the terminal must allow Security Administration commands to be entered from it and the user must be allowed to enter Security Administration commands. The terminal's permissions can be verified with the `rtrv-secu-trm` command. The user's permissions can be verified with the `rtrv-user` or `rtrv-secu-user` commands.

For more information about the `canc-cmd` command, go to the *Commands Manual*.

1. Verify whether or not the user ID you wish to add to the database is in the database by entering the `rtrv-secu-user` command and specifying the desired user ID with the `uid` parameter.

For this example, enter this command.

```
rtrv-secu-user:uid=frodo
```

If the user ID being added to the database is displayed in the `rtrv-secu-user` output, the user ID cannot be used in this procedure. The attributes of the user ID shown in the `rtrv-secu-user` output can be changed in the [Changing User Information](#) on page 415.

If the user ID being added to the database is not in the database, the error message E2199 is displayed.

```
E2199 Cmd Rej: The specified user identification is not defined
```

Continue the procedure by performing one of these steps.

- If the CC1 through CC8 parameters are not being specified in this procedure, continue the procedure with [Step 4](#) on page 408.
  - If the CC1 through CC8 parameters will be specified in this procedure, continue the procedure by performing one of these steps.
    - If configurable command classes are shown in the `rtrv-secu-user` output, continue the procedure with [Step 3](#) on page 408.
    - If configurable command classes are not shown in the `rtrv-secu-user` output, continue the procedure with [Step 2](#) on page 407.
2. Verify that the Command Class Management feature is enabled and turned on, by entering the `rtrv-ctrl-feat` command with the `partnum=893005801` parameter.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
Feature Name Partnum Status Quantity
Command Class Management 893005801 off ----
```

**Note:** The `rtrv-ctrl-feat` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-ctrl-feat` command, see the `rtrv-ctrl-feat` command description in the *Commands Manual*.

If the Command Class Management feature is enabled and turned on (`status = on`), continue the procedure with [Step 3](#) on page 408.

If the Command Class Management feature is not enabled or turned on, perform [Activating Controlled Features](#) on page 606 to enable and turn on the Command Class Management feature.



**CAUTION:** If the Command Class Management feature is temporarily enabled, the configurable command classes can be assigned and used only for the amount of time shown in the `Trial Period Left` column in the `rtrv-ctrl-feat` output.

3. Display the descriptions of the configurable command classes in the database by entering the `rtrv-cmd` command.

This is an example of the possible output.

If the desired configurable command class descriptions are not in the database, perform [Configuring Command Classes](#) on page 459 to configure the desired command classes.

4. After you enter the `ent-user` command, you will be prompted for a password for the user that is being added.

The password must meet the requirements defined by the `chg-secu-dflt` command. Once you enter the `ent-user` command, you will not be able to enter any other commands until the user ID and password combination has been accepted by the EAGLE 5 ISS. The password requirements must be verified before the `ent-user` command is executed. Display the password requirements by entering the `rtrv-secu-dflt` command. This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
SECURITY DEFAULTS

PAGE 60
UOUT 90
MULTLOG NO
MINLEN 8
ALPHA 1
NUM 1
PUNC 1
```

The password can contain from one to twelve characters. For this example, the password must contain at least eight characters, no more than twelve, with at least one alpha character (a-z), at least one numeric character (0-9), and at least one punctuation character (any printable character that is not an alphabetic character, a numeric character, the space bar). The password requirements are shown in these fields in the `rtrv-secu-dflt` command output.

- MINLEN – the minimum length of the password
- ALPHA – the minimum number of alpha characters
- NUM – the minimum number of numeric characters
- PUNC – the minimum number of punctuation characters

The password is not case sensitive. For security reasons, the password is never displayed on the terminal.

5. Add the new user ID to the database using the `ent-user` command.

The user ID must contain 1 alpha character and up to 15 alphanumeric characters. The first character of a user ID must be an alpha character. Even though a period is not an alphanumeric character, one of the 15 alphanumeric characters can be a period.

The other parameters assign command class permissions to the user ID. If `yes` is entered for any of these parameters, the user will have access to that class of commands. If `no` is entered, the user will not have access to that class of commands. These parameters are optional and if

not specified, the user is not assigned to that command class. The user is assigned to the Basic command class whether any of these other parameters are specified. Refer to the *Commands Manual* for a list of commands permitted with each command class. For this example, the user ID frodo is being added with access to these command classes: link maintenance, system maintenance, database administration, and debug.

The frodo user ID will use the values for the page and uout parameters configured with the chg-secu-dflt command. For this example, enter this command.

```
ent-user:uid=frodo:link=yes:sys=yes:db=yes:dbg=yes:cc1=db1=yes
```

This message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
ENT-USER: MASP A - COMPLTD
```

6. You are prompted for a password for the user that is being added.  
Enter the new password. Make sure that the password meets the password requirements displayed in the output of the rtrv-secu-dflt command, executed in [Step 4](#) on page 408.
7. At the prompt `verify password`, re-enter the password that was entered in [Step 6](#) on page 409 again.
8. When the command executed message appears, the execution of the command has been completed, and the user ID and password has been added to the database.
9. Verify the changes using the `rtrv-secu-user` command with the user ID specified in [Step 5](#) on page 408.

For this example, enter this command.

```
rtrv-secu-user:uid=frodo
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 08:33:48 GMT EAGLE5 40.1.0
```

| USER ID | AGE | PAGE | UOUT | REV | LINK | SA | SYS | PU | DB  | DBG |
|---------|-----|------|------|-----|------|----|-----|----|-----|-----|
| frodo   | 0   | 60   | *    | 90  | *    | NO | YES | NO | YES | YES |

| DB1 | U02 | U03 | U04 | U05 | U06 | U07 | U08 | U09 | U10 | U11 | U12 | U13 | U14 | U15 | U16 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| YES | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  |

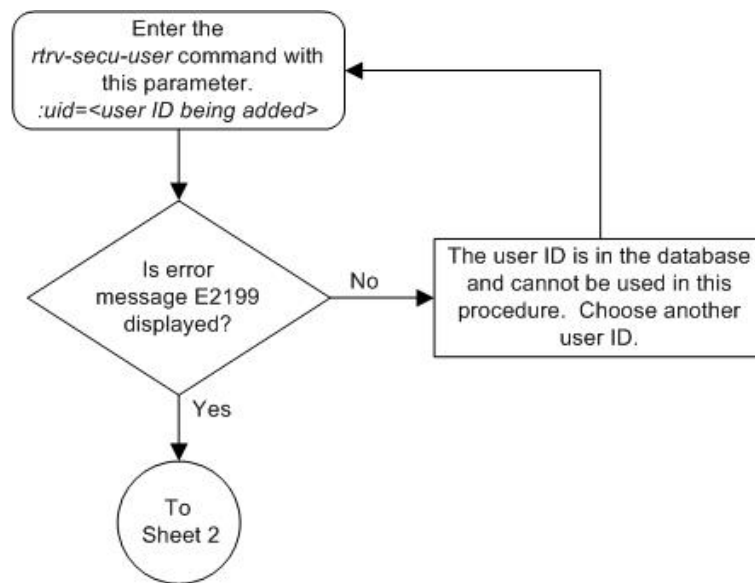
| U17 | U18 | U19 | U20 | U21 | U22 | U23 | U24 | U25 | U26 | U27 | U28 | U29 | U30 | U31 | U32 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  | NO  |

10. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

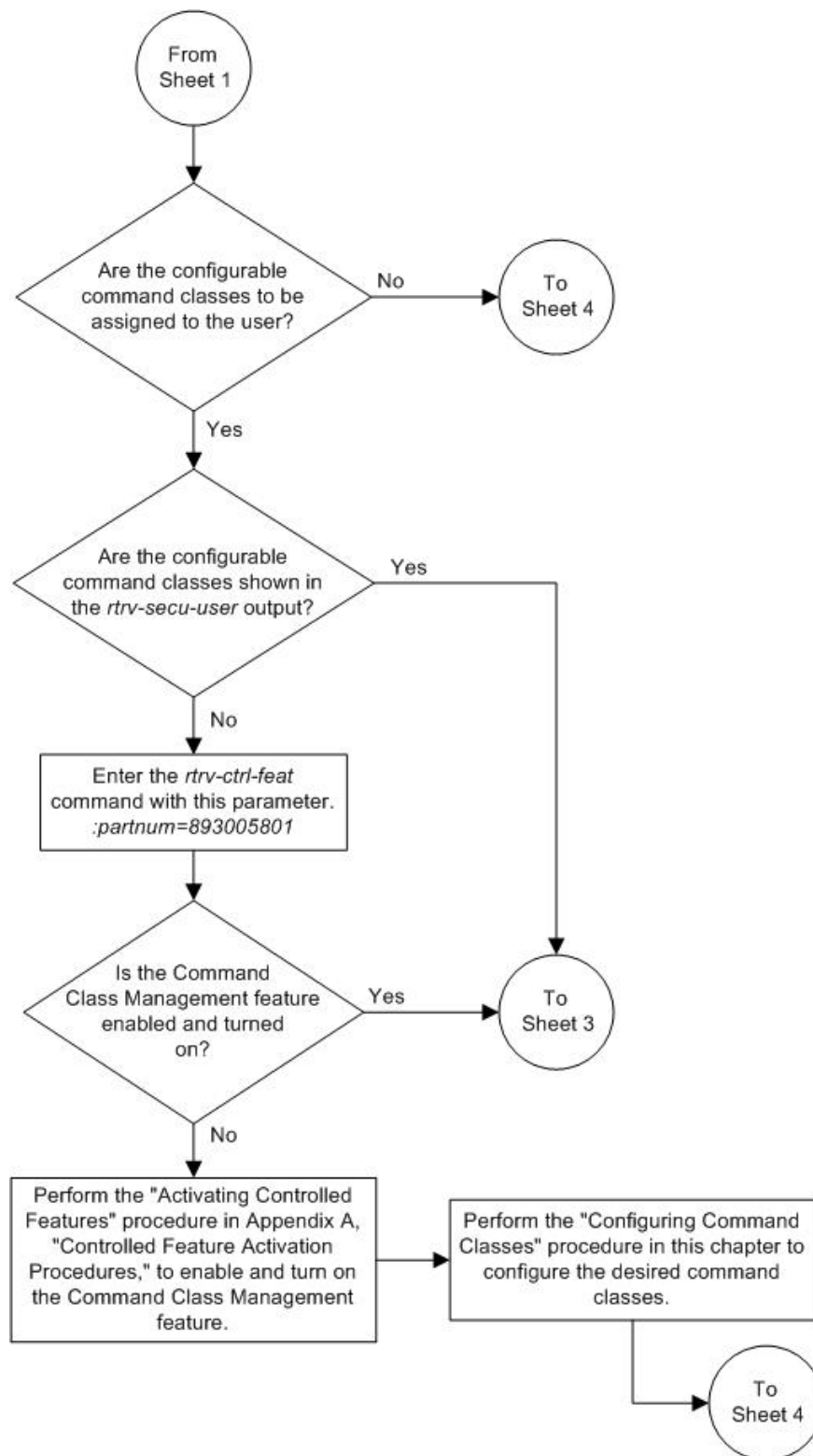
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

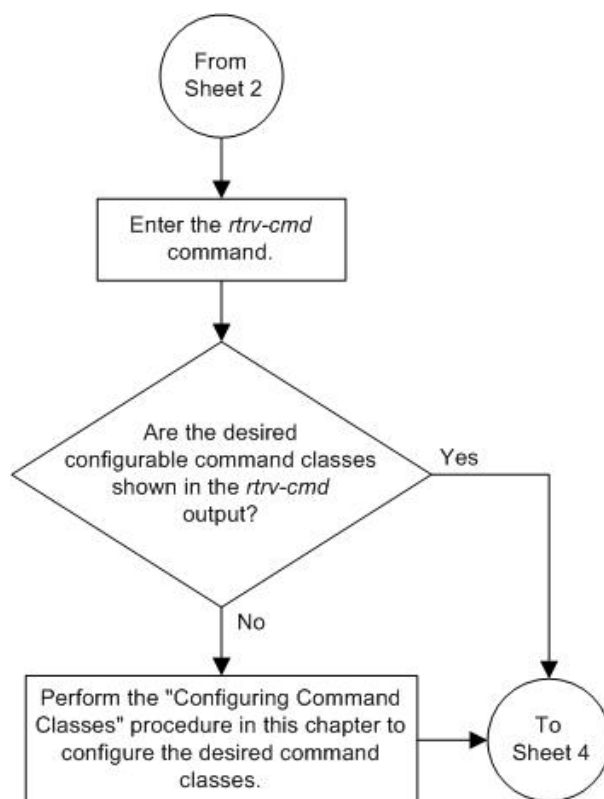
**Figure 40: Adding a User to the System**

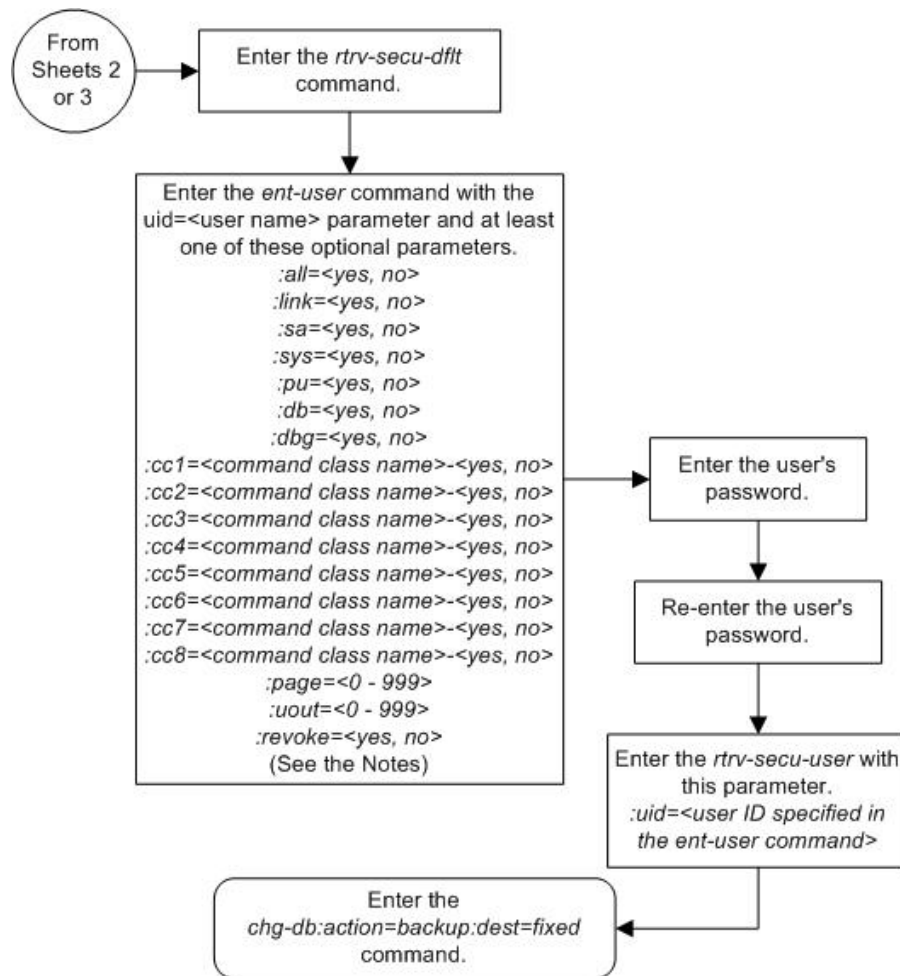


Note: This procedure can be performed on all terminals (1 - 40) if the Eagle OA&M IP Security Enhancements feature is on. If this feature is on, the entry YES is shown for terminals 17 through 40 in the SECURE column in the *rtrv-trm* output. The output of the *rtrv-ctrl-feat* command also shows if this feature is on or off. If this feature is off, this procedure can be performed only on terminals 1 through 16. If you wish to use the Eagle OA&M IP Security Enhancements feature, and the feature is not on, perform the "Activating the Eagle OA&M IP Security Enhancement Controlled Feature" procedure in Appendix A to enable and turn on this feature.









Notes:

1. The *revoke=yes* parameter cannot be specified with the *sa* parameter value is *yes*.
2. To specify the *cc1* through *cc8* parameters, the Command Class Management feature must be enabled and turned on.
3. The user can have a maximum of 32 configurable command classes assigned. The *ent-user* command can assign up to 8 configurable command classes. Perform the "Changing User Information" procedure in this chapter to assign the other 24 configurable command classes to the user.
4. The *all* parameter specifies whether or not all non-configurable command classes (*link*, *sa*, *sys*, *pu*, *db*, *dbg*) can be used by the user.
5. If the *all* parameter and individual non-configurable command classes are specified with the *ent-user* command, the value of the specified individual non-configurable command classes overrides the value of the *all* parameter.

## Removing a User from the System

This procedure is used to remove a user from the EAGLE 5 ISS using the `dlt-user` command. This procedure can only be performed if you have been assigned the command class "Security Administration." If the user ID does not exist in the database, the user's characteristics cannot be changed.

1. Display the user IDs in the database using the `rtrv-secu-user` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 08:33:48 GMT EAGLE5 40.1.0

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
frodo 0 60 * 90 * NO YES NO YES NO YES YES

 DB1 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 YES NO NO NO NO NO NO NO NO NO NO NO NO NO NO
 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 NO NO NO NO NO NO NO NO NO NO NO NO NO NO NO NO

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
manny 36 60 60 NO YES YES YES YES YES YES YES YES

 U01 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 NO NO NO NO YES YES YES YES YES YES YES YES YES YES YES YES
 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
fred 750 0 0 NO YES YES YES YES YES YES YES YES

 DB1 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES NO
 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES NO

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
travist 101 60 * 90 * NO YES NO YES NO NO YES

 DB1 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES
 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 YES YES YES YES YES YES YES NO NO NO NO YES YES YES YES YES NO
```

2. Remove the user ID from the database by using the `dlt-user` command.

The `dlt-user` command has only one parameter, `uid`, which is the user ID that you wish to remove from the database. For this example, enter this command.

```
dlt-user:uid=travist
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
DLT-USER: MASP A - COMPLTD
```

3. Verify the changes using the `rtrv-secu-user` command and specifying the user ID used in step 2 with the `uid` parameter.

For this example, enter this command.

```
rtrv-secu-user:uid=travist
```

If the user ID was removed in step 2, error message E2199 is displayed.

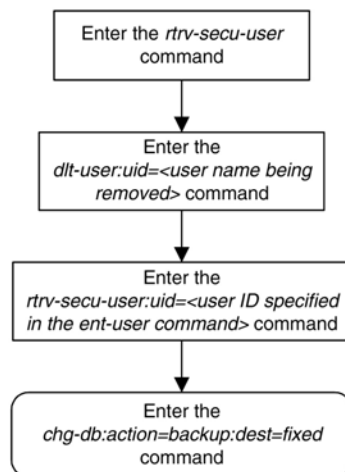
```
E2199 Cmd Rej: The specified user identification is not defined
```

4. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 41: Removing a User from the System**



## Changing User Information

This procedure is used to change the characteristics of a user on the EAGLE 5 ISS using the `chg-user` command. This procedure can only be performed if you have been assigned the command class "Security Administration." If the user ID does not exist in the database, the user's characteristics cannot be changed.

**Note:** The `pid` parameter can be specified for this procedure on all terminals (1 - 40) if the Eagle OA&M IP Security Enhancements feature is on. If this feature is on, the entry YES is shown for

terminals 17 through 40 in the SECURE column in the `rtrv-trm` output. The output of the `rtrv-ctrl-feat` command also shows if this feature is on or off. If this feature is off, the `pid` parameter can be specified for this procedure only on terminals 1 through 16. If you wish to use the Eagle OA&M IP Security Enhancements feature, and the feature is not on, perform [Activating the Eagle OA&M IP Security Enhancement Controlled Feature](#) on page 614 to enable and activate this feature.

The `chg-user` command uses these parameters.

:`uid` – The ID of a user in the database

:`nuid` – New user ID – The new ID of the user specified by the `uid` parameter.

:`pid` – Password ID (only required if changing the password of a user) – The password of the user specified by the `uid` parameter.

:`all` – The user has access to all commands in all command classes.

:`dbg` – The user has access to all commands in the command class “Debug.”

:`link` – The user has access to all commands in the command class “Link Maintenance.”

:`sys` – The user has access to all commands in the command class “System Maintenance.”

:`sa` – The user has access to all commands in the command class “Security Administration.”

:`pu` – The user has access to all commands in the command class “Program Update.”

:`db` – The user has access to all commands in the command class “Database Administration.”

:`cc1` - :`cc8` – Eight configurable command classes. These parameters specified whether or not the user has access to the commands in the specified configurable command class. The value of these parameters consist of the configurable command class name (1 alphabetic character followed by 2 alphanumeric characters), and either yes or no. The command class name and the yes or no values are separated by a dash. For example, to assign a user the permission to use the commands in configurable command class `db1`, the `cc1=db1-yes` parameter would be specified.

To specify any configurable command classes, the Command Class Management feature must be enabled and turned on. Enter the `rtrv-ctrl-feat` command to verify whether or not the Command Class Management feature is enabled. If the Command Class Management feature is not enabled or turned on, perform [Activating Controlled Features](#) on page 606 to enable and turn on the Command Class Management feature. Up to 32 configurable command classes can be assigned to users. When the Command Class Management feature is enabled and turned on, the configurable command class names are given the names `u01` - `u32`. These command class names, the descriptions of these command classes, and the commands assigned to these command classes can be changed using the [Configuring Command Classes](#) on page 459.

The `chg-user` command can assign a maximum of eight configurable command classes to the user each time the `chg-user` command is performed.

:`page` – The amount of time, in days, that the specified user’s password can be used before the user must change their password.

If the `page` parameter is not specified with the `ent-user` command, the EAGLE 5 ISS uses the value configured for the `page` parameter specified by the `chg-secu-dflt` command to determine the age of the user’s password.

:`uout` – The number of consecutive days that a user ID can remain active on the EAGLE 5 ISS and not be used. When the user ID has not been used for the number of days specified by the `uout`

parameter, that user ID is no longer valid and the EAGLE 5 ISS rejects any attempt to log into the EAGLE 5 ISS with that user ID.

If the `uout` parameter is not specified with the `ent-user` command, the EAGLE 5 ISS uses the value configured for the `uout` parameter specified by the `chg-secu-dflt` command to determine the number of consecutive days that a user ID can remain active on the EAGLE 5 ISS and not be used

`:revoke` – Is the specified user ID in service? Any login attempts using a revoked user ID are rejected by the EAGLE 5 ISS. The `revoke=yes` parameter cannot be specified for a user ID assigned to the security administration command class.

`:rstlsl` – resets the last successful login date for a user ID to the current date. If the user ID is out of service because the user ID has been idle longer than the value of the `uout` parameter defined by either the `ent-user` or `chg-secu-dflt` commands, this parameter brings that user ID back into service.

This example shows an `rtrv-secu-user` command output when the Command Class Management feature is enabled and turned on. If the Command Class Management feature is not enabled and activated, the 32 configurable command classes, shown in the following example as fields `U01 - U32`, are not shown in the `rtrv-secu-user` command output.

An asterisk (\*) displayed after the value in the `PAGE` or `UOUT` fields indicates that the system-wide default `page` or `uout` parameter values, as configured on the `chg-secu-dflt` command, is in effect for the user ID.

```
rlghncxa03w 09-03-01 08:33:48 GMT EAGLE5 40.1.0

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
frodo 750 0 0 NO YES YES YES YES YES YES
 U01 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES NO
 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 YES YES YES YES YES YES YES YES YES YES YES NO NO NO NO YES

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
manny 36 60 60 NO YES YES YES YES YES YES
 U01 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 NO NO NO NO YES YES YES YES YES YES YES YES YES YES YES YES
 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 YES YES YES YES YES YES YES YES YES YES YES NO NO NO NO YES

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
moe 100 30 60 YES YES YES YES YES YES YES
 U01 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES NO
 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 YES YES YES YES YES YES YES YES YES YES YES YES YES NO NO NO

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
jack 10 30 * 30 * NO YES YES YES YES YES YES YES
 U01 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES
```

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| U17 | U18 | U19 | U20 | U21 | U22 | U23 | U24 | U25 | U26 | U27 | U28 | U29 | U30 | U31 | U32 |
| YES | YES | YES | YES | YES | YES | NO  | NO  | NO  | NO  | YES | YES | YES | YES | YES | NO  |

1. Display the user IDs in the database using the `rtrv-secu-user` command.

This is an example of the possible output.

```
rlghncxa03w 09-03-01 08:33:48 GMT EAGLE5 40.1.0

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
frodo 0 60 * 90 * NO YES NO YES NO YES YES

 DB1 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 YES NO NO NO NO NO NO NO NO NO NO NO NO NO NO NO

 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 NO NO NO NO NO NO NO NO NO NO NO NO NO NO NO NO

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
manny 36 60 60 NO YES YES YES YES YES YES YES YES

 DB1 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 NO NO NO NO YES YES YES YES YES YES YES YES YES YES YES YES

 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 YES YES YES YES YES YES YES YES YES YES YES YES NO NO NO YES

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
fred 750 0 0 NO YES YES YES YES YES YES YES YES

 DB1 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 NO YES YES YES YES YES YES YES YES YES YES YES YES YES YES NO

 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 YES YES YES YES YES YES YES YES YES YES YES YES YES YES NO NO

USER ID AGE PAGE UOUT REV LINK SA SYS PU DB DBG
travist 101 60 * 90 * NO YES NO YES NO NO YES

 DB1 U02 U03 U04 U05 U06 U07 U08 U09 U10 U11 U12 U13 U14 U15 U16
 YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES

 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
 YES YES YES YES YES YES NO NO NO NO YES YES YES YES YES NO
```

Continue the procedure by performing one of these steps.

- If the cc1 through cc8 parameters are not being specified in this procedure, continue the procedure with [Step 4](#) on page 420.
  - If the cc1 through cc8 parameters will be specified in this procedure, continue the procedure by performing one of these steps.
    - If configurable command classes are shown in the `rtrv-secu-user` output, continue the procedure with [Step 3](#) on page 419.
    - If configurable command classes are not shown in the `rtrv-secu-user` output, continue the procedure with [Step 2](#) on page 418.
2. Verify that the Command Class Management feature is enabled and activated, by entering the `rtrv-ctrl-feat` command with the `partnum=89005801` parameter.



This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
Feature Name Partnum Status Quantity
Command Class Management 893005801 off ----
```

**Note:** The `rtrv-ctrl-feat` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-ctrl-feat` command, see the `rtrv-ctrl-feat` command description in the *Commands Manual*.

If the Command Class Management feature is enabled and turned on (status = on), [Step 3](#) on page 419.

If the Command Class Management feature is not enabled or turned on, perform [Activating Controlled Features](#) on page 606 to enable and turn on the Command Class Management feature.



**CAUTION**

If the Command Class Management feature is temporarily enabled, the configurable command classes can be assigned and used only for the amount of time shown in the **Trial Period Left** column in the `rtrv-ctrl-feat` output.

3. Display the descriptions of the configurable command classes in the database by entering the `rtrv-cmd` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 21:15:37 GMT EAGLE5 41.0.0
CMD CLASS
alw-slk link, u11
ent-user sa
unhb-slk link
rtrv-attr-seculog sa, u31
inh-slk link, abc
rtrv-meas-sched link, abc, def
act-lbp link
act-dlk link
act-slk link
rtrv-seculog sa, abc, def, ghi
act-lpo link
blk-slk link, abc, u23, u31
dact-lbp link
canc-dlk link
inh-card sys
canc-lpo link, u01, u02, u03, u04, u05, u06, u07, u08, u09, u10,
u11, u12, u13
canc-slk link
ublk-slk link, u01, u02, u03, u04, u05, u06, u07, u08, u09, u10,
u11, u12, u13, u14, u15, u16, u17, u18, u19, u20, u21,
u22, u23, u24, u25, u26, u27, u28, u29, u30, u31, u32
inh-trm sys, krb
rept-meas link
.
.
.
chg-meas link
tst-dlk link, krb
tst-slk link
```

If the desired configurable command class descriptions are not in the database, perform [Configuring Command Classes](#) on page 459 to configure the desired command classes.

**Note:** A user ID cannot be changed while the user is logged on, except when the `revoke=yes` parameter is specified with the `chg-user` command. It is assumed that if the user is being revoked, the intent is to immediately deny the user access to the EAGLE 5 ISS. In this case, the user will be logged off when the database is updated.

4. Verify that the user is not logged on the EAGLE 5 ISS using the `rept-stat-user` command.

If the user is logged on to the EAGLE 5 ISS, the `chg-user` command will log the user off the EAGLE 5 ISS when the command is executed. Notify the user to log off the EAGLE 5 ISS. This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:15 GMT EAGLE5 36.0.0
REPT-STAT-USER COMPLTD
USER ID TERM# IDLE SINCE COMMAND STATE
fred 3 04-06-01 05:06:43 rept-stat-user PROCESSING
frodo 13 04-06-01 08:12:23 chg-db IDLE
manny 1 04-06-01 04:37:56 ent-dlk IDLE
travist 7 04-06-01 10:06:22 rtrv-meas IDLE
```

```
rlghncxa03w 09-05-01 09:12:15 GMT EAGLE5 41.0.0
REPT-STAT-USER COMPLTD
USER ID TERM # IDLE SINCE COMMAND STATE
fred 3 09-04-19 05:06:43 rept-stat-user PROCESSING
frodo 13 09-04-20 08:12:23 chg-db IDLE
manny 1 09-04-27 04:37:56 ent-dlk IDLE
travist 7 09-04-30 10:06:22 rtrv-meas IDLE
```

5. Change the user's characteristics using the `chg-user` command.

The `nuid` parameter changes the user ID of a user. This parameter is optional and if not specified, the user ID is not changed. The user ID must contain 1 alpha character and up to 15 alphanumeric characters. The first character of a user ID must be an alpha character. Even though a period is not an alphanumeric character, one of the 15 alphanumeric characters can be a period.

The `pid` parameter specifies whether the password is to be changed. If `no` is selected, the password is not changed. If `yes` is entered, you will be prompted for a new password for the user. Enter the new password for the user. You do not need to know the old password with this command. The password must meet the requirements defined by the `chg-secu-dflt` command. Display the password requirements by entering the `rtrv-secu-dflt` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
SECURITY DEFAULTS

PAGE 60
UOUT 90
MULTLOG NO
MINLEN 8
ALPHA 1
NUM 1
PUNC 1
```

The password can contain from one to twelve characters. For this example, the password must contain at least eight characters, no more than twelve, with at least one alpha character (a-z), at least one numeric character (0-9), and at least one punctuation character (any printable

character that is not an alphabetic character, a numeric character, the space bar). The password requirements are shown in these fields in the `rtrv-secu-dflt` command output.

- MINLEN – the minimum length of the password
- ALPHA – the minimum number of alpha characters
- NUM – the minimum number of numeric characters
- PUNC – the minimum number of punctuation characters

The password is not case sensitive. For security reasons, the password is never displayed on the terminal.

At the prompt `verify password`, enter the new password again. This `pid` parameter is optional and the default value is `no`.

The other parameters assign command class permissions to the user ID. If `yes` is selected for any of these parameters, the user will have access to that class of commands. If `no` is entered, the user will not have access to that class of commands. These parameters are optional and if not specified, the values are not changed.

For this example, the user ID `manny` is being changed to `bilbo`, and the PU, DB, DBG, and DB1 command class values are changed. Enter this command.

```
chg-user:uid=manny:nuid=bilbo:pu=no:db=no:dbg=no:db1=yes
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CHG-USER: MASP A - COMPLTD
```

6. Verify the changes using the `rtrv-secu-user` command and specifying the user ID used in [Step 5](#) on page 420 with the `uid` parameter.

If the user ID was changed in [Step 5](#) on page 420, specify the new user ID. For this example, enter this command.

```
rtrv-secu-user:uid=bilbo
```

This is an example of the possible output.

```
rlghncxa03w 09-03-01 08:33:48 GMT EAGLE5 40.1.0
```

| USER ID | AGE | PAGE | UOUT | REV | LINK | SA  | SYS | PU | DB | DBG |
|---------|-----|------|------|-----|------|-----|-----|----|----|-----|
| bilbo   | 36  | 60   | 60   | NO  | YES  | YES | YES | NO | NO | NO  |

| DB1 | U02 | U03 | U04 | U05 | U06 | U07 | U08 | U09 | U10 | U11 | U12 | U13 | U14 | U15 | U16 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| YES | NO  | NO  | NO  | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |

| U17 | U18 | U19 | U20 | U21 | U22 | U23 | U24 | U25 | U26 | U27 | U28 | U29 | U30 | U31 | U32 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | NO  | NO  | NO  | NO  | YES |

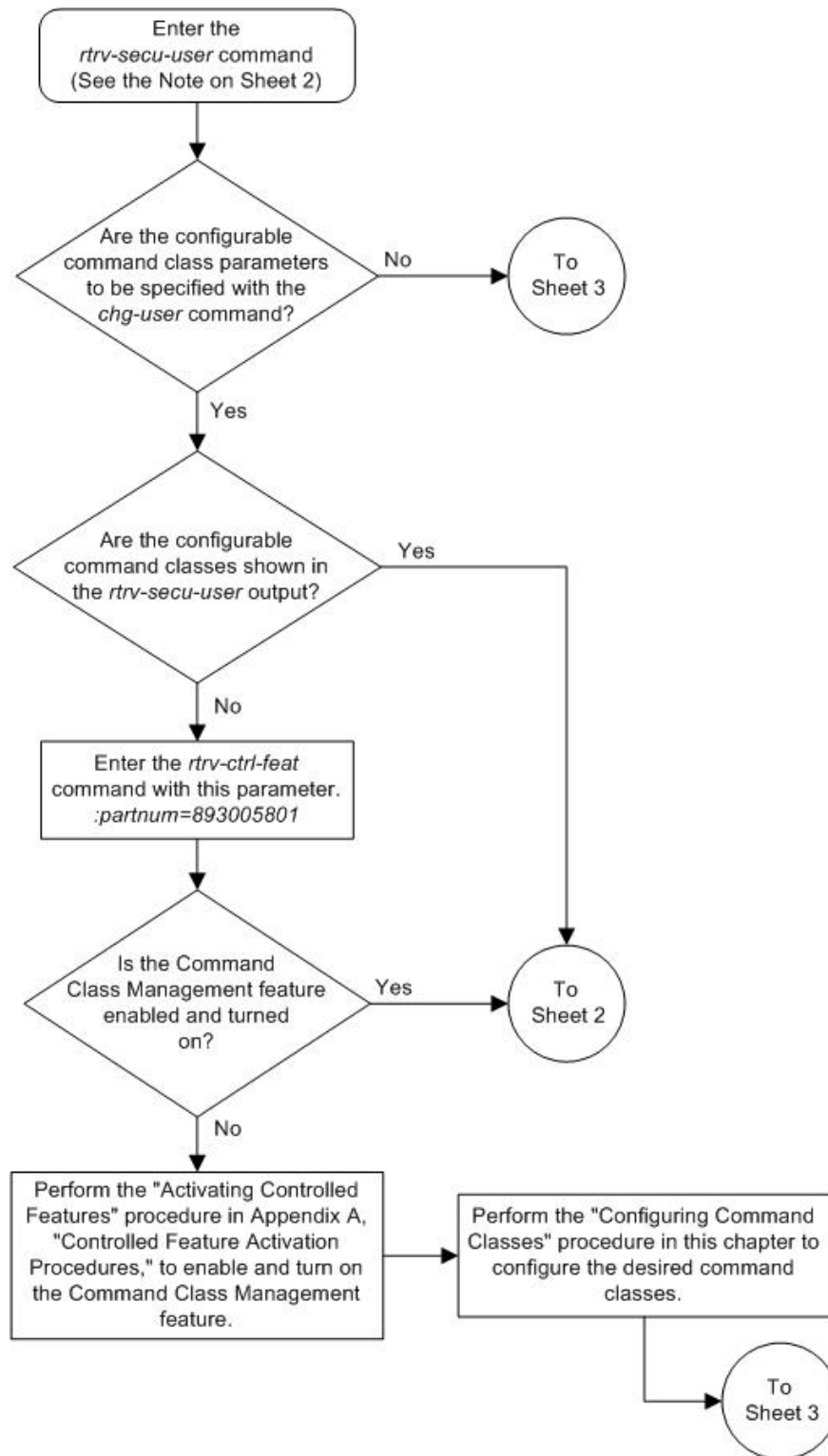
7. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

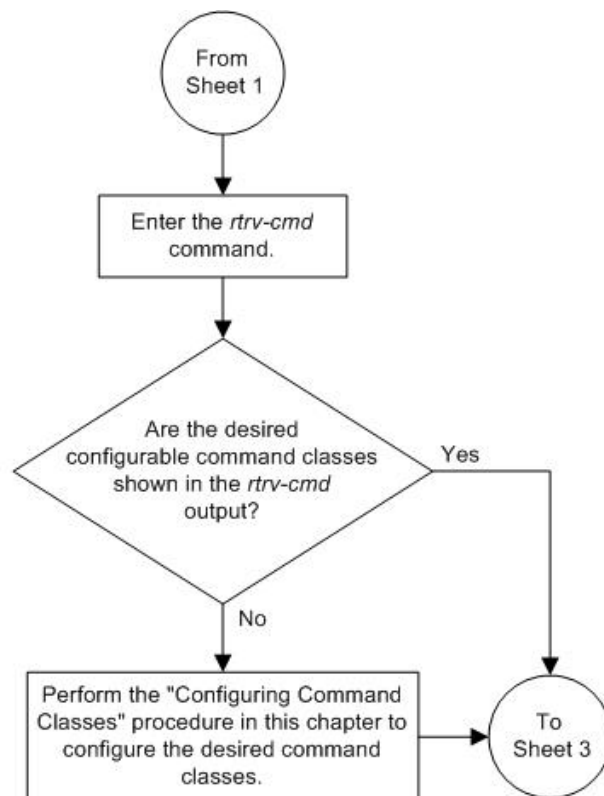
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
```

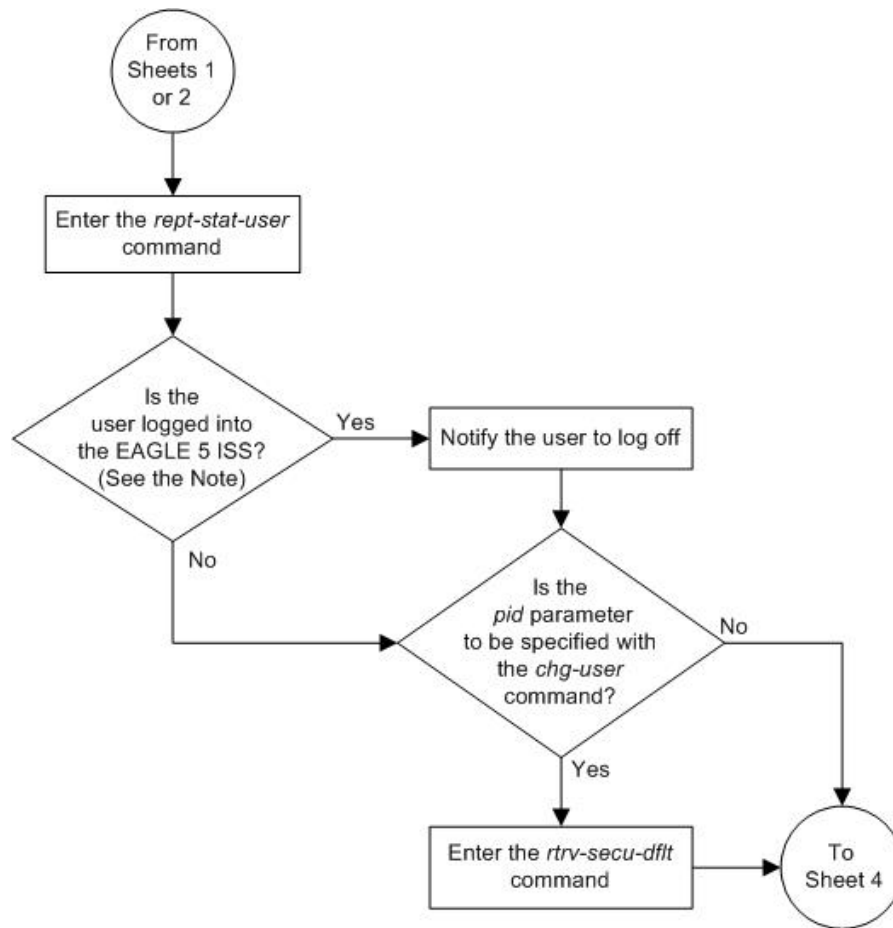
```
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 42: Changing User Information**

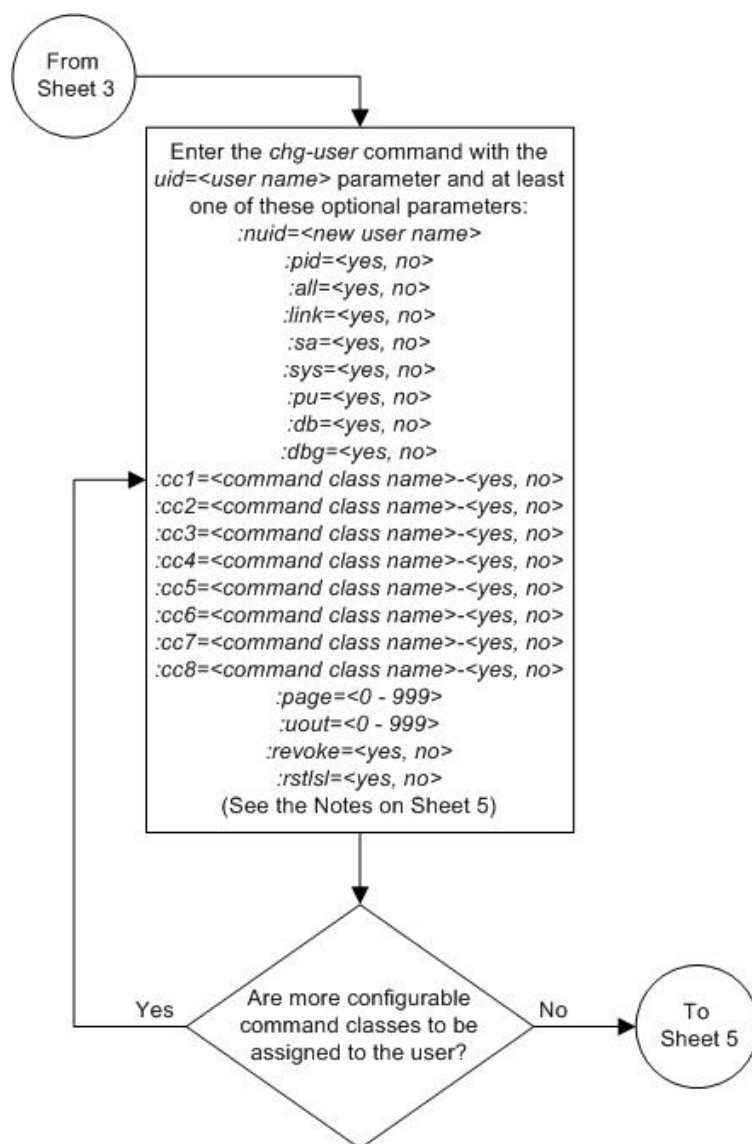




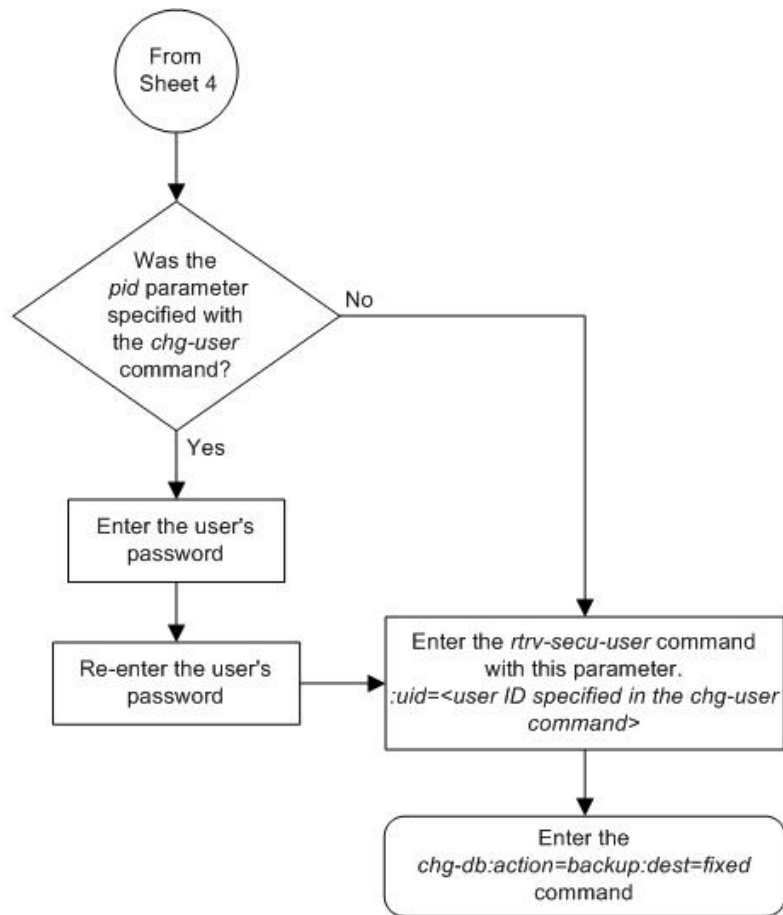
Note: The *pid* parameter can be specified for this procedure on all terminals (1 - 40) if the Eagle OA&M IP Security Enhancements feature is on. If this feature is on, the entry YES is shown for terminals 17 through 40 in the *SECURE* column in the *rtv-trm* output. The output of the *rtv-ctrl-feat* command also shows if this feature is on or off. If this feature is off, the *pid* parameter can be specified for this procedure only on terminals 1 through 16. If you wish to use the Eagle OA&M IP Security Enhancements feature, and the feature is not on, perform the "Activating the Eagle OA&M IP Security Enhancement Controlled Feature" procedure in Appendix A to enable and turn on this feature.



Note: A user ID cannot be changed while the user is logged on, except when the *revoke=yes* parameter is specified with the *chg-user* command. It is assumed that if the user ID is being revoked, the intent is to immediately deny the user access to the EAGLE 5 ISS. In this case, the user will be logged off when the database is updated.







Notes:

1. The words SEAS and NONE are reserved by the EAGLE 5 ISS and cannot be specified as values for the *nuid* parameter.
2. The *revoke=yes* parameter cannot be specified when the *sa* parameter value is *yes*.
3. To specify the *cc1* through *cc8* parameters, the Command Class Management feature must be enabled and activated.
4. The user can have a maximum of 32 configurable command classes assigned.
5. The *all* parameter specifies whether or not all non-configurable command classes (*link*, *sa*, *sys*, *pu*, *db*, *dbg*) can be used by the user.
6. If the *all* parameter and individual non-configurable command classes are specified with the *ent-user* command, the value of the specified individual non-configurable command classes overrides the value of the *all* parameter.
7. The password must adhere to all password provisioning rules as shown in the *rtrv-secu-dflt* output. These rules are displayed on the screen when the password prompt is presented.

## Changing a Password

There are two different procedures that can be used to change passwords. This procedure allows a specific user to change their own password using the `chg-pid` command. The other procedure is for the EAGLE 5 ISS administrator to change the password of any user (see the [Changing User Information](#) on page 415 procedure).

The rules for the format of the password are determined by the `chg-secu-dflt` command (see the [Changing the Security Defaults](#) on page 391 procedure for more information) and are displayed in the scroll area of the terminal before the password prompt is issued, or by entering the `rtrv-secu-dflt` command.

The password is not case sensitive. For security reasons, the password is never displayed on the terminal.

**Note:** This procedure can be performed on all terminals (1 - 40) if the Eagle OA&M IP Security Enhancements feature is on. If this feature is on, the entry YES is shown for terminals 17 through 40 in the SECURE column in the `rtrv-trm` output. The output of the `rtrv-ctrl-feat` command also shows if this feature is on or off. If this feature is off, this procedure can be performed only on terminals 1 through 16. If you wish to use the Eagle OA&M IP Security Enhancements feature, and the feature is not on, go to the [Activating the Eagle OA&M IP Security Enhancement Controlled Feature](#) on page 614 procedure to enable and activate this feature.

1. Log into the EAGLE 5 ISS using the `login` or `act-user` command.

This is an example of the messages that appear when you have successfully logged onto the EAGLE 5 ISS.

```
NOTICE: This is a private computer system.
Unauthorized access or use may lead to prosecution.

0 LOGIN failures since last successful LOGIN
Last successful LOGIN was on port 4 on 04-06-01 @ 09:12:36
```

2. Enter the `chg-pid` command.
3. At the prompt enter `old password`, enter your current password.

This is a security feature of this command. It prevents another user from changing the password of the user that is logged in to the EAGLE 5 ISS who may have stepped away from the terminal without logging off.

4. At the prompt enter `new password`, the minimum requirements for passwords are displayed as shown in the following example.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
New password must contain:
- between 1 and 12 characters
- at least 1 alphabetic character(s) ('a' - 'z')
- at least 1 numeric character(s) ('0' - '9')
- at least 1 punctuation character(s) (e.g. $%@#)
```

Enter your new password making sure that the password meets the minimum requirements for passwords on your EAGLE 5 ISS.

If the password is rejected, it did not meet the minimum requirements for passwords. Go back to step 2 and start the process of changing the password again making sure that the new password meets the minimum character requirements.

5. At the prompt `verify new password`, enter the password that was entered in step 4 again.

If the password is rejected, either the new password entered in this step did not match the password entered in step 4, or the password entered in step 3 did not match the original password. Go back to step 2 and start the process of changing the password again making sure that the current password entered in step 3 is correct and that the new password meets the minimum character requirements shown at the `enter new password` prompt.

6. When the command `executed` message appears, the execution of the command has been completed, and the new password has been entered into the EAGLE 5 ISS database.

This message should also appear.

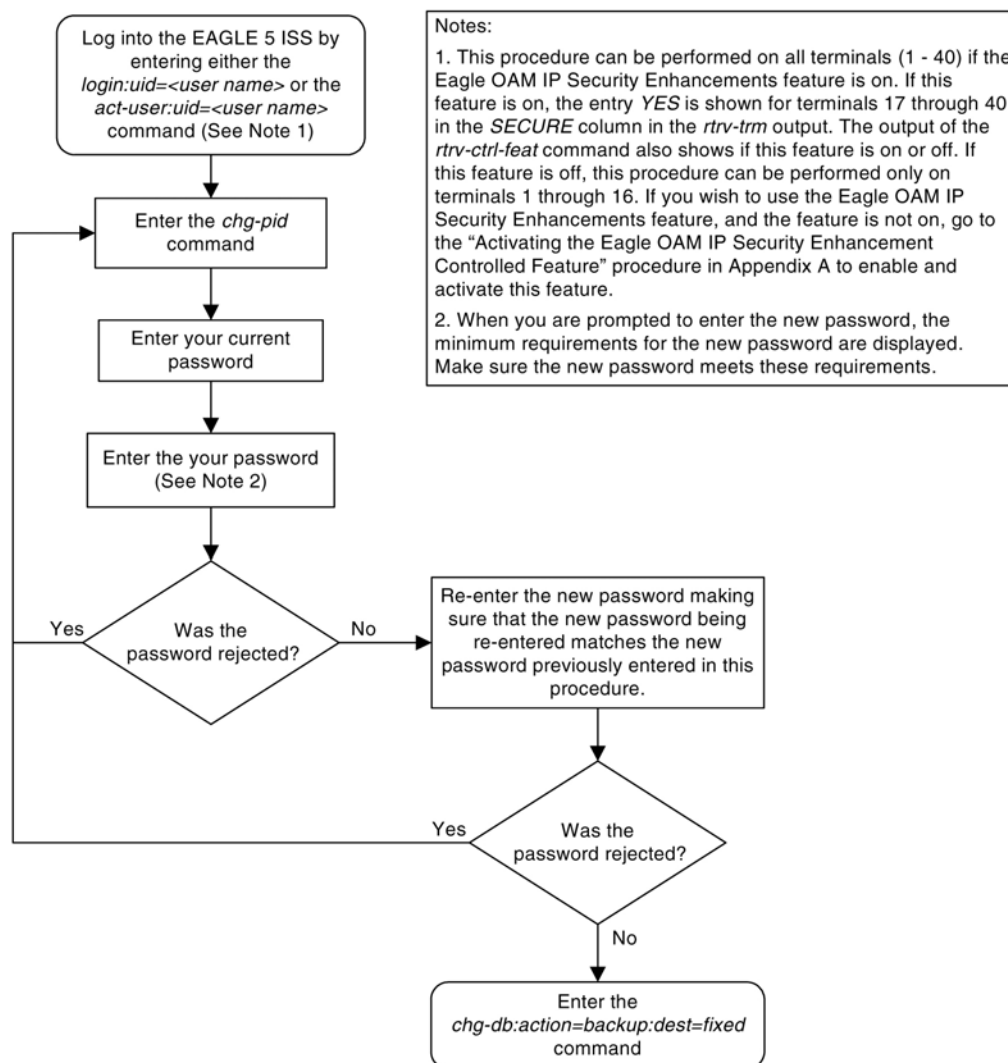
```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CHG-PID: MASP A - COMPLTD
```

7. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 43: Changing a Password**



## Changing Terminal Characteristics

This procedure is used to change the characteristics of a terminal, except for the OAP terminal, the SEAS terminal and a measurements terminal for an EAGLE 5 ISS containing a maximum of 700 signaling links, using the `chg-trm` command.

To configure a measurements terminal for an EAGLE 5 ISS containing a maximum of 700 signaling links, go to the [Configuring the Measurements Terminal for an EAGLE 5 ISS Containing 700 Signaling Links](#) on page 490 procedure.

To configure a terminal as an OAP terminal, refer to the *System Manual - EOAP*.

To configure a SEAS terminal, refer to the [Configuring SEAS Terminals](#) on page 581 procedure.

The communication attributes can be changed on any terminal except on the terminal you are logged on to. The message output group assignments can be changed on any terminal, including the terminal you are logged on to. The `chg - trm` command uses these parameters.

`: trm` – terminal numbers (1 - 40, terminals 1-16 are serial terminals, terminals 17-40 are telnet terminals)

`: baud` – Serial port baud rate (2400, 4800, 9600, or 19200)

`: sb` – The number of stop bits used in communications with the device (1 or 2)

`: prty` – Parity used by the device (odd, even, none)

`: type` – The type of device being connected (See the "Terminal Types" section)

`: fc` – The type of flow control used between the EAGLE 5 ISS and the output devices. (sw - software, hw - hardware, both, none)

`: tmout` – The maximum amount of time, in minutes, that a login session on the specified port can remain idle (that is, no user input) on the port before being automatically logged off. (0 - 99, see the "Security Parameters" section)

`: mxinv` – The login failure threshold – The number of login attempt failures or attempts to unlock a terminal that can occur on the terminal before the terminal is disabled. (0 - 9, see the "Security Parameters" section)

`: dural` – The length of time that the terminal is disabled after the login failure threshold has been exceeded. (See the "Security Parameters" section)

`: all` – Specifies whether or not all unsolicited messages are displayed on the specified terminal (yes or no)

`: traf` – Specifies whether or not traffic related unsolicited messages are displayed on the specified terminal (yes or no)

`: link` – Specifies whether or not link maintenance related unsolicited messages are displayed on the specified terminal (yes or no)

`: sa` – Specifies whether or not security administration related unsolicited messages are displayed on the specified terminal (yes or no)

`: db` – Specifies whether or not database related unsolicited messages are displayed on the specified terminal (yes or no)

`: sys` – Specifies whether or not system maintenance related unsolicited messages are displayed on the specified terminal (yes or no)

`: pu` – Specifies whether or not program update related unsolicited messages are displayed on the specified terminal (yes or no)

`: uimrd` – Specifies whether or not UIM redirect related unsolicited messages are displayed on the specified terminal (yes or no)

`: appserv` – Specifies whether or not application server related unsolicited messages are displayed on the specified terminal. (yes or no)

`: appss` – Specifies whether or not application subsystem related unsolicited messages are displayed on the specified terminal (yes or no)

`: card` – Specifies whether or not card related unsolicited messages are displayed on the specified terminal (yes or no)

: **clk** – Specifies whether or not clock related unsolicited messages are displayed on the specified terminal (yes or no)

: **dbg** – Specifies whether or not debug related unsolicited messages are displayed on the specified terminal (yes or no)

: **gtt** – Specifies whether or not global title translation related unsolicited messages are displayed on the specified terminal (yes or no)

: **gws** – Specifies whether or not gateway screening related unsolicited messages are displayed on the specified terminal (yes or no)

: **meas** – Specifies whether or not measurements maintenance related unsolicited messages are displayed on the specified terminal (yes or no)

: **mon** – Specifies whether or not unsolicited messages related to the Sentinel monitoring functions are displayed on the specified terminal (yes or no)

: **mps** – Specifies whether or not MPS related unsolicited messages are displayed on the specified terminal (yes or no)

: **seas** – Specifies whether or not SEAS maintenance related unsolicited messages are displayed on the specified terminal (yes or no)

: **slan** – Specifies whether or not SLAN maintenance related unsolicited messages are displayed on the specified terminal (yes or no)

: **logintmr** – the login timer. This parameter specifies the maximum time for logging on to the telnet terminal after selecting the terminal. This timer makes sure the user logs in within the configured time and terminal does not remain idle. The value for this timer can be from 3 seconds to 600 seconds. An additional value **none** indicates that the user has an indefinite amount of time to login on the telnet terminal. The system default value for this parameter is **none**. This parameter can be specified only for telnet terminals (**type=telnet**).

: **logouttmr** – the logout timer. This parameter specifies the maximum time the telnet session remains open after the user manually or automatically logs out. The value for this timer can be from 0 to 1200 seconds. An additional value **none** indicates that the telnet session is never closed when the user logs out. The system default value for this parameter is **none**. This parameter can be specified only for telnet terminals (**type=telnet**).

: **pngtimeint** – the ping timer interval. This parameter specifies the amount of time that must pass before the IPSM initiates a new ping cycle. The value for this timer can be from 100 to 1200000 milliseconds. An additional value **none** indicates that pinging does not occur. The system default value for this parameter is **none**. This parameter can be specified only for telnet terminals (**type=telnet**) and EMSALM terminals (**type=emsalm**).

: **pngfailcnt** – This parameter specifies the number of consecutive ping fails that must occur before the telnet connection is dropped. The value for this timer can be from 1 to 10. The system default value for this parameter is 1. This parameter can be specified only for telnet terminals (**type=telnet**) and EMSALM terminals (**type=emsalm**).

The messages assigned to the output message groups defined by the **traf**, **db**, **link**, **sa**, **sys**, **pu**, **uimrd**, **appserv**, **appss**, **card**, **clk**, **dbg**, **gtt**, **gws**, **meas**, **mon**, **mps**, **seas**, and **slan** parameters are listed in the *Unsolicited Alarm and Information Messages Manual*.

Certain UIMs (unsolicited information messages) can be assigned to the UIM Redirect output group or remain in their original output message group. The **uimrd** parameters of the **chg-trm**

and `chg-stpopts` commands determine which output groups these UIMs are assigned to and how the EAGLE 5 ISS handles them.

The `uimrd=yes` parameter of the `chg-stpopts` command tells the EAGLE 5 ISS to put these UIMs in the unsolicited UIM redirect output message group. If the `uimrd=no` parameter is specified with the `chg-stpopts` command, the messages remain in their original output message group. The `uimrd=yes` parameter of the `chg-trm` command allows the specified terminals to receive unsolicited UIM redirect output messages.

[Table 11: UIMRD Parameter Combinations](#) on page 433 shows the combination of the values of both `uimrd` parameters and how the EAGLE 5 ISS handles the messages. The unsolicited output group message assignments are listed in the *Unsolicited Alarm and Information Messages Manual*.

**Table 11: UIMRD Parameter Combinations**

| Value of the <code>uimrd</code> parameter with <code>chg-trm</code> command | Value of the <code>uimrd</code> parameter with <code>chg-stpopts</code> command | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No                                                                          | No                                                                              | The UIMs remain in their original output message group and are output to terminals receiving messages from the original output message group.                                                                                                                                                                                                                                                                                                                                                          |
| No                                                                          | Yes                                                                             | The UIMs are in the UIM Redirect output group but are not output to any terminal.                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Yes                                                                         | No                                                                              | The UIMs remain in their original output message group and are output to terminals receiving messages from the original output message group.<br><br>Even though the <code>uimrd</code> parameter with the <code>chg-trm</code> command is set to <code>yes</code> , there are no messages in the UIM redirect output group because the <code>uimrd</code> parameter with the <code>chg-stpopts</code> command is set to <code>no</code> .<br><br>No UIM redirect messages are output to any terminal. |
| Yes                                                                         | Yes                                                                             | The UIMs are in the UIM Redirect output group and are output to terminals receiving unsolicited UIM redirect messages.                                                                                                                                                                                                                                                                                                                                                                                 |

If the `type=vt320` or `type=sccs` parameters are specified, the value of the `prty` parameter cannot be none. The value of the `prty` parameter must be either `odd` or `even`.

The EAGLE 5 ISS requires at least two terminals assigned to the Security Administration command class. The terminal type of a terminal assigned to the Security Administration command class cannot be changed to these terminal types, printer (`:type=printer`), none (`:type=none`), or OAP (`:type=oap`), if the change would leave the EAGLE 5 ISS with only one terminal assigned to the Security Administration command class. The command class assignments of the terminal

are shown with the `rtrv-secu-trm` command. If the terminal type is being changed to either `oap`, `printer`, or `none`, go to the [Changing Terminal Command Class Assignments](#) on page 450 procedure and make sure that the command class assignment for the terminal being changed does not have the Security Administration command class assigned to it, or change the command class assignment of another terminal to include the Security Administration command class.

If the `all=yes` parameter and the `traf`, `db`, `link`, `sa`, `sys`, `pu`, `appserv`, `appss`, `card`, `clk`, `dbg`, `ggt`, `gws`, `meas`, `mon`, `mps`, `seas`, or `slan` parameters are specified, for example, `chg-trm:trm=1:all=yes:pu=no`; all the message output groups are set to `yes` with the exception of the message output groups specified in the `chg-trm` command which are set to `no`. In this example, the value of all the message output groups is `yes` (`all=yes`) with the exception of the program update message output group which has the value `no` (`pu=no`).

If the `all=no` parameter is specified for a SEAS terminal (`type=seas`), all the output group values are changed to `NO` except for the SEAS output group. The SEAS output group value remains set to `YES` and this message is displayed.

SEAS Output Group is SET for SEAS terminal <terminal number>

The total value of the terminals' baud rate cannot be greater than 172,032. If the total baud rate of the terminals exceeds 172,032, change the baud rates of the terminals so that the total baud rate is not greater than 172,032.

Only four terminals should be configured to receive unsolicited system maintenance messages (`:sys=yes`).

If the communication attributes (`baud`, `sb`, `prty`, and `fc`) or the terminal type (`type`) for the terminal are being changed, the terminal must be placed out of service with the `rmv-trm` command before the changes can be made. If the terminal being changed is the last OAP terminal that is in service, the `force=yes` parameter must be used with the `rmv-trm` command.

If only the output message group or security (`tmout`, `mxinv`, `dura`) parameters are being changed, the terminal can remain in service when the `chg-trm` command is executed.

### Terminal Types

There are 10 terminal types that can be used on the EAGLE 5 ISS.

The VT320 type is the standard terminal used for entering commands, displaying command responses, displaying periodic system status information at screen specific locations, and scrolling unsolicited messages.

The PRINTER type is used with printers for recording UAMs, UIMs and echoed command responses.

The KSR type mimics older style teleprinters (that is, printers with a keyboard).

The OAP type is used to connect directly to the OAP, which provides support for the SEAS feature. The OAP terminal type is not used in this procedure. To configure a terminal as an OAP terminal, refer to the *System Manual - EOAP*.

The SCCS type is used for some network monitoring and surveillance applications. SCCS terminals are the same as KSR terminals, except a pre-defined "start-of-message" character is added to indicate the beginning of a new command response or unsolicited message.

The NONE type is typically used to indicate unused terminals.

The MGMT terminal type, or management terminal, provides a machine to machine messaging interface between the EAGLE 5 ISS and the customer's network to provide network surveillance.



The TELNET terminal type provides up to 24 IP based connections to the EAGLE 5 ISS's user interface using a telnet client, in addition to the 16 RS-232 terminals. The telnet terminals are numbered from 17 to 40. The telnet terminals are configured automatically when the IP User Interface (Telnet) feature is enabled and activated, and when the IPSMs are configured in the database. The EAGLE 5 ISS can have 3 IPSMs, with each IPSM supporting eight telnet terminals. The baud, prty, sb, and fc parameters cannot be specified with the chg-trm command for a telnet terminal, but all other terminal parameters can be specified and changed for a telnet terminal. For terminals 17 to 40, the values for the type parameter can be only telnet, none, or emsaln.

**Note:** If the chg-trm command is executed from a telnet terminal (terminals 17 to 40), only the output group parameters (all, traf, link, sa, db, sys, pu, uimrd, appserv, appss, card, clk, dbg, gtt, gws, meas, mon, mps, seas, slan) and the terminal type can be changed.

The EMSALM terminal type provides an alarm monitoring capability that displays only UAMs and system alive messages generated by the EAGLE 5 ISS. UIMs and autonomous reports are not displayed on the EMSALM terminals, even if the output group settings for these terminals would allow these messages to be displayed on these terminals.

**CAUTION**

**CAUTION:** EMSALM terminals can accept login requests and commands; however, these operations may interfere with the alarm monitoring functions of the EMSALM terminals and should be performed on another terminal.

The EMSALM terminal type can be assigned to any terminal, serial (terminals 1 to 16) or telnet (terminals 17 to 40). When the terminal type is changed to emsaln, all the output message group settings for that terminal are set to yes, even if any of the output message groups were set to no before the terminal type change. These output message group settings can be changed, if desired. The communications attributes (baud, prty, sb, fc) and security parameter values (tmout, mxinv, dural) are not changed.

**CAUTION**

**CAUTION:** It is recommended that all the output message group settings for an EMSALM terminal are set to yes. Changing any of the output message group settings to no could prevent alarm messages controlled by the output message group from being displayed on the EMSALM terminal.

**CAUTION**

**CAUTION:** If a terminal dedicated to measurements collection is configured (see the [Configuring the Measurements Terminal for an EAGLE 5 ISS Containing 700 Signaling Links](#) on page 490 procedure), it is recommended that this terminal is not changed to an EMSALM terminal.

When the terminal type is changed from emsaln to another terminal type, the output message group settings, communications attributes, and security parameter values are not changed.

When assigning the EMSALM terminal type to a serial terminal, the communication attribute (baud, prty, sb, fc), security (tmout, mxinv, dural), and output group (traf, db, link, sa, sys, pu, uimrd, appserv, appss, card, clk, dbg, gtt, gws, meas, mon, mps, seas, slan) parameters values can be changed.

When assigning the EMSALM terminal type to a telnet terminal, only the security (tmout, mxinv, dural), and output group (traf, db, link, sa, sys, pu, uimrd, appserv, appss, card, clk, dbg, gtt, gws, meas, mon, mps, seas, slan) parameters values can be changed.

The SEAS terminal type is used to provide a path between the EAGLE 5 ISS and the CCS MR to support the SEAS over IP feature. The SEAS terminal type is not used in this procedure. To

configure a terminal as a SEAS terminal, refer to the [Configuring SEAS Terminals](#) on page 581 procedure.

### Security Parameters

The monitoring of a terminal's idle time (tmout) and the automatic logout function only applies to terminal types VT320 (type=vt320), KSR, (type=ksr), SCCS (type=sccs), and MGMT (type=mgmt). The tmout parameter can be specified with other terminal types, but it will have no effect. The system default value for the tmout parameter is 30 minutes. The tmout=0 parameter value allows the terminal to remain idle indefinitely without being automatically logged off.

To impose a temporary lockout of a terminal after a particular number of login attempt failures or a particular number of attempts to unlock a terminal have occurred, the mxinv and dural values for that terminal must be greater than 0.

The mxinv=0 parameter value prevents any temporary lockout of the terminal regardless of the number of successive failed login or unlock attempts that were made at the terminal. No messages are issued regarding the temporary lockout. This action applies even if the dural parameter value is greater than 0.

The dural=0 parameter prevents the terminal from being temporarily locked out. If the mxinv parameter value is greater than 0 and the dural parameter value is 0, the EAGLE 5 ISS issues messages concerning login failure threshold, but the terminal will not be locked out.

The value of the dural parameter can be expressed in seconds (0 - 59), minutes and seconds (0 - 5959), or hours, minutes, and seconds (0 - 995959). The value 999999 for the dural parameter disables the terminal, when the login failure threshold has been exceeded, for an indefinite period of time. A terminal that is disabled for an indefinite period of time is identified by the entry INDEF in the DURAL field of the rtrv-trm command output. A terminal disabled indefinitely can only be restored to service by inhibiting the terminal with the rmv-trm command, then placing it into service with the rst-trm command.

When the EAGLE 5 ISS is delivered to the user, the mxinv and dural parameters will be set to these values:

```
:mxinv = 5
```

```
:dural = 0100 (1 minute, 0 seconds)
```

### The RTRV-TRM Output

The output of the rtrv-trm command is displayed in two parts. The first part displays the communication and security attributes of the terminal. The communication attributes of the terminal, BAUD, PRTY (parity), SB (stop bits), and DBTS (data bits), are displayed in the COMM field of the rtrv-trm output and are displayed in this format: BAUD-DBTS-PRTY-SB. The type of flow control used by the terminal is shown in the FC field. The security attributes of the terminal are shown in the TMOUT, MXINV, and DURAL fields. The second part of the rtrv-trm command output displays the types of unsolicited messages the terminal may receive. An example of the rtrv-trm command output is shown in this example.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 36.0.0
TRM TYPE COMM FC TMOUT MXINV DURAL
3 VT320 9600-7-E-1 SW 30 5 99:59:59

TRM TRAF LINK SA SYS PU DB UIMRD
3 NO YES NO YES NO YES YES
 APP APP
```

```
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
3 YES YES YES YES YES YES YES YES YES YES NO NO
```

In this example, terminal 3 is running at 9600 baud with 7 data bits, even parity, and 1 stop bit.

For terminals 17 to 40, the **COMM** and **FC** fields are not displayed in the **rtrv-trm** output. The following items are displayed for these terminals in addition to the security attributes and the types of unsolicited messages the terminal may receive. An example **rtrv-trm** output example follows the list.

- The card location of the IPSM associated with the terminals.
- The security status of the terminal is displayed in the **SECURE** field. If the Eagle OA&M IP Security Enhancements feature is on, the terminal is secure. The entry **yes** is shown in the **SECURE** field. If the Eagle OA&M IP Security Enhancements feature is off, the terminal is not secure. The entry **no** is shown in the **SECURE** field. [Controlled Feature Activation Procedures](#) on page 605 contains the procedures to enable and turn on, or turn off the Eagle OA&M IP Security Enhancements feature.
- The login timer (**LOGINTMR**), logout timer (**LOGOUTTMR**), ping time out timer (**PNGTIMEINT**), and the ping fail count (**PNGFAILCNT**) values.

```
r lghncxa03w 06-10-01 16:02:08 GMT EAGLE5 39.0.0
TRM TYPE LOC TMOUT MXINV DURAL SECURE
30 TELNET 1204 60 0 00:00:00 no

TRM LOGINTMR LOGOUTTMR PNGTIMEINT PNGFAILCNT
 (sec) (sec) (msec)
30 none none none 1

TRM TRAF LINK SA SYS PU DB UIMRD
30 YES YES YES YES YES YES YES

 APP APP
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
30 YES YES YES YES YES YES YES YES YES YES NO NO
```

### Using Telnet Terminals in Place of Serial Terminals

For EAGLE 5 ISS releases 29.0 to 30.0, and releases 30.2 and greater with the Eagle OA&M IP Security feature disabled and off, serial terminals must be connected to the EAGLE 5 ISS and provisioned in the database because Security Administration commands cannot be executed from a telnet terminal.

For EAGLE 5 ISS releases 30.2 and greater, Security Administration commands, in addition to all other commands, can be executed from a telnet terminal only if the Eagle OA&M IP Security feature is enabled and on. The ability to execute commands from a particular terminal is dependent on the terminal command class assignments for that terminal. Even with the ability to execute most EAGLE 5 ISS commands from a telnet terminal, it is recommended that at least two serial terminals remain connected to the EAGLE 5 ISS. The **act-echo**, **lock**, and **unlock** commands cannot be executed from a telnet terminal. These terminals should be configured with at least Security Administration command class privileges.

By having serial terminals connected to the EAGLE 5 ISS, the user would still have access to the EAGLE 5 ISS in the event of a telnet terminal connection failure.

Upgrades of the EAGLE 5 ISS from a telnet terminal are not supported. When the EAGLE 5 ISS is upgraded, the MASPs are upgraded first, followed by the various cards in the EAGLE 5 ISS. The cards are upgraded by taking the cards out of service, then placing the cards back into service. When the IPSMs are taken out of service, the telnet sessions running on the IPSMs are disabled.

This can result in losing the telnet terminal connection to the EAGLE 5 ISS. The Expanded Terminal Output Groups feature, introduced in release 31.3, can create a situation where UIMs required for the upgrade would not be displayed on the same telnet terminal that initiated the upgrade. The upgrade would be difficult to complete if the UIMs generated during the upgrade are not displayed on the same telnet terminal that initiated the upgrade.

The EAGLE 5 ISS upgrade procedure recommends that some method to capture command input and output during the upgrade process is used. The telnet terminals do not support capturing the input and output, nor can the EAGLE 5 ISS's `act -echo` command be used on a telnet terminal. Because of this limitation, the upgrade procedure should not be executed from a telnet terminal.

For any EAGLE 5 ISS release, whether the Eagle OA&M IP Security feature is enabled or not, if applicable, Kermit file transfers, required for the Security Log feature, are not supported from telnet terminals. The Kermit file transfers can be performed only from a serial terminal.

1. Display the values of all terminals using the `rtrv-trm` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 39.0.0
TRM TYPE COMM FC TMOUT MXINV DURAL
1 VT320 9600-7-E-1 SW 30 5 99:59:59
2 KSR 9600-7-E-1 HW 30 5 INDEF
3 PRINTER 4800-7-E-1 HW 30 0 00:00:00
4 VT320 2400-7-E-1 BOTH 30 5 00:30:00
5 VT320 9600-7-0-1 NONE 30 5 00:00:30
6 VT320 9600-7-E-2 SW 30 9 INDEF
7 PRINTER 9600-7-N-2 HW 30 5 00:30:00
8 KSR 19200-7-E-2 BOTH 30 5 00:30:00
9 VT320 9600-7-E-1 SW 30 7 00:30:00
10 VT320 9600-7-E-1 HW 30 5 00:30:00
11 VT320 4800-7-E-1 HW 30 5 00:30:00
12 PRINTER 9600-7-E-1 HW 30 4 00:30:00
13 VT320 9600-7-0-1 NONE 30 5 00:30:00
14 VT320 9600-7-E-2 SW 30 8 00:30:00
15 VT320 9600-7-N-2 HW 30 5 00:30:00
16 VT320 9600-7-E-2 BOTH 30 3 00:30:00

TRM TYPE LOC TMOUT MXINV DURAL SECURE
17 TELNET 1201 60 5 00:30:00 yes
18 TELNET 1201 60 5 00:30:00 yes
19 TELNET 1201 60 5 00:30:00 yes
20 TELNET 1201 60 5 00:30:00 yes
21 TELNET 1201 60 5 00:30:00 yes
22 TELNET 1201 60 5 00:30:00 yes
23 TELNET 1201 60 5 00:30:00 yes
24 TELNET 1201 60 5 00:30:00 yes

TRM LOGIN TMR LOGOUT TMR PNGTIMEINT PNGFAILCNT
 (sec) (sec) (msec)
17 none none none 1
18 none none none 1
19 none none none 1
20 none none none 1
21 none none none 1
22 none none none 1
23 none none none 1
24 none none none 1

TRM TRAF LINK SA SYS PU DB UIMRD
1 NO YES NO YES NO YES YES
2 NO NO NO NO NO NO NO
```

|    |     |     |     |     |     |     |     |  |  |  |  |  |  |
|----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|
| 3  | YES | YES | YES | NO  | YES | YES | YES |  |  |  |  |  |  |
| 4  | YES | NO  | NO  | NO  | NO  | NO  | NO  |  |  |  |  |  |  |
| 5  | NO  | YES | NO  | NO  | NO  | NO  | NO  |  |  |  |  |  |  |
| 6  | NO  | NO  | YES | NO  | NO  | NO  | NO  |  |  |  |  |  |  |
| 7  | YES | YES | YES | YES | YES | YES | YES |  |  |  |  |  |  |
| 8  | NO  | NO  | NO  | NO  | YES | NO  | YES |  |  |  |  |  |  |
| 9  | NO  | YES | NO  | NO  | NO  | YES | NO  |  |  |  |  |  |  |
| 10 | NO  | NO  | NO  | NO  | NO  | NO  | YES |  |  |  |  |  |  |
| 11 | YES | YES | YES | YES | YES | YES | YES |  |  |  |  |  |  |
| 12 | YES | YES | YES | YES | YES | YES | YES |  |  |  |  |  |  |
| 13 | NO  | YES | NO  | NO  | NO  | NO  | YES |  |  |  |  |  |  |
| 14 | NO  | NO  | YES | NO  | NO  | NO  | NO  |  |  |  |  |  |  |
| 15 | YES | YES | YES | NO  | YES | YES | YES |  |  |  |  |  |  |
| 16 | NO  | NO  | NO  | NO  | YES | NO  | YES |  |  |  |  |  |  |
| 17 | NO  | NO  | NO  | NO  | NO  | NO  | NO  |  |  |  |  |  |  |
| 18 | NO  | NO  | NO  | NO  | NO  | NO  | NO  |  |  |  |  |  |  |
| 19 | NO  | NO  | NO  | NO  | NO  | NO  | NO  |  |  |  |  |  |  |
| 20 | NO  | NO  | NO  | NO  | NO  | NO  | NO  |  |  |  |  |  |  |
| 21 | NO  | NO  | NO  | NO  | NO  | NO  | NO  |  |  |  |  |  |  |
| 22 | NO  | NO  | NO  | NO  | NO  | NO  | NO  |  |  |  |  |  |  |
| 23 | NO  | NO  | NO  | NO  | NO  | NO  | NO  |  |  |  |  |  |  |
| 24 | NO  | NO  | NO  | NO  | NO  | NO  | NO  |  |  |  |  |  |  |

| TRM | SERV | SS  | CARD | CLK | DBG | GTT | GWS | MEAS | MON | MPS | SEAS | SLAN |
|-----|------|-----|------|-----|-----|-----|-----|------|-----|-----|------|------|
| 1   | YES  | YES | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 2   | YES  | YES | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 3   | YES  | YES | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 4   | YES  | YES | YES  | YES | YES | NO  | YES | YES  | YES | YES | NO   | NO   |
| 5   | YES  | YES | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 6   | YES  | YES | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 7   | NO   | YES | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 8   | YES  | YES | YES  | YES | YES | YES | YES | YES  | YES | YES | YES  | YES  |
| 9   | YES  | YES | YES  | YES | YES | YES | YES | YES  | YES | YES | YES  | YES  |
| 10  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 11  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 12  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 13  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 14  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 15  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 16  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 17  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 18  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 19  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 20  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 21  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 22  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 23  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 24  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |

**Note:** If telnet terminals are not being added in this procedure, continue the procedure with [Step 3](#) on page 440.

- If the `rtrv-trm` output in [Step 1](#) on page 438 shows terminals 1 to 16 and you wish to add telnet terminals (type=telnet, terminals 17 through 40), go to the [Adding an IPSM](#) on page 523 procedure.

Adding an IPSM adds eight telnet terminals to the EAGLE 5 ISS.

When an IPSM is added to the database, the eight telnet terminals associated with the IPSM are added to the database with the telnet terminal type and the default values for these parameters.

- The security (tmout, mxinv, dural) parameters.
- The output message group (traf, db, link, sa, sys, pu, uimrd, appserv, appss, card, clk, dbg, gtt, gws, meas, mon, mps, seas, slan) parameters
- The logintmr, logouttmr, pngtimeint, pngfailcnt parameters.

The only actions that can be performed on terminals 17 through 40 is changing the terminal type to either none, telnet, or emsaln, and changing the security (tmout, mxinv, dural), changing the output message group (traf, db, link, sa, sys, pu, uimrd, appserv, appss, card, clk, dbg, gtt, gws, meas, mon, mps, seas, slan) parameters, or changing the logintmr, logouttmr, pngtimeint, pngfailcnt parameters.

If no changes are being to the telnet terminals, either to the existing telnet terminals, or to the telnet terminals that were added in this step with “[Adding an IPSM](#) on page 523” procedure, this procedure is finished.

If changes are being made to the telnet terminals, continue the procedure by performing one of these steps.

- If only the output message group or security parameters are being changed, continue the procedure with [Step 6](#) on page 442.
- If the terminal type or the logintmr, logouttmr, pngtimeint, pngfailcnt parameters are being changed, continue the procedure with [Step 3](#) on page 440.

3. Display the status of the terminals by entering the rept - stat - trm command.

This is an example of the possible output (another IPSM added from [Step 2](#) on page 439 ).

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
1 IS-NR Active -----
2 IS-NR Active -----
3 IS-NR Active -----
4 IS-NR Active -----
5 IS-NR Active -----
6 IS-NR Active -----
7 IS-NR Active -----
8 IS-NR Active -----
9 IS-NR Active -----
10 IS-NR Active -----
11 IS-NR Active -----
12 IS-NR Active -----
13 IS-NR Active -----
14 IS-NR Active -----
15 IS-NR Active -----
16 IS-NR Active -----
17 IS-NR Active -----
18 IS-NR Active -----
19 IS-NR Active -----
20 IS-NR Active -----
21 IS-NR Active -----
22 IS-NR Active -----
23 IS-NR Active -----
24 IS-NR Active -----
25 IS-NR Active -----
26 IS-NR Active -----
27 IS-NR Active -----
28 IS-NR Active -----
29 IS-NR Active -----
30 IS-NR Active -----
31 IS-NR Active -----
```

```
32 IS-NR Active -----
```

```
Command Completed.
```

4. If the communication attributes (baud, sb, prty, and fc), the terminal type (type), or the logintmr, logouttmr, pngtimeint, pngfailcnt parameters for the terminal are being changed, inhibit the terminal you wish to change using the `rmv-trm` command and specify the port you wish to inhibit.

If the terminal being changed is the last OAP terminal that is in service, the `force=yes` parameter must be used with the `rmv-trm` command. The OAP terminals are shown by the entry OAP in the TYPE field in the `rtrv-trm` command output in [Step 1](#) on page 438. For this example, enter these commands.

```
rmv-trm:trm=4
```

```
rmv-trm:trm=8
```

```
rmv-trm:trm=19
```

```
rmv-trm:trm=23
```

```
rmv-trm:trm=21
```

When these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Inhibit message sent to terminal
```

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Command Completed.
```

5. Verify that the terminal that was inhibited in [Step 4](#) on page 441 is in the OOS-MT-DSBLD state by entering the `rept-stat-trm` command.

For this command, enter these commands.

```
rept-stat-trm:trm=4
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
4 OOS-MT-DSBLD MANUAL -----
Command Completed.
```

```
rept-stat-trm:trm=8
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
8 OOS-MT-DSBLD MANUAL -----
Command Completed.
```

```
rept-stat-trm:trm=19
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
```

```
19 OOS-MT-DSBLD MANUAL -----
Command Completed.
```

```
rept-stat-trm:trm=23
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
23 OOS-MT-DSBLD MANUAL -----
Command Completed.
```

```
rept-stat-trm:trm=21
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 39.0.0
TRM PST SST AST
21 OOS-MT-DSBLD MANUAL -----
Command Completed.
```

**Note:** If the terminal type is not being changed to either printer or none, continue the procedure with [Step 6](#) on page 442.

6. Display the command class values of all terminals using the `rtrv-secu-trm` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 12:31:04 GMT EAGLE5 36.0.0

TRM LINK SA SYS PU DB DBG
1 NO NO YES NO YES NO
2 NO NO NO NO YES NO
3 YES *** YES YES YES YES
4 NO YES NO NO NO NO
5 YES NO NO NO YES YES
6 NO YES NO NO NO NO
7 NO *** YES NO YES NO
8 NO NO NO NO NO NO
9 YES YES YES YES YES YES
10 NO NO NO NO NO NO
11 YES NO YES NO YES YES
12 NO *** NO NO NO NO
13 NO NO NO NO YES YES
14 NO YES NO NO YES YES
15 NO NO NO NO YES YES
16 NO NO NO NO YES YES
17 NO NO YES NO YES NO
18 NO NO NO NO YES NO
19 YES NO YES YES YES YES
20 NO YES NO NO NO NO
21 YES NO NO NO YES YES
22 NO YES NO NO NO NO
23 NO NO YES NO YES NO
24 NO NO NO NO NO NO
25 YES YES YES YES YES YES
26 NO NO NO NO NO NO
27 YES NO YES NO YES YES
28 NO NO NO NO NO NO
29 NO NO NO NO YES YES
30 NO YES NO NO YES YES
```



|    |    |    |    |    |     |     |
|----|----|----|----|----|-----|-----|
| 31 | NO | NO | NO | NO | YES | YES |
| 32 | NO | NO | NO | NO | YES | YES |

**Note:** If the terminal type is being changed to either `printer` or `none`, make sure the EAGLE 5 ISS has at least two terminals assigned to the Security Administration command class (shown in the SA column in the `rtrv-secu-trm` output). If the terminal being changed in this procedure is being removed from the Security Administration command class, and if this change would leave the EAGLE 5 ISS with only one terminal assigned to the Security Administration command class, go to the [Changing Terminal Command Class Assignments](#) on page 450 procedure and change the command class assignment of another terminal to include the Security Administration command class.

- Change the terminal characteristics using the `chg-trm` command.

For this example enter these commands.

```
chg-trm:trm=4:baud=9600:traf=no:link=yes:sa=yes:db=yes
```

```
chg-trm:trm=19:type=none
```

```
chg-trm:trm=21:sys=yes:link=yes:sa=yes:db=yes:trout=30:logintmr=30:logoutmr=60:pngtimeint=1000:pngfailcnt=3
```

```
chg-trm:trm=8:type=emsalm
```

```
chg-trm:trm=23:type=emsalm
```

**Note:** If [Step 4](#) on page 441 was not performed in this procedure (placing the terminal out of service), do not specify these parameters with the `chg-trm` command:

- `baud`, `sb`, `prty`, `fc` (the communications attributes of the terminal).  
These parameters cannot be specified for terminals 17 to 40.
- the terminal type (`type`).
- the `logintmr`, `logoutmr`, `pngtimeint`, `pngfailcnt` parameters



**CAUTION**

**CAUTION:** If the terminal type is being changed to `emsalm`, it is recommended that all the output message group settings for an EMSALM terminal are set to `yes`. Changing any of the output message group settings to `no` could prevent alarm messages controlled by the output message group from being displayed on the EMSALM terminal.



**CAUTION**

**CAUTION:** If a terminal dedicated to measurements collection is configured (see the [Configuring the Measurements Terminal for an EAGLE 5 ISS Containing 700 Signaling Links](#) on page 490 procedure), it is recommended that this terminal is not changed to an EMSALM terminal.

When these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
CHG-TRM: MASP A - COMPLTD
```

- Verify the changes made in [Step 7](#) on page 443 by using the `rtrv-trm` command with the terminal number specified in [Step 7](#) on page 443.

For this example, enter these commands.

```
rtrv-trm:trm=4
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 36.0.0
TRM TYPE COMM FC TMOUT MXINV DURAL
4 VT320 9600-7-E-1 BOTH 30 5 00:30:00

TRM TRAF LINK SA SYS PU DB UIMRD
4 NO YES YES NO NO YES NO

APP APP
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
4 YES YES YES YES YES NO YES YES YES YES NO NO
```

rtrv-trm:trm=19

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 39.0.0
TRM TYPE LOC TMOUT MXINV DURAL SECURE
19 NONE 1201 60 5 00:30:00 yes

TRM TRAF LINK SA SYS PU DB UIMRD
19 NO NO NO NO NO NO NO

APP APP
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
19 NO NO NO NO NO NO NO NO NO NO NO NO
```

rtrv-trm:trm=21

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 39.0.0
TRM TYPE LOC TMOUT MXINV DURAL SECURE
21 TELNET 1201 30 5 00:30:00 yes

TRM LOGINTMR LOGOUTTMR PNGTIMEINT PNGFAILCNT
(sec) (sec) (msec)
21 30 60 1000 3

TRM TRAF LINK SA SYS PU DB UIMRD
21 NO YES YES YES NO YES NO

APP APP
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
21 NO NO NO NO NO NO NO NO NO NO NO NO
```

rtrv-trm:trm=8

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 36.0.0
TRM TYPE COMM FC TMOUT MXINV DURAL
8 EMSALM 19200-7-E-2 BOTH 30 5 00:30:00

TRM TRAF LINK SA SYS PU DB UIMRD
8 YES YES YES YES YES YES YES

APP APP
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
8 YES YES YES YES YES YES YES YES YES YES YES YES
```

rtrv-trm:trm=23

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 39.0.0
TRM TYPE LOC TMOUT MXINV DURAL SECURE
23 EMSALM 1201 60 5 00:30:00 yes
```

```

TRM PNGTIMEINT PNGFAILCNT
23 none 1

TRM TRAF LINK SA SYS PU DB UIMRD
23 YES YES YES YES YES YES YES YES
 APP APP
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
23 YES YES YES YES YES YES YES YES YES YES YES YES

```

**Note:** If there terminal was not inhibited in [Step 4](#) on page 441, continue the procedure with [Step 9](#) on page 445.

9. When the changes are complete, and if the terminal was inhibited in [Step 4](#) on page 441 , activate the terminal using the `rst-trm` command.

For this example, enter these commands.

```

rst-trm:trm=4
rst-trm:trm=8
rst-trm:trm=19
rst-trm:trm=23
rst-trm:trm=21

```

When these commands have successfully completed, this message should appear.

```

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Allow message sent to terminal

```

10. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

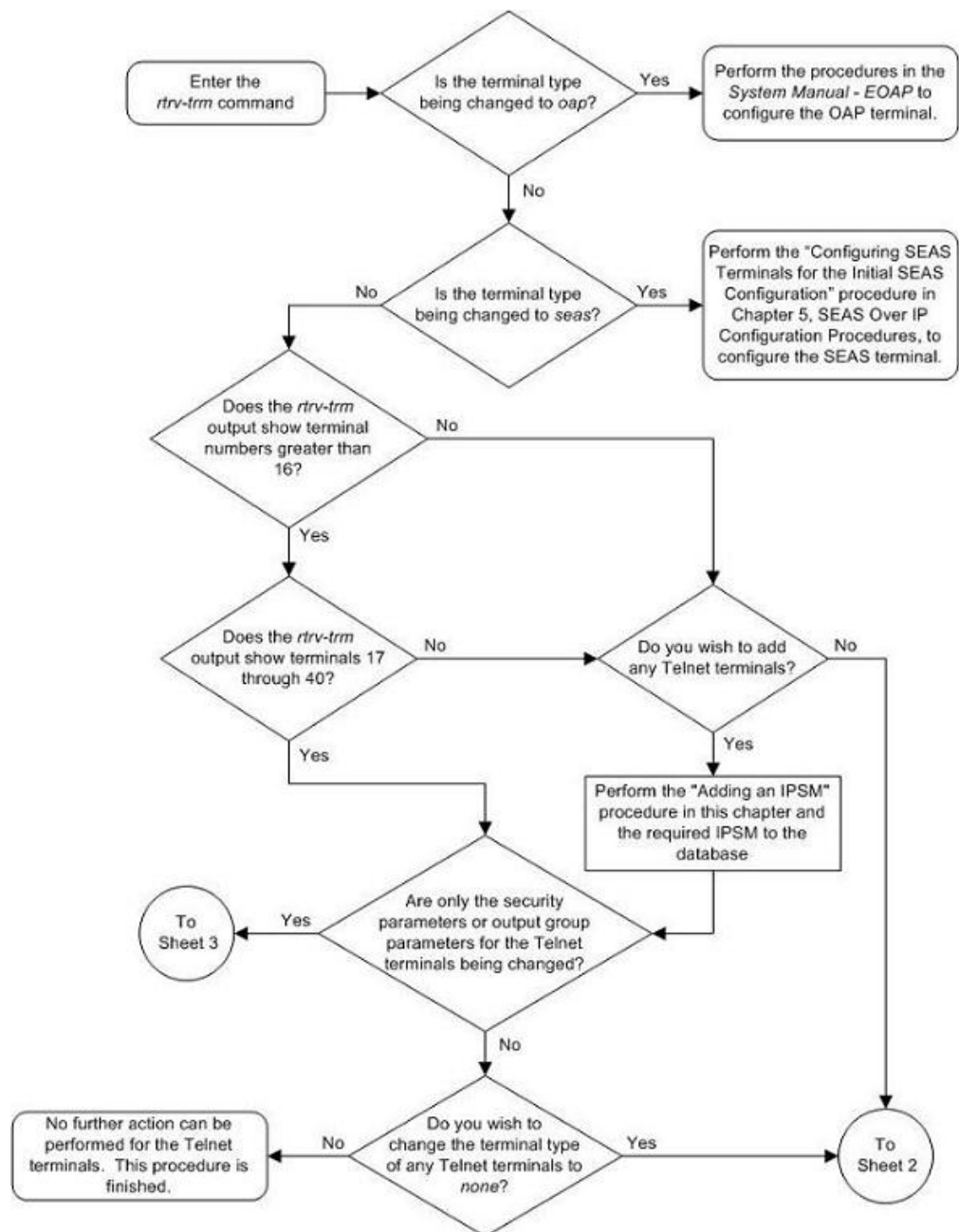
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

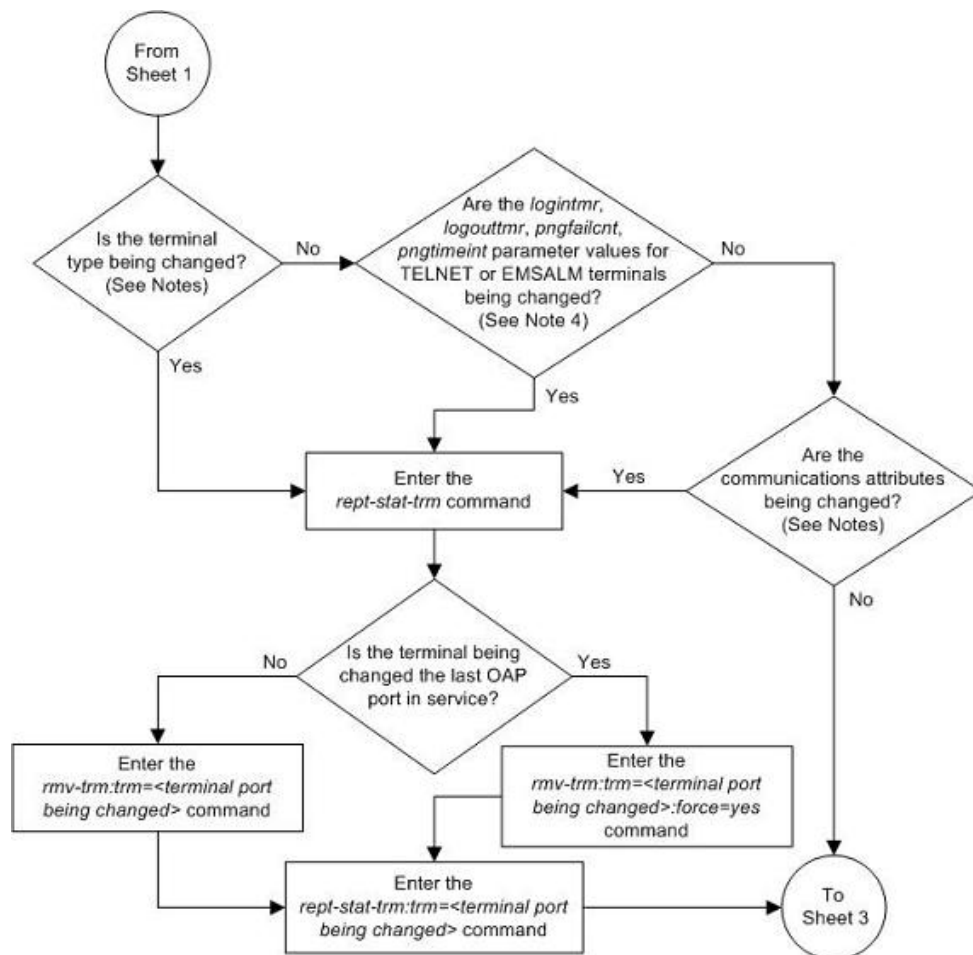
```

BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.

```

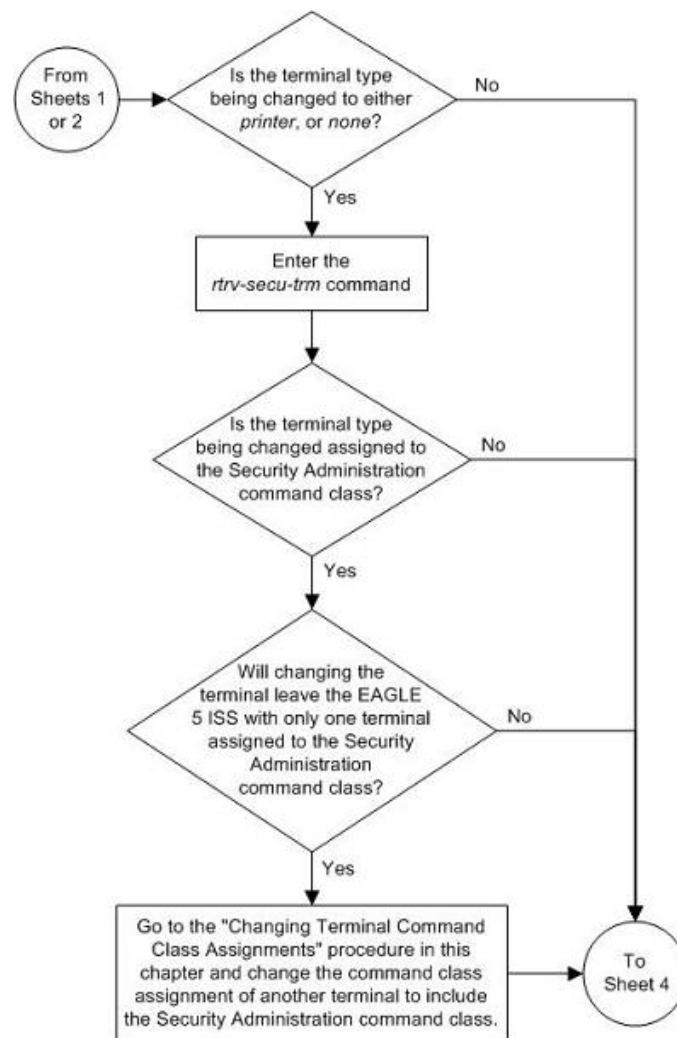
**Figure 44: Changing Terminal Characteristics**

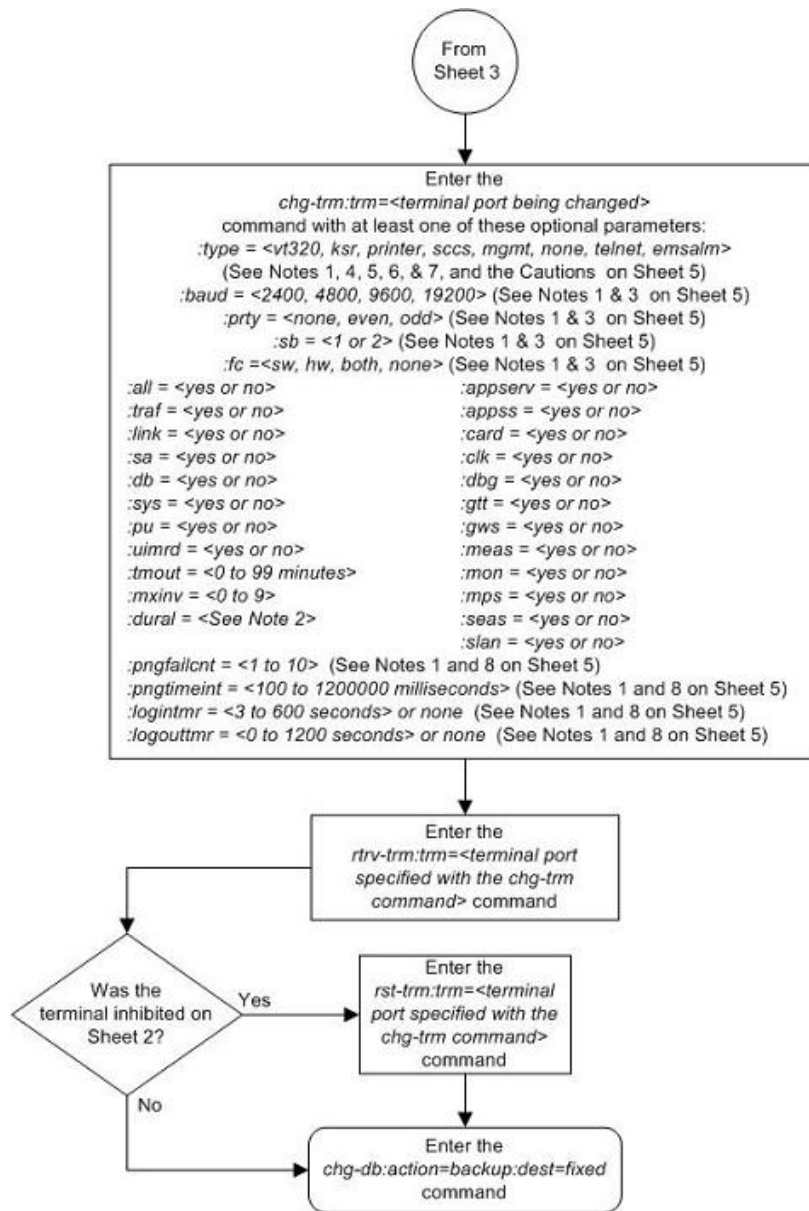




Notes:

1. If the terminal numbers are from 17 to 40, the values for the *type* parameter can be only *telnet*, *none*, or *emsalm*. The communication attributes for these terminals cannot be specified.
2. If the terminal numbers are from 1 to 16, the values for the *type* parameter can be *vt320*, *ksr*, *printer*, *sccs*, *mgmt*, *none*, or *emsalm*. The communication attributes for these terminals can be specified and changed.
3. The communications attributes are defined by these parameters: *baud* (baud rate), *prty* (parity), *sb* (stop bits), and *fc* (flow control).
4. The *logintmr* and *logoutmr* parameters can be specified only for TELNET terminals. The *pngfailcnt* and *pngtimeint* parameters can be specified only for TELNET and EMSALM terminals.





Notes:

1. If the terminal was not placed out of service on Sheet 2, this parameter cannot be specified with the *chg-trm* command.
2. The value of the *dural* parameter can be expressed in seconds (0 - 59), minutes and seconds (0 - 5959), or hours, minutes, and seconds (0 - 995959). The value 999999 for the *dural* parameter disables the terminal, when the login failure threshold has been exceeded, for an indefinite period of time.
3. This parameter cannot be specified for terminals 17 through 40.
4. The *type=telnet* parameter cannot be specified for terminals 1 through 16. Valid terminal types for terminals 1 through 16 are *vt320*, *ksr*, *printer*, *sccs*, *mgmt*, *none*, or *emsalm*.
5. For terminals 17 through 40, the value of the *type* parameter can be only *telnet*, *none*, or *emsalm*.
6. The output group settings are set to *yes* when the terminal type is changed to *emsalm*. The output group settings for an EMSALM terminal can be changed.

**Caution:** It is recommended that all the output message group settings for an EMSALM terminal are set to *yes*. Changing any of the output message group settings to *no* could prevent alarm messages controlled by the output message group from being displayed on the EMSALM terminal.

**Caution:** If a terminal dedicated to measurements collection is configured (see the "Configuring the Measurements Terminal for a 700 Signaling Link System" procedure in this chapter), it is recommended that this terminal is not changed to an EMSALM terminal.

7. The output group settings are not changed when the terminal type is changed from *emsalm* to another terminal type.
8. The *logintmr* and *logouttmr* parameters can be specified only for TELNET terminals. The *pngfailcnt* and *pngtimeint* parameters can be specified only for TELNET and EMSALM terminals.

## Changing Terminal Command Class Assignments

This procedure is used to change the assignment of command classes to a terminal using the *chg-secu-trm* command. This procedure can only be performed if you have been assigned the command class "Security Administration." This can be useful to restrict the types of commands that can be entered on an EAGLE 5 ISS terminal. This procedure can only be performed if you and the terminal have been assigned the command class "Security Administration." The EAGLE 5 ISS commands are grouped into these command classes.

- Basic
- Database Administration
- Debug
- Link Maintenance
- Program Update
- Security Administration
- System Maintenance
- 32 Configurable Command Classes

With the *chg-secu-trm* command, only six of these command classes can be assigned to a terminal. The Basic command class is automatically assigned to every terminal and to every user and is not configurable. Refer to the *Commands Manual* for a list of command classes and the commands assigned to them.

The *chg-secu-trm* command uses these parameters.

:*trm* – The terminal number 1-16.

:*all* – The commands in all non-configurable command classes (*dbg*, *link*, *sys*, *sa*, *pu*, *db*) can be entered on the specified terminal.

:*db* – Database Administration commands can be entered on the specified terminal.



:dbg – Debug commands can be entered on the specified terminal.

:link – Link Maintenance commands can be entered on the specified terminal.

:pu – Program Update commands can be entered on the specified terminal.

:sa – Security Administration commands can be entered on the specified terminal.

:sys – System Maintenance commands can be entered on the specified terminal.

:cc1 - :cc8 – Eight configurable command classes. These parameters specify whether or not the commands in the specified configurable command class can be entered on the specified terminal. The value of these parameters consist of the configurable command class name (1 alphabetic character followed by 2 alphanumeric characters), and either yes or no. The command class name and the yes or no values are separated by a dash. For example, to allow commands in the configurable command class db1 from terminal 5, the cc1=db1-yes parameter would be specified in the chg-secu-trm command for terminal5.

To specify any configurable command classes, the Command Class Management feature must be enabled and turned on. Enter the rtrv-ctrl-feat command to verify whether or not the Command Class Management feature is enabled. If the Command Class Management feature is not enabled or turned on, perform [Activating Controlled Features](#) on page 606 to enable and turn on the Command Class Management feature. Up to 32 configurable command classes can be assigned to terminals. When the Command Class Management feature is enabled and turned on, the configurable command class names are given the names u01 - u32. These command class names, the descriptions of these command classes, and the commands assigned to these command classes can be changed using [Configuring Command Classes](#) on page 459.

The chg-secu-trm command allows up to eight configurable command classes to be assigned to a terminal each time the chg-secu-trm command is performed.

If the all=yes parameter and the db, dbg, link, pu, sa, sys parameter values are specified as no, for example, chg-secu-trm:trm=1:all=yes:pu=no; all commands can be entered on the specified terminal except those commands in the command class specified with the chg-secu-trm command. In this example, all commands can be entered on terminal 1 except for program update commands.

The terminal command class assignments cannot be changed for the specified terminal if a user is currently logged onto that terminal. This can be verified with the rept-stat-user command.

At least two terminals in the EAGLE 5 ISS must always be assigned to the security administration command class to prevent the EAGLE 5 ISS from becoming unadministerable.

It is possible that a terminal with the terminal type of printer, oap, or none can be assigned to the Security Administration command class. Terminals with these terminal types are not counted as having Security Administration authority since commands cannot be administered from these terminal types and is shown in the rtrv-secu-trm output report as "\*\*\*" instead of yes.

When the EAGLE 5 ISS is delivered to the user, the terminal command class assignments will be set to the system default values for these parameters.

all = no

db = no

dbg = no

link = no

pu = no

sa = yes

sys = no

The examples in this procedure are used to change the command class assignments to the terminal assigned to port 4 to these values: Link Maintenance = yes, Security Administration = no, Program Update = yes, Database Administration = yes.

1. Display the command class values of all terminals using the `rtrv-secu-trm` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 12:31:04 GMT EAGLE5 36.0.0
```

| TRM | LINK | SA  | SYS | PU  | DB  | DBG |
|-----|------|-----|-----|-----|-----|-----|
| 1   | NO   | NO  | YES | NO  | YES | NO  |
| 2   | NO   | NO  | NO  | NO  | YES | NO  |
| 3   | YES  | *** | YES | YES | YES | YES |
| 4   | NO   | YES | NO  | NO  | NO  | NO  |
| 5   | YES  | NO  | YES | NO  | YES | YES |
| 6   | NO   | NO  | NO  | NO  | NO  | NO  |
| 7   | NO   | NO  | YES | NO  | YES | NO  |
| 8   | NO   | NO  | NO  | NO  | NO  | NO  |
| 9   | YES  | YES | YES | YES | YES | YES |
| 10  | NO   | NO  | NO  | NO  | NO  | NO  |
| 11  | YES  | NO  | YES | NO  | YES | YES |
| 12  | NO   | NO  | NO  | NO  | NO  | NO  |
| 13  | NO   | NO  | NO  | NO  | YES | YES |
| 14  | NO   | NO  | NO  | NO  | YES | YES |
| 15  | NO   | NO  | NO  | NO  | YES | YES |
| 16  | NO   | NO  | NO  | NO  | YES | YES |

Continue the procedure by performing one of these steps.

- If the cc1 through cc8 parameters are not being specified in this procedure, continue the procedure with [Step 4](#) on page 453.
  - If the cc1 through cc8 parameters will be specified in this procedure, continue the procedure by performing one of these steps.
    - If configurable command classes are shown in the `rtrv-secu-user` output, continue the procedure with [Step 3](#) on page 453.
    - If configurable command classes are not shown in the `rtrv-secu-user` output, continue the procedure with [Step 2](#) on page 452.
2. Verify that the Command Class Management feature is enabled and turned on, by entering the `rtrv-ctrl-feat` command with the `partnum=89005801` parameter.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
Feature Name Partnum Status Quantity
Command Class Management 893005801 off ----
```

**Note:** The `rtrv-ctrl-feat` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-ctrl-feat` command, see the `rtrv-ctrl-feat` command description in the *Commands Manual*.

If the Command Class Management feature is enabled and turned on (status = on), continue the procedure with [Step 3](#) on page 453. If the Command Class Management feature is not enabled

or turned on, perform the [Activating Controlled Features](#) on page 606 to enable and turn on the Command Class Management feature.

**CAUTION**

If the Command Class Management feature is temporarily enabled, the configurable command classes can be assigned and used only for the amount of time shown in the Trial Period Left column in the rtrv-ctrl-feat output.

3. Display the descriptions of the configurable command classes in the database by entering the rtrv-cmd command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 21:15:37 GMT EAGLE5 41.0.0
CMD CLASS
alw-slk link, u11
ent-user sa
unhb-slk link
rtrv-attr-seculog sa, u31
inh-slk link, abc
rtrv-meas-sched link, abc, def
act-lbp link
act-dlk link
act-slk link
rtrv-seculog sa, abc, def, ghi
act-lpo link
blk-slk link, abc, u23, u31
dact-lbp link
canc-dlk link
inh-card sys
canc-lpo link, u01, u02, u03, u04, u05, u06, u07, u08, u09, u10,
u11, u12, u13
canc-slk link
ublk-slk link, u01, u02, u03, u04, u05, u06, u07, u08, u09, u10,
u11, u12, u13, u14, u15, u16, u17, u18, u19, u20, u21,
u22, u23, u24, u25, u26, u27, u28, u29, u30, u31, u32
inh-trm sys, krb
rept-meas link
.
.
.
chg-meas link
tst-dlk link, krb
tst-slk link
```

If the desired configurable command class descriptions are not in the database, perform [Configuring Command Classes](#) on page 459 to configure the desired command classes.

4. Verify that no users are logged onto the terminal whose command class assignments you wish to change using the rept-stat-user command.

If the user is logged onto the terminal, notify the user to log off the terminal. This is an example of the possible output.

```
rlghncxa03w 09-05-01 09:12:15 GMT EAGLE5 41.0.0
REPT-STAT-USER COMPLTD
USER ID TERM # IDLE SINCE COMMAND STATE
fred 3 09-04-19 05:06:43 rept-stat-user PROCESSING
frodo 13 09-04-20 08:12:23 chg-db IDLE
manny 1 09-04-27 04:37:56 ent-dlk IDLE
travist 7 09-04-30 10:06:22 rtrv-meas IDLE
```

5. If you wish to change the Security Administration command class assignment of the specified terminal to no (:sa=no), make sure the EAGLE 5 ISS has at least two terminals assigned to the Security Administration command class.

This is shown in the output of [Step 1](#) on page 452, the `rtrv-secu-trm` command output, with the entry YES in the SA field. If this procedure would leave the EAGLE 5 ISS with only one terminal assigned to the Security Administration command class, use the `chg-secu-trm` command and change another terminal's assignment to the Security Administration command class from NO to YES. For this example, enter the `chg-secu-trm:trm=1:sa=yes` command

6. Change the command class assignments of the terminal using the `chg-secu-trm` command.

For this example enter this command.

```
chg-secu-trm:trm=4:link=yes:sa=no:pu=yes:db=yes
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 12:31:04 GMT EAGLE5 36.0.0
CHG-SECU-TRM: MASP A - COMPLTD
```

7. Verify the changes made in [Step 6](#) on page 454 by using the `rtrv-secu-trm` command with the port number specified in [Step 6](#) on page 454.

For this example, enter this command.

```
rtrv-secu-trm:trm=4
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 12:31:04 GMT EAGLE5 36.0.0

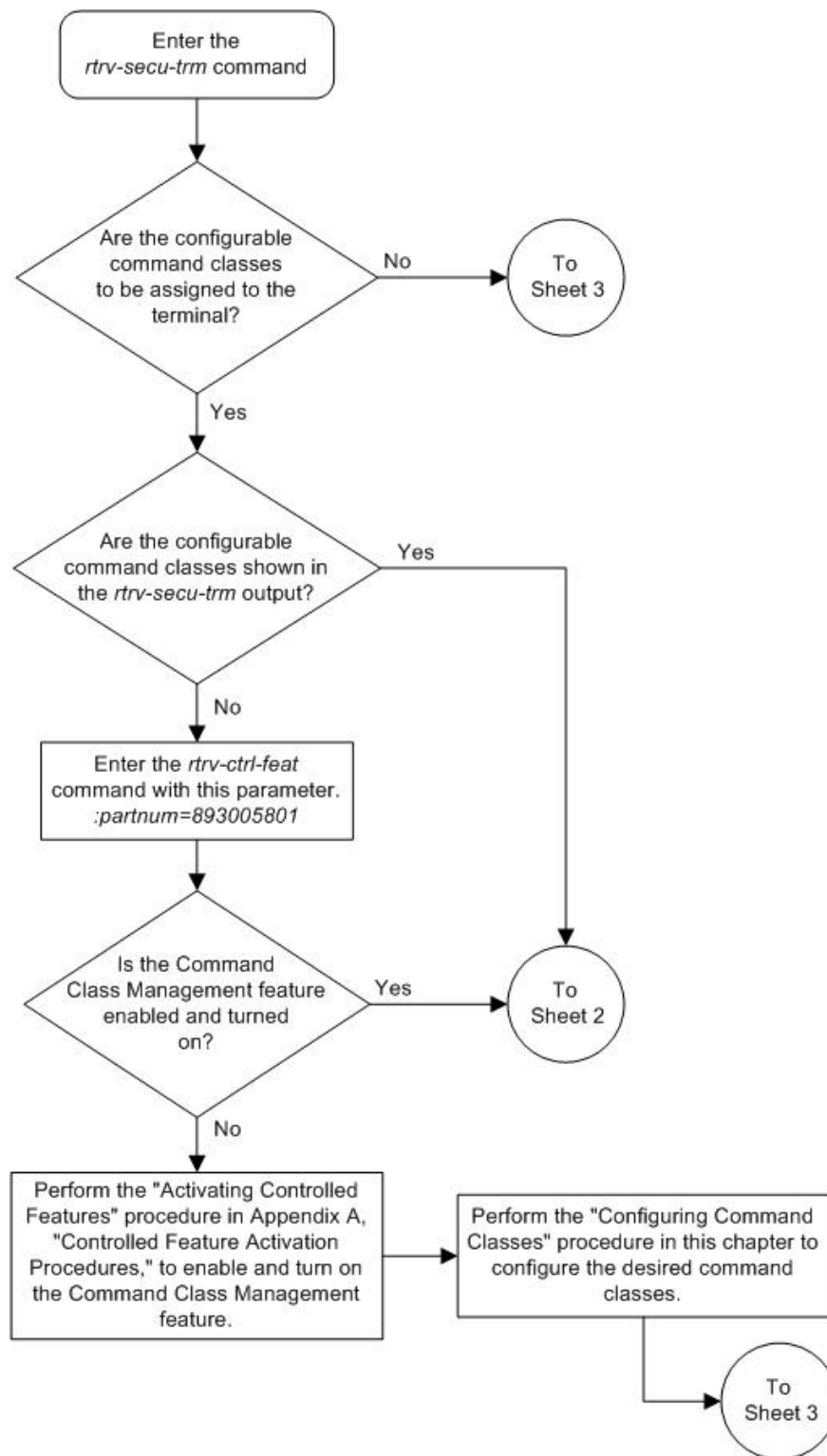
TRM LINK SA SYS PU DB DBG
4 YES NO NO YES YES NO
```

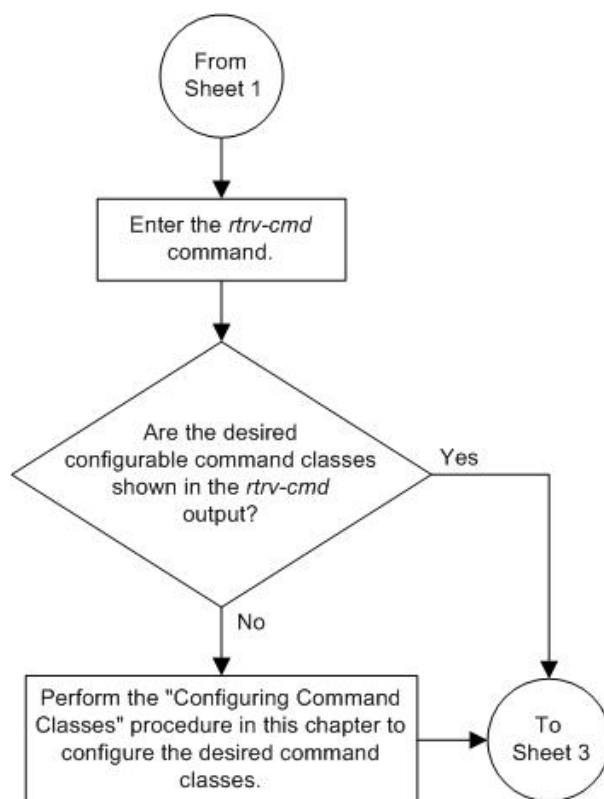
8. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

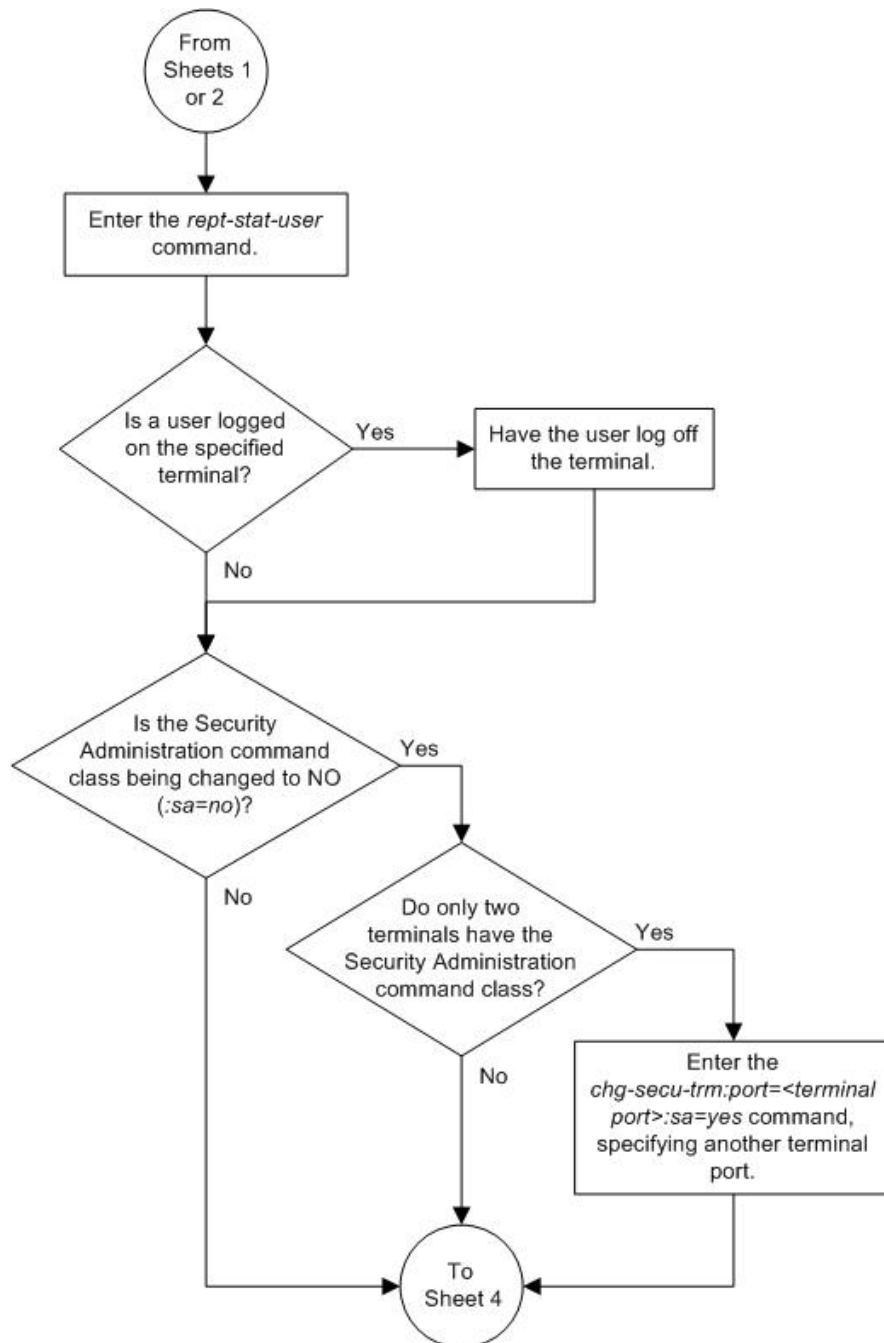
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

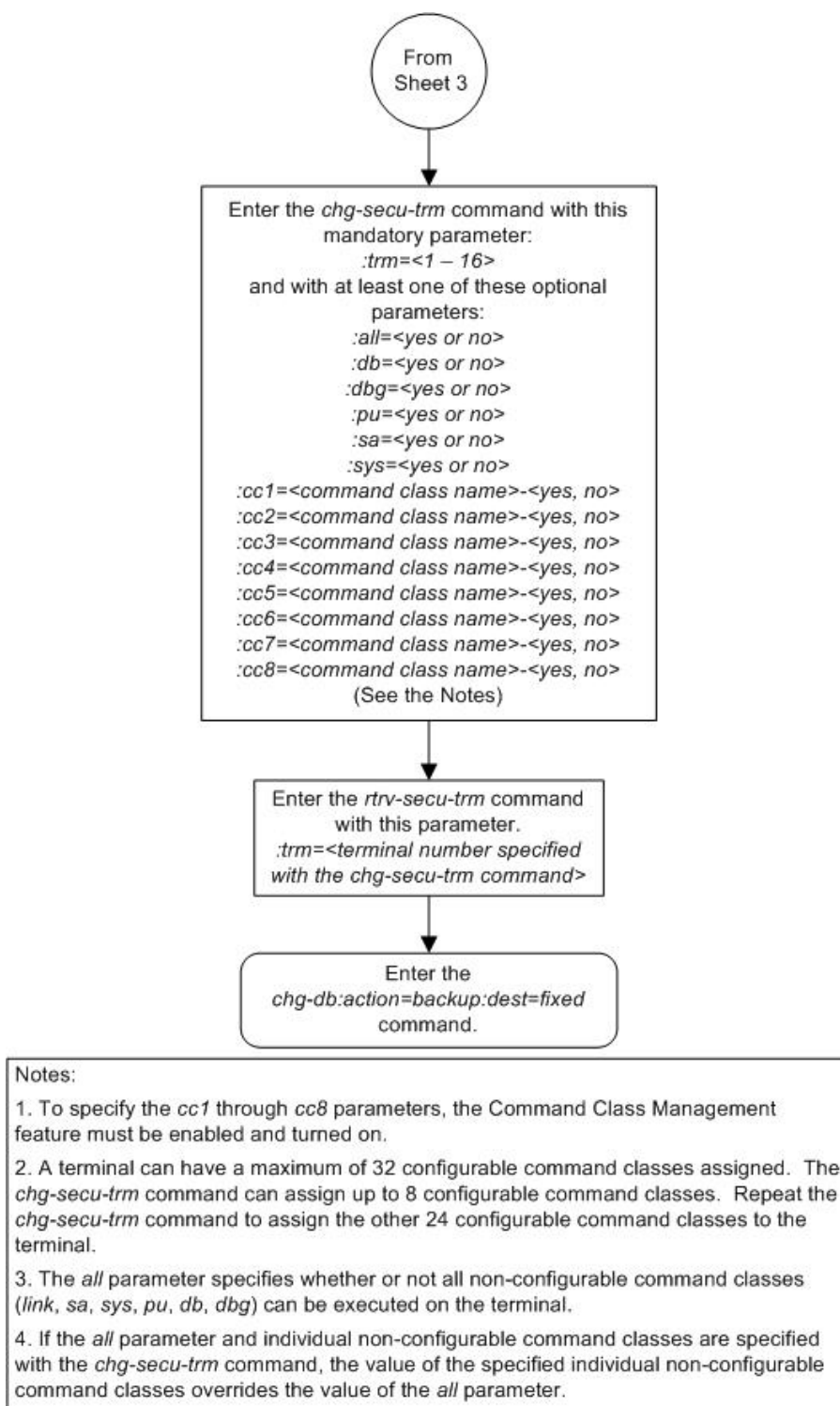
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 45: Changing Terminal Command Class Assignments**











## Configuring Command Classes

This procedure is used to assign different names to the 32 configurable command classes, and to assign commands to these configurable command classes.

The EAGLE 5 ISS still has the non-configurable seven command classes: Basic, Database Administration, Debug, Link Maintenance, Program Update, Security Administration, System Maintenance.

The Command Class Management feature allows commands from any of these non-configurable command classes to be placed into another command class, which can be assigned to a user or terminal. This gives greater control over the commands that users can use, and to the commands that can be executed from a given terminal. For example, a user needs to use only these commands: `rtrv-card`, `rtrv-ls`, `rtrv-slk`, `rtrv-dstn`, `rtrv-rte`, `rtrv-user`, `rtrv-secu-user`, `rept-stat-db`, `rept-stat-card`, `rept-stat-slk`, `rept-stat-ls`, `rtrv-gpl`, `rept-stat-gpl`, `rept-stat-rte`, `rept-meas`.

To give this user access to these commands without the Command Class Management feature would require the user to be assigned to these command classes: Database, Security Administration, System Maintenance, Program Update, and Link Maintenance. In addition to giving access to the commands this user needs, this user has access to all the commands in these command classes. This would also allow the user to add, change, or remove database entities (cards, signaling links, routes, etc.), to inhibit signaling links, enable features with either the `chg-feat` or `enable-ctrl-feat` command that you may not want turned on.

The Command Class Management feature allows these commands to be placed in their own command class which can be assigned to the user. Once the new command class is configured with these commands, the commands will be in their original command classes as well as the new configured command class. The user can be restricted to executing the commands in the new configured command class.

Commands can also be removed from configurable command classes.

When the Command Class Management controlled feature is enabled and activated, these command classes are created with the names U01, U02, U03, ... U32. The names of these command classes, and the descriptions of these command classes can be changed with the `chg-cmdclass` command. The `chg-cmdclass` command uses these parameters.

**:class** – The current class name, shown in the `rtrv-cmdclass` command output.

**:nclass** – The new command class name consisting of 1 alphabetic character and 2 alpha-numeric characters.

**:descr** – The description of the new command class consisting of 1 alphabetic character and up to 31 alpha-numeric characters, enclosed in double quotes.

Commands can be assigned to these configurable command classes using the `chg-cmd` command. The `chg-cmd` command uses these parameters.

**:cmd** – The command being added or removed from the configurable command class.

**:class1 - :class8** – The name of the configurable command class that command is being added to or removed from with either yes (to add the command) or no (to remove the command) separated by a dash. For example, to add a command to configurable class db1, the `class1=db1-yes` parameter would be specified.

Up to eight configurable command classes can be specified with the `chg -cmd` command. To assign the command to more than eight configurable command classes, the repeat `chg -cmd` command until the desired number of configurable command classes, up to 32, have been specified.

To configure command classes, the Command Class Management feature must be enabled and turned on. Enter the `rtrv-ctrl-feat` command to verify whether or not the Command Class Management feature is enabled. If the Command Class Management feature is not enabled or turned on, perform [Activating Controlled Features](#) on page 606 to enable and turn on the Command Class Management feature.

1. Verify that the Command Class Management feature is enabled and turned on, by entering the `rtrv-ctrl-feat` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
Feature Name Partnum Status Quantity
Command Class Management 893005801 off ----
```

**Note:** The `rtrv-ctrl-feat` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-ctrl-feat` command, see the `rtrv-ctrl-feat` command description in the *Commands Manual*.

If the Command Class Management feature is enabled and turned on (`status = on`), continue the procedure with [Step 2](#) on page 460.

If the Command Class Management feature is not enabled or turned on, perform [Activating Controlled Features](#) on page 606 to enable and turn on the Command Class Management feature. After the Command Class Management feature is turned on, continue the procedure with [Step 2](#) on page 460.



**CAUTION**

If the Command Class Management feature is temporarily enabled, the configurable command classes can be assigned and used only for the amount of time shown in the `Trial Period Left` column in the `rtrv-ctrl-feat` output.

2. Display the descriptions of the configurable command classes in the database by entering the `rtrv-cmd` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 21:15:37 GMT EAGLE5 41.0.0
CMD CLASS
alw-slk link, u11
ent-user sa
unhb-slk link
rtrv-attr-seculog sa, u31
inh-slk link, abc
rtrv-meas-sched link, abc, def
act-lbp link
act-dlk link
act-slk link
rtrv-seculog sa, abc, def, ghi
act-lpo link
blk-slk link, abc, u23, u31
dact-lbp link
canc-dlk link
inh-card sys
```

```

canc-lpo link, u01, u02, u03, u04, u05, u06, u07, u08, u09, u10,
 u11, u12, u13
canc-slk link
ublk-slk link, u01, u02, u03, u04, u05, u06, u07, u08, u09, u10,
 u11, u12, u13, u14, u15, u16, u17, u18, u19, u20, u21,
 u22, u23, u24, u25, u26, u27, u28, u29, u30, u31, u32
inh-trm sys, krb
rept-meas link
.
.
.
chg-meas link
tst-dlk link, krb
tst-slk link

```

If the desired configurable command class descriptions are in the database, and the commands are in the desired command classes, no further action is necessary. This procedure is finished.

**Note:** If the name of a configurable command class is not being changed, continue the procedure with [Step 6](#) on page 462.

3. Display the configurable command class descriptions by entering the `rt rv-cmdclass` command.

This is an example of the possible output.

```

rlghncxa03w 09-03-01 21:15:37 GMT EAGLE5 40.1.0
CLASS DESCR
link link maintenance commands
sa security administration commands
sys system maintenance commands
db database administration commands
dbg debug commands
pu program update commands
u01 configurable command class 1
krb my command class description
u03 configurable command class 3
dab your command class description
u05 configurable command class 5
.
.
.
u32 configurable command class 32

```

4. Change the configurable command class name or description by entering the `chg-cmdclass` command.

For this example, enter these commands.

```
chg-cmdclass:class=u01:nclass=db1:descr="retrieve database commands"
```

```
chg-cmdclass:class=dab:nclass=s15
```

```
chg-cmdclass:class=u03:descr="user commands 3"
```

**Note:** The command classes `link`, `sa`, `sys`, `db`, `dbg`, and `pu` cannot be changed.

When these commands have successfully completed, this message should appear.

```

rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
CHG-CMDCLASS: MASP A - COMPLTD

```

5. Verify the changes by entering the `rtrv-cmdclass` command, specifying the command class name, or new command class name if the command class name was changed, used in [Step 4](#) on page 461.

For this example, enter these commands.

```
rtrv-cmdclass:class=db1
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
CLASS DESCR
db1 retrieve database commands
```

```
rtrv-cmdclass:class=s15
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
CLASS DESCR
s15 your command class description
```

```
rtrv-cmdclass:class=u03
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
CLASS DESCR
u03 user commands 3
```

6. Add or remove a command from the desired command classes by entering the `chg-cmd` command.

For this example, enter these commands.

```
chg-cmd:cmd=rtrv-card:class1=db1=yes
```

```
chg-cmd:cmd=tst-dlk:class1=krb=no
```

When these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
CHG-CMD: MASP A - COMPLTD
```

Up to eight configurable command classes can be specified with the `chg-cmd` command. If you wish to assign the command to more than eight configurable command classes, but no more than 32 configurable command classes, repeat this step until the desired configurable command class assignments have been made.

7. Verify the changes by entering the `rtrv-cmd` command specifying the `cmd` parameter value used in step 6.

For this example, enter these commands.

```
rtrv-cmd:cmd=rtrv-card
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
```

```
CMD CLASS
rtrv-card db, db1
```

```
rtrv-cmd:cmd=tst-dlk
```

This is an example of the possible output.

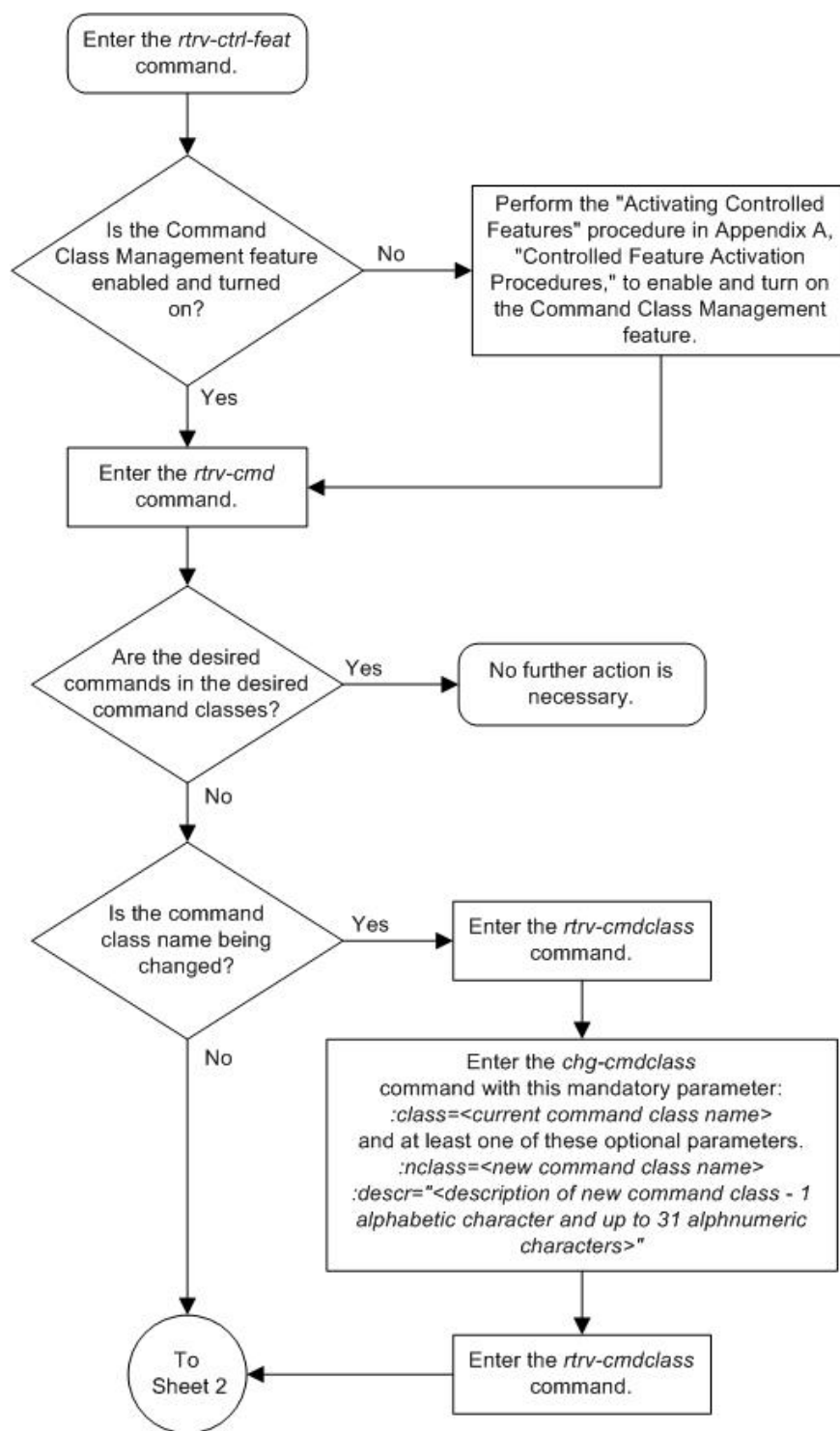
```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
CMD CLASS
tst-dlk link
```

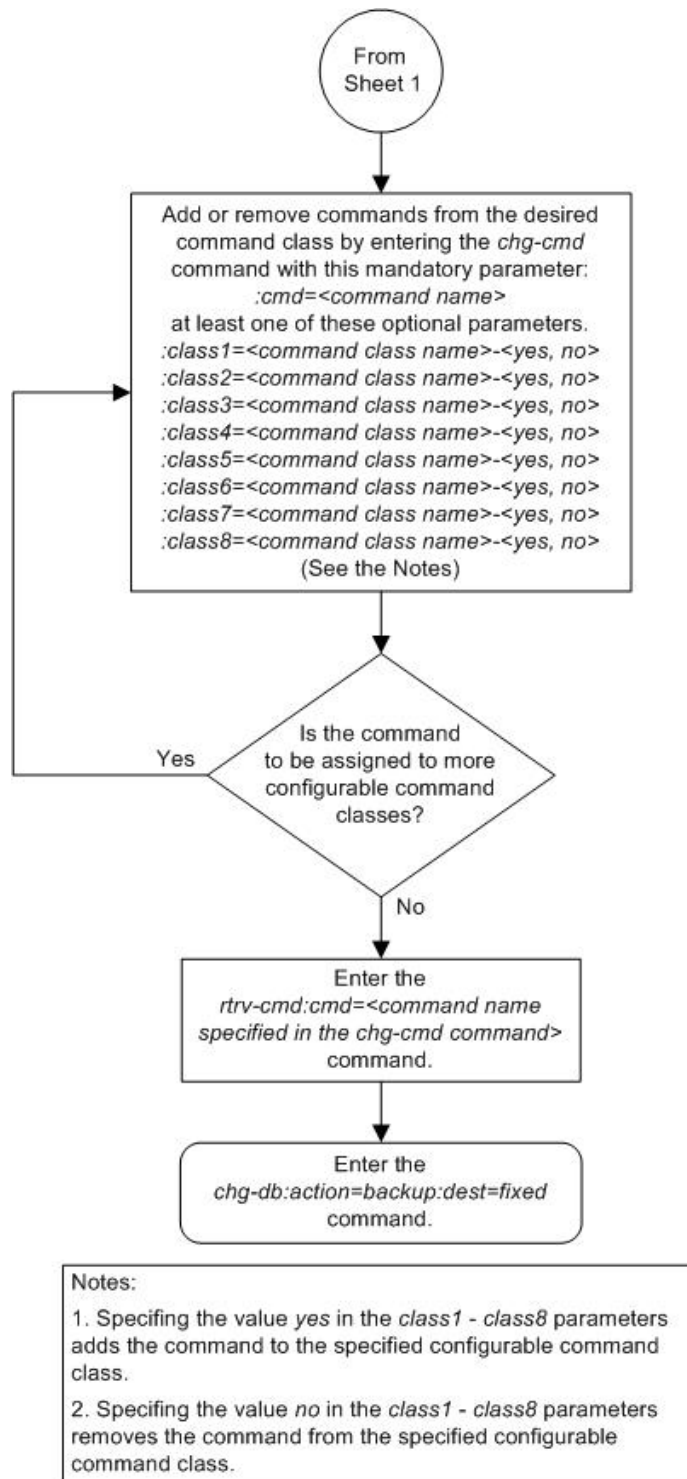
8. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 46: Configuring Command Classes**





## Adding a Shelf

This procedure is used to add a shelf to the database using the `ent-shlf` command. The shelf may not already exist in the database. The control shelf (Shelf 1100) cannot be added to the database. The `ent-shlf` command uses these parameters.

: `type` – The shelf type. There is only one shelf type that can be added to the database, an extension shelf, shown by the value for this parameter as `ext`.

: `loc` – The shelf location

The examples in this procedure are used to add an extension shelf to frame 3 of the EAGLE 5 ISS.

1. Display the current shelf information using the `rtrv-shlf` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
SHELF DISPLAY
FRAME SHELF TYPE
 1 1 CONTROL
 1 2 EXTENSION
 1 3 EXTENSION
 2 2 EXTENSION
```

2. Add the shelf using the `ent-shlf` command.

For this example, the shelf to be added is the first shelf in frame 3. Enter this command.

```
ent-shlf:loc=3100:type=ext
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
ENT-SHLF: MASP A - COMPLTD
```

3. Verify the changes using the `rtrv-shlf` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
SHELF DISPLAY
FRAME SHELF TYPE
 1 1 CONTROL
 1 2 EXTENSION
 1 3 EXTENSION
 2 2 EXTENSION
 3 1 EXTENSION
```

4. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

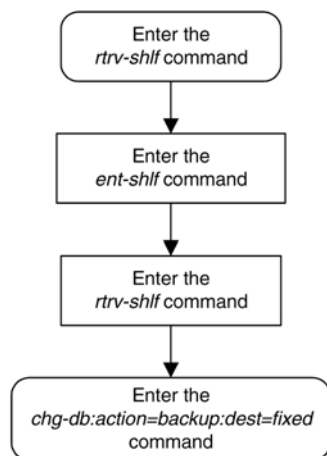
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
```



BACKUP (FIXED) : MASP A - Backup starts on standby MASP.  
 BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.

Figure 47: Adding a Shelf



## Removing a Shelf

This procedure is used to remove a shelf from the database using the `dlt-shlf` command. If the shelf to be removed does not exist in the database, it cannot be removed. The control shelf (Shelf 1100) cannot be removed from the database. The `dlt-shlf` command has only one parameter, `loc`, which is the location of the shelf.

Before a shelf can be removed from the database, all of the cards in that shelf must be removed from the database. The procedures for removing these cards are based on the application that is assigned to these cards. [Table 12: Card Removal Procedures](#) on page 467 shows the location of these procedures.

Table 12: Card Removal Procedures

| Card Application                  | Procedure                                                                                                                                                                                              |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SS7ANSI, ATMANSI, CCS7ITU, ATMITU | <a href="#">Removing an SS7 LIM</a> on page 476<br>"Removing an E1 Card" in the <i>Database Administration Manual - SS7</i><br>"Removing a T1 Card" in the <i>Database Administration Manual - SS7</i> |
| VSCCP                             | "Removing a Service Module" in the <i>Database Administration Manual - Global Title Translation</i>                                                                                                    |
| GLS                               | "Removing a GLS Card" in the <i>Database Administration Manual - Gateway Screening</i>                                                                                                                 |

| Card Application              | Procedure                                                                                                              |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------|
| STPLAN                        | "Removing an STP LAN Card" in the <i>Database Administration Manual - Features</i>                                     |
| IPLIM, IPLIMI, SS7IPGW, IPGWI | "Removing an IPLIMx Card" or "Removing an IPGWx Card" in the <i>Database Administration Manual - IP Secure Gateway</i> |
| IPSG                          | "Removing an IPSG Card" in the <i>Database Administration Manual - IP Secure Gateway</i>                               |
| EROUTE                        | "Removing an STC Card" in the <i>Database Administration Manual - Features</i>                                         |
| MCP                           | <a href="#">Removing an MCPM</a> on page 499                                                                           |
| IPS                           | <a href="#">Removing an IPSM</a> on page 538                                                                           |

**CAUTION**

If any card in the shelf is the last card of that type in service, removing that card from the database will cause the traffic handled by that card to be lost or the feature requiring that card to be disabled. See [Table 13: Effect of Removing the Last In-Service Card Type from the Database](#) on page 468 for a description of the effect that removing the last card type that is in service has on the EAGLE 5 ISS.

**Table 13: Effect of Removing the Last In-Service Card Type from the Database**

| Card type                   | Application assigned to card | Effect on the EAGLE 5 ISS                                                                                                                                                                                      |
|-----------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LIMDS0, LIME1, LIMT1, LIMCH | SS7ANSI                      | ANSI traffic is lost.                                                                                                                                                                                          |
| LIMATM                      | ATMANSI                      |                                                                                                                                                                                                                |
| LIME1, LIMT1, LIMCH         | CCS7ITU                      | ITU traffic is lost.                                                                                                                                                                                           |
| LIME1ATM                    | ATMITU                       |                                                                                                                                                                                                                |
| DSM                         | VSCCP                        | Global title translation traffic is lost. If any of the GTT-related features are enabled, the traffic for those features is also lost. Refer to the "Adding a Service Module" procedure in the <i>Database</i> |

| Card type | Application assigned to card | Effect on the EAGLE 5 ISS                                                                                   |
|-----------|------------------------------|-------------------------------------------------------------------------------------------------------------|
|           |                              | <i>Administration Manual - Global Title Translation</i> for a list of the GTT-related features.             |
| TSM       | GLS                          | Gateway screening feature is disabled.                                                                      |
| DCM       | STPLAN                       | STPLAN feature is disabled.                                                                                 |
| DCM       | IPLIM                        | Point-to-point connectivity for IP <sup>7</sup> Secure Gateway functions in ANSI networks is disabled.      |
|           | IPLIMI                       | Point-to-point connectivity for IP <sup>7</sup> Secure Gateway functions in ITU networks is disabled.       |
|           | SS7IPGW                      | Point-to-multipoint connectivity for IP <sup>7</sup> Secure Gateway functions in ANSI networks is disabled. |
|           | IPGWI                        | Point-to-multipoint connectivity for IP <sup>7</sup> Secure Gateway functions in ITU networks is disabled.  |
| ENET      | IPSG                         | Traffic carried by the IPSG card is lost.                                                                   |
| STC       | EROUTE                       | Monitoring of the EAGLE 5 ISS by the EAGLE 5 Integrated Monitoring Support feature is disabled.             |
| MCPM      | MCP                          | The Measurements Platform feature is disabled.                                                              |

| Card type | Application assigned to card | Effect on the EAGLE 5 ISS                                                   |
|-----------|------------------------------|-----------------------------------------------------------------------------|
| IPSM      | IPS                          | IP Telnet sessions and the IP User Interface (Telnet) feature are disabled. |

The shelf being removed in this procedure cannot be removed if the shelf is the only provisioned shelf in the frame and the frame is in the Frame Power Alarm Threshold table. The Frame Power Alarm Threshold table is shown in the `rtrv-frm-pwr` command output. If the frame is shown in the `rtrv-frm-pwr` output, and the shelf is the only shelf in the frame, perform the [Removing an Entry from the Frame Power Alarm Threshold Table](#) on page 556 procedure to remove the frame from the Frame Power Alarm Threshold table.

The examples in this procedure are used to remove shelf 2100 from the database.

1. Display the cards in the database using the `rtrv-card` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 09:12:36 GMT EAGLE5 41.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
1101 DSM VSCCP
1102 TSM GLS
1113 GSPM OAM
1114 TDM-A
1115 GSPM OAM
1116 TDM-B
1117 MDAL
1201 LIMDS0 SS7ANSI sp2 A 0 sp1 B 0
1202 LIMDS0 SS7ANSI sp4 A 0
1203 LIMDS0 SS7ANSI sp3 A 0
1204 LIMDS0 SS7ANSI sp3 A 1
1205 LIMDS0 SS7ANSI nsp3 A 0 nsp4 B 0
1206 LIMDS0 SS7ANSI nsp3 A 1 nsp4 B 1
1211 DSM VSCCP
1212 TSM GLS
1215 DCM STPLAN
1301 LIMATM ATMANSI lsnatm1 A 0
1305 DCM STPLAN
1307 LIMDS0 SS7ANSI sp2 A 1 nsp3 B 2
1308 LIMATM ATMANSI lsnatm1 A 1
1317 DCM STPLAN
2101 LIMDS0 SS7ANSI sp5 A 0 sp8 B 0
2102 LIMDS0 SS7ANSI sp7 A 0
2103 LIMDS0 SS7ANSI sp6 A 0
2104 LIMDS0 SS7ANSI sp6 A 1
2105 LIMDS0 SS7ANSI nsp3 A 0 nsp5 B 0
2106 LIMDS0 SS7ANSI nsp3 A 1 nsp5 B 1
```

In this example, these cards must be removed from the database: 2101, 2102, 2103, 2104, 2105, 2106.

2. Based on the application assigned to the cards in the shelf to be removed, perform the appropriate procedures shown in [Table 12: Card Removal Procedures](#) on page 467 and remove all the cards from the shelf.

The application assigned to the card is shown in the APPL field of the `rtrv-card` command output in step 1.

3. Display the shelves configured in the database by entering the `rtrv-shlf` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
SHELF DISPLAY
FRAME SHELF TYPE
 1 1 CONTROL
 1 2 EXTENSION
 1 3 EXTENSION
 2 1 EXTENSION
```

If the `rtrv-shlf` output shows the shelf being removed in this procedure is not the only shelf in the frame, skip step 4 and go to step 5.

4. Display the frame power alarm thresholds by entering the `rtrv-frm-pwr` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0

Frame Power Threshold (Amps)

cf00 56
ef00 36
```

If the frame containing the shelf being removed in this procedure is shown in the `rtrv-frm-pwr` output, the frame must be removed from the frame power alarm threshold table (shown in the `rtrv-frm-pwr` output) before the shelf can be removed. The following list shows the frames and the shelves contained in those frames.

- Frame CF00 – Shelves 1200 and 1300
- Frame EF00 – Shelves 2100, 2200, and 2300
- Frame EF01 – Shelves 3100, 3200, and 3300
- Frame EF02 – Shelves 4100, 4200, and 4300
- Frame EF03 – Shelves 5100, 5200, and 5300
- Frame EF04 – Shelf 6100

Shelf 1100 is the Control Shelf and is in Frame CF00. Shelf 1100 cannot be removed.

Perform the [Removing an Entry from the Frame Power Alarm Threshold Table](#) on page 556 procedure to remove the frame from the frame power alarm threshold table.

If the frame containing the shelf being removed in this procedure is not shown in the `rtrv-frm-pwr` output, go to step 5.

5. Remove the shelf from the database using the `dlt-shlf` command.

For this example, enter this command.

```
dlt-shlf:loc=2100
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
DLT-SHLF: MASP A - COMPLTD
```

6. Verify the changes with the `rtrv-shlf` command and specify the location of the shelf.

For this example, enter this command.

```
rtrv-shlf:loc=2100
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
SHELF DISPLAY LOCATION=1200
FRAME SHELF TYPE
```

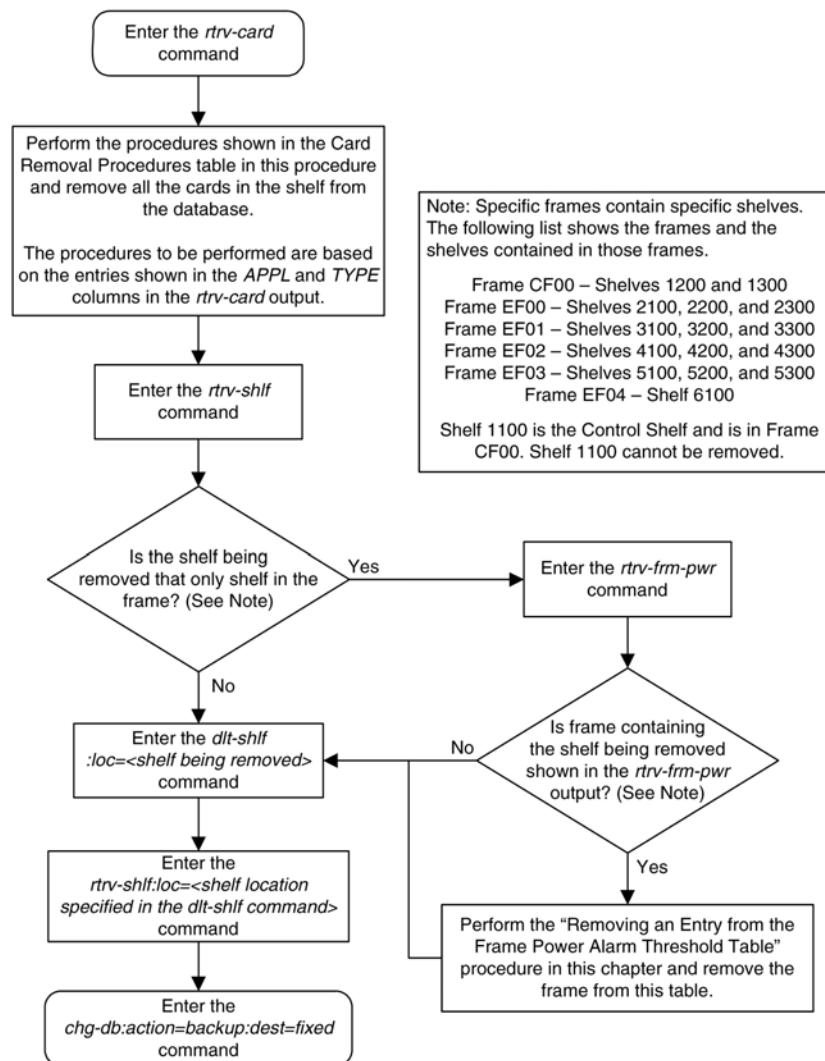
This shelf is UNEQUIPPED in the database.

7. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 48: Removing a Shelf**



## Adding an SS7 LIM

This procedure is used to add a low-speed SS7 LIM (link interface module) to the database using the ent - card command. The SS7 LIM cannot be added if it exists in the database.

The SS7 LIM that is being added in this procedure is the Multiport LIM, part number 870-2061-XX. The Multiport LIM can contain eight signaling links. A maximum of 63 Multiport LIMs can be configured in the database. See the "Determining the Number of High-Speed and Low-Speed Signaling Links" section of Appendix D, "Reference Information," in the *Database Administration Manual - SS7* for information on how to determine the quantities of the different types of signaling links the EAGLE 5 ISS can have. The Multiport LIM is added using these parameters.

- : loc – The location of the card being added to the database.
- : type – The type of card being added to the database - limds0.
- : appl – The application software that is assigned to the card - ss7ansi.

The `ent - card` command also contains the `force` parameter. If the global title translation feature is on, the `force=yes` parameter allows the LIM to be added to the database even if the current SCCP transactions-per-second threshold is unable to support the additional SCCP transaction-per-second capacity created by adding the LIM. This parameter is obsolete and is no longer used.

There are other cards that support signaling links that are provisioned with the `ent - card` command. These cards are provisioned in the following procedures. These cards can also be used to provision ITU signaling links.

- Cards for E1 signaling links are configured in the database using the procedures in Appendix A, "E1 Interface," in the *Database Administration Manual - SS7*.
- Cards for T1 signaling links are configured in the database using the procedures in Appendix B, "T1 Interface," in the *Database Administration Manual - SS7*.
- Cards for ATM high-speed signaling links are configured in the database using the procedures in Appendix C, "ATM Signaling Link Configuration," in the *Database Administration Manual - SS7*.
- IP cards (cards used for IP links) are configured in the database using the procedures in the *Database Administration Manual - IP Secure Gateway*.

The shelf to which the card is to be added, must already be in the database. This can be verified with the `rtrv-shlf` command. If the shelf is not in the database, see the [Adding a Shelf](#) on page 466 procedure.

1. Display the cards in the database using the `rtrv-card` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 09:12:36 GMT EAGLE5 41.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
1101 DSM VSCCP
1102 TSM GLS
1113 GSPM OAM
1114 TDM-A
1115 GSPM OAM
1116 TDM-B
1117 MDAL
1201 LIMDS0 SS7ANSI sp2 A 0 sp1 B 0
1203 LIMDS0 SS7ANSI sp3 A 0
1204 LIMDS0 SS7ANSI sp3 A 1
1206 LIMDS0 SS7ANSI nsp3 A 1 nsp4 B 1
1216 DCM STPLAN
1301 DSM VSCCP
1308 LIMDS0 SS7ANSI sp6 A 1 sp7 B 0
1314 LIMDS0 SS7ANSI sp7 A 1 sp5 B 1
1317 DCM STPLAN
```

The cards should be distributed throughout the EAGLE 5 ISS for proper power distribution. Refer to the *Installation Manual - EAGLE 5 ISS* for the shelf power distribution.

2. Add the card using the `ent - card` command.

For this example, enter these commands.

```
ent-card:loc=1205:type=limds0:appl=ss7ansi
```

```
ent-card:loc=1305:type=limds0:appl=ss7ansi
```

```
ent-card:loc=1311:type=limds0:appl=ss7ansi
```



When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
ENT-CARD: MASP A - COMPLTD
```

3. Verify the changes using the `rtrv-card` command with the card location specified. For this example, enter these commands.

```
rtrv-card: loc=1202
```

This is an example of the possible output.

```
rlghncxa03w 09-05-01 09:12:36 GMT EAGLE5 41.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
1202 LIMDS0 SS7ANSI
```

```
rtrv-card: loc=1205
```

This is an example of the possible output.

```
rlghncxa03w 09-05-01 09:12:36 GMT EAGLE5 41.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
1205 LIMDS0 SS7ANSI
```

```
rtrv-card: loc=1305
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
1305 LIMDS0 SS7ANSI
```

```
rtrv-card: loc=1311
```

This is an example of the possible output.

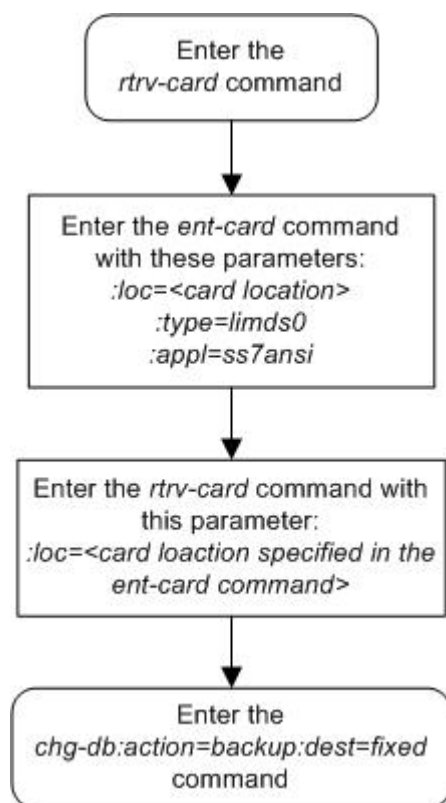
```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
1311 LIMDS0 SS7ANSI
```

4. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 49: Adding an SS7 LIM**



## Removing an SS7 LIM

This procedure is used to remove an SS7 LIM (link interface module) from the database using the `dlt-card` command. The card cannot be removed if it does not exist in the database.

No SS7 signaling links can be assigned to the card you wish to remove from the database.



### CAUTION:

If the SS7 LIM is the last SS7 LIM in service, removing this card from the database will cause SS7 traffic to be lost and isolate the EAGLE 5 ISS from the network.

### Note:

1. LIM-E1 or LIMCH cards for E1 signaling links are removed from the database using the procedures in Appendix A, "E1 Interface" in the *Database Administration Manual - SS7*.
2. LIM-T1 or LIMCH cards for T1 signaling links are removed from the database using the procedures in Appendix B, "T1 Interface" in the *Database Administration Manual - SS7*.
3. IP cards (DCMs used for IP links) are removed from the database using the procedures in the *Database Administration Manual - IP Secure Gateway*.

The examples in this procedure are used to remove the SS7 LIMs in card location 1201, 1311, and 1318.

**Canceling the REPT-STAT-CARD Command**

Because the `rept-stat-card` command used in this procedure can output information for a long period of time, the `rept-stat-card` command can be canceled and the output to the terminal stopped. There are three ways that the `rept-stat-card` command can be canceled.

- Press the F9 function key on the keyboard at the terminal where the `rept-stat-card` command was entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rept-stat-card` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rept-stat-card` command was entered, from another terminal other than the terminal where the `rept-stat-card` command was entered. To enter the `canc-cmd:trm=<xx>` command, the terminal must allow Security Administration commands to be entered from it and the user must be allowed to enter Security Administration commands. The terminal's permissions can be verified with the `rtrv-secu-trm` command. The user's permissions can be verified with the `rtrv-user` or `rtrv-secu-user` commands.

For more information about the `canc-cmd` command, go to the *Commands Manual*.

1. Display the cards in the database using the `rtrv-card` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 09:12:36 GMT EAGLE5 41.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
1101 DSM VSCCP
1102 TSM GLS
1103 DCM STPLAN
1113 GSPM OAM
1114 TDM-A
1115 GSPM OAM
1116 TDM-B
1117 MDAL
1201 LIMDS0 SS7ANSI sp2 A 0 sp1 B 0
1202 LIMDS0 SS7ANSI sp2 A 1 nsp3 B 0
1203 LIMDS0 SS7ANSI sp3 A 0
1204 LIMDS0 SS7ANSI sp3 A 1
1205 LIMDS0 SS7ANSI itu1 A 0
1206 LIMDS0 SS7ANSI nsp3 A 1 nsp4 B 0
1212 DSM VSCCP
1214 TSM GLS
1215 DCM STPLAN
1301 LIMATM ATMANSI lsnatm1 A 0
1305 DCM STPLAN
1308 LIMDS0 SS7ANSI sp6 A 0 sp7 B 0
1311 LIMDS0 SS7ANSI sp2 A 2 sp1 B 1
 sp7 A1 1 sp3 B1 2
1315 LIMDS0 SS7ANSI sp7 A 2 sp5 B 0
1318 LIMATM ATMANSI lsnatm1 A 1
```

2. An SS7 LIM is identified by the entries SS7ANSI, CCS7ITU, or ATMANSI in the APPL field.

Display the status of the SS7 signaling links on the card you wish to remove by entering the `rept-stat-slk` command, specifying the card location and signaling link. The card location is shown in the `CARD` field of the `rtrv-card` command output.

For this example, enter these commands.

```
rept-stat-slk:loc=1201:link=a
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
SLK LSN CLLI PST SST AST
1201,A sp2 ----- IS-NR Avail ----
 ALARM STATUS = No Alarms.
 UNAVAIL REASON = --
Command Completed.
```

```
rept-stat-slk:loc=1201:link=b
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
SLK LSN CLLI PST SST AST
1201,B sp1 ----- IS-NR Avail ----
 ALARM STATUS = No Alarms.
 UNAVAIL REASON = --
Command Completed.
```

```
rept-stat-slk:loc=1318:link=a
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
SLK LSN CLLI PST SST AST
1318,A lsnatm1 ----- IS-NR Avail ----
 ALARM STATUS = No Alarms.
 UNAVAIL REASON = --
Command Completed.
```

```
rept-stat-slk:loc=1311:link=a
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
SLK LSN CLLI PST SST AST
1311,A sp2 ----- IS-NR Avail ----
 ALARM STATUS = No Alarms.
 UNAVAIL REASON = --
Command Completed.
```

```
rept-stat-slk:loc=1311:link=a1
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
SLK LSN CLLI PST SST AST
1311,A1 sp7 ----- IS-NR Avail ----
 ALARM STATUS = No Alarms.
 UNAVAIL REASON = --
Command Completed.
```

```
rept-stat-slk:loc=1311:link=b
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
SLK LSN CLLI PST SST AST
1311,B sp1 ----- IS-NR Avail ----
 ALARM STATUS = No Alarms.
```

```
UNAVAIL REASON = --
Command Completed.
```

```
rept-stat-slk:loc=1311:link=b1
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
SLK LSN CLLI PST SST AST
1311,B1 sp3 ----- IS-NR Avail ----
 ALARM STATUS = No Alarms.
 UNAVAIL REASON = --
Command Completed.
```

3. Deactivate the links to the card that are not in an OOS-MT-DSBLD state using the `dact -slk` command.

For this example, enter these commands.

```
dact-slk:loc=1201:link=a
dact-slk:loc=1201:link=b
dact-slk:loc=1318:link=a
dact-slk:loc=1311:link=a
dact-slk:loc=1311:link=a1
dact-slk:loc=1311:link=b
dact-slk:loc=1311:link=b1
```

When these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
Deactivate Link message sent to card
```

4. Display the cards that are in service with the `rept-stat-card:stat=nr` command.

```
rept-stat-card:stat=nr
```

This is an example of the possible output.

```
rlghncxa03w 09-05-01 16:43:42 GMT EAGLE5 41.0.0
CARD VERSION TYPE GPL PST SST AST
1101 113-003-000 DSM VSCCP IS-NR Active ---
1102 113-003-000 TSM GLS IS-NR Active ---
1103 113-002-000 DCM STPLAN IS-NR Active ---
1104 113-002-000 DCM STPLAN IS-NR Active ---
1109 113-003-000 HMUX BPHMUX IS-NR Active ---
1110 113-003-000 HMUX BPHMUX IS-NR Active ---
1113 113-003-000 GPSM EOAM IS-NR Active ---
1114 ----- TDM IS-NR Active ---
1115 113-003-000 GPSM EOAM IS-NR Standby ---
1116 ----- TDM IS-NR Active ---
1117 ----- MDAL IS-NR Active ---
1201 113-003-000 LIMDS0 SS7ANSI IS-NR Active ---
1203 113-003-000 LIMDS0 SS7ANSI IS-NR Active ---
1204 113-003-000 LIMDS0 SS7ANSI IS-NR Active ---
1205 113-003-000 LIMDS0 SS7ANSI IS-NR Active ---
1206 113-003-000 LIMDS0 SS7ANSI IS-NR Active ---
1209 113-003-000 HMUX BPHMUX IS-NR Active ---
1210 113-003-000 HMUX BPHMUX IS-NR Active ---
```

|      |             |        |         |       |        |     |
|------|-------------|--------|---------|-------|--------|-----|
| 1212 | 113-003-000 | DSM    | VSCCP   | IS-NR | Active | --- |
| 1214 | 113-003-000 | TSM    | GLS     | IS-NR | Active | --- |
| 1216 | 113-002-000 | DCM    | STPLAN  | IS-NR | Active | --- |
| 1301 | 113-003-000 | LIMATM | ATMANSI | IS-NR | Active | --- |
| 1304 | 113-002-000 | DCM    | STPLAN  | IS-NR | Active | --- |
| 1305 | 113-003-000 | LIMDS0 | SS7ANSI | IS-NR | Active | --- |
| 1308 | 113-003-000 | LIMDS0 | SS7ANSI | IS-NR | Active | --- |
| 1309 | 113-003-000 | HMUX   | BPHMUX  | IS-NR | Active | --- |
| 1310 | 113-003-000 | HMUX   | BPHMUX  | IS-NR | Active | --- |
| 1311 | 113-003-000 | LIMDS0 | SS7ANSI | IS-NR | Active | --- |
| 1314 | 113-003-000 | LIMDS0 | SS7ANSI | IS-NR | Active | --- |
| 1317 | 113-002-000 | DCM    | STPLAN  | IS-NR | Active | --- |
| 1318 | 113-003-000 | LIMATM | ATMANSI | IS-NR | Active | --- |

5. If the signaling links on the card to be removed from the database is the last signaling link in a linkset, the `force=yes` parameter must be used with the `dlt-slk` command.

To verify this, enter the `rtrv-ls` command with the linkset name shown in step 1 (LSET NAME field) or in step 2 (LSN field). For this example, enter these commands.

```
rtrv-ls:lsn=sp1
```

This is an example of the possible output

```
rlghncxa03w 06-10-01 16:31:35 GMT EAGLE5 36.0.0

LSN APCA (SS7) SCRNL3T SLT GWS GWS GWS
sp1 240-020-000 scr1 1 1 yes A 2 off off off yes off

CLLI TFATCABMLQ MTPRSE ASL8
----- 2 yes yes

IPGWAPC MATELSN IPTPS LSUSEALM SLKUSEALM GTTMODE
no ----- --- --- --- CdPA

LOC LINK SLC TYPE L2T L1 PCR PCR
1201 B 0 LIMDS0 1 56000 --- --- ECM N1 N2
1311 B 0 LIMDS0 1 56000 --- --- BASIC --- -----
1311 B 0 LIMDS0 1 56000 --- --- BASIC --- -----
```

Link set table is ( 10 of 1024) 1% full

```
rtrv-ls:lsn=sp2
```

This is an example of the possible output

```
rlghncxa03w 06-10-01 16:31:35 GMT EAGLE5 36.0.0

LSN APCA (SS7) SCRNL3T SLT GWS GWS GWS
sp2 240-030-000 scr1 1 1 yes A 3 off off off yes off

CLLI TFATCABMLQ MTPRSE ASL8
----- 2 yes yes

IPGWAPC MATELSN IPTPS LSUSEALM SLKUSEALM GTTMODE
no ----- --- --- --- CdPA

LOC LINK SLC TYPE L2T L1 PCR PCR
1201 A 0 LIMDS0 1 56000 --- --- BASIC --- -----
1202 A 1 LIMDS0 1 56000 --- --- BASIC --- -----
1311 A 2 LIMDS0 1 56000 --- --- BASIC --- -----
```

```
Link set table is (10 of 1024) 1% full
```

```
rtrv-ls:lsn=lsnatm1
```

This is an example of the possible output

```
rlghncxa03w 06-10-01 16:31:35 GMT EAGLE5 36.0.0
```

| LSN     | APCA        | (SS7) | SCRN   | L3T        | SLT | BEI     | LST      | LNKS     | GWS | GWS       | GWS | SLSCI   | NIS |
|---------|-------------|-------|--------|------------|-----|---------|----------|----------|-----|-----------|-----|---------|-----|
| lsnatm1 | 240-040-000 |       | scr1   | 1          | 1   | yes     | A        | 2        | off | off       | off | yes     | off |
| CLLI    |             |       |        | TFATCABMLQ |     | MTPRSE  |          | ASL8     |     |           |     |         |     |
| -----   |             |       |        | 2          |     | yes     |          | yes      |     |           |     |         |     |
| IPGWAPC |             |       |        | MATELSN    |     | IPTPS   |          | LSUSEALM |     | SLKUSEALM |     | GTTMODE |     |
| no      |             |       |        | -----      |     | ---     |          | ---      |     | ---       |     | CdPA    |     |
| LOC     | LINK        | SLC   | TYPE   | LP         | SET | BPS     | ATM      | TSEL     | VCI | VPI       | LL  |         |     |
| 1301    | A           | 0     | LIMATM | 3          |     | 1544000 | INTERNAL |          | 35  | 15        |     |         |     |
| 1318    | A           | 1     | LIMATM | 5          |     | 1544000 | LINE     |          | 5   | 0         |     |         |     |

```
Link set table is (10 of 1024) 1% full
```

```
rtrv-ls:lsn=sp3
```

This is an example of the possible output

```
rlghncxa03w 06-10-01 16:31:35 GMT EAGLE5 36.0.0
```

| LSN     | APCA        | (SS7) | SCRN   | L3T        | SLT | BEI    | LST | LNKS     | GWSA | GWSM      | GWSD | SLSCI   | NIS |
|---------|-------------|-------|--------|------------|-----|--------|-----|----------|------|-----------|------|---------|-----|
| sp3     | 240-050-000 |       | scr1   | 1          | 1   | yes    | A   | 3        | off  | off       | off  | yes     | off |
| CLLI    |             |       |        | TFATCABMLQ |     | MTPRSE |     | ASL8     |      |           |      |         |     |
| -----   |             |       |        | 2          |     | yes    |     | yes      |      |           |      |         |     |
| IPGWAPC |             |       |        | MATELSN    |     | IPTPS  |     | LSUSEALM |      | SLKUSEALM |      | GTTMODE |     |
| no      |             |       |        | -----      |     | ---    |     | ---      |      | ---       |      | CdPA    |     |
| LOC     | LINK        | SLC   | TYPE   | L2T        | SET | BPS    | L1  | MODE     | TSET | ECM       | PCR  | PCR     |     |
| 1203    | A           | 0     | LIMDS0 | 1          |     | 56000  | --- | ---      |      | BASIC     | ---  | ---     |     |
| 1204    | A           | 1     | LIMDS0 | 1          |     | 56000  | --- | ---      |      | BASIC     | ---  | ---     |     |
| 1311    | B1          | 2     | LIMDS0 | 1          |     | 56000  | --- | ---      |      | BASIC     | ---  | ---     |     |

```
Link set table is (10 of 1024) 1% full
```

```
rtrv-ls:lsn=sp7
```

This is an example of the possible output

```
rlghncxa03w 06-10-01 16:31:35 GMT EAGLE5 36.0.0
```

| LSN     | APCA        | (SS7) | SCRN | L3T        | SLT | BEI    | LST | LNKS     | GWS | GWS       | GWS | SLSCI   | NIS |
|---------|-------------|-------|------|------------|-----|--------|-----|----------|-----|-----------|-----|---------|-----|
| sp7     | 240-060-000 |       | scr1 | 1          | 1   | yes    | A   | 3        | off | off       | off | yes     | off |
| CLLI    |             |       |      | TFATCABMLQ |     | MTPRSE |     | ASL8     |     |           |     |         |     |
| -----   |             |       |      | 2          |     | yes    |     | yes      |     |           |     |         |     |
| IPGWAPC |             |       |      | MATELSN    |     | IPTPS  |     | LSUSEALM |     | SLKUSEALM |     | GTTMODE |     |
| no      |             |       |      | -----      |     | ---    |     | ---      |     | ---       |     | CdPA    |     |

| LOC  | LINK | SLC | TYPE   | L2T<br>SET | BPS   | L1<br>MODE | TSET | ECM   | PCR<br>N1 | PCR<br>N2 |
|------|------|-----|--------|------------|-------|------------|------|-------|-----------|-----------|
| 1308 | B    | 0   | LIMDS0 | 1          | 56000 | ---        | ---  | BASIC | ---       | -----     |
| 1311 | A1   | 1   | LIMDS0 | 1          | 56000 | ---        | ---  | BASIC | ---       | -----     |
| 1315 | A    | 2   | LIMDS0 | 1          | 56000 | ---        | ---  | BASIC | ---       | -----     |

Link set table is ( 10 of 1024) 1% full

- Inhibit the card using the `rmv-card` command, specifying the card location.

If the LIM to be inhibited contains the only signaling link in the linkset that is in service, the `force=yes` parameter must also be specified. For this example, enter these commands.

```
rmv-card: loc=1201
```

```
rmv-card: loc=1318
```

```
rmv-card: loc=1311
```

When these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
Card has been inhibited.
```

- Remove the signaling links on the specified card by using the `dlt-slk` command.

If the output of step 5 shows that the signaling link being removed is the last signaling link in a linkset, the `force=yes` parameter must be used. For this example, enter these commands.

```
dlt-slk: loc=1201: link=a
```

```
dlt-slk: loc=1201: link=b
```

```
dlt-slk: loc=1318: link=a
```

```
dlt-slk: loc=1311: link=a
```

```
dlt-slk: loc=1311: link=a1
```

```
dlt-slk: loc=1311: link=b: force=yes
```

```
dlt-slk: loc=1311: link=b1
```

When these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
DLT-SLK: MASP A - COMPLTD
```

- Remove the card using the `dlt-card` command.

The `dlt-card` command has only one parameter, `loc`, which is the location of the card. For this example, enter these commands.

```
dlt-card: loc=1201
```

```
dlt-card: loc=1318
```

```
dlt-card: loc=1311
```

When these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
DLT-CARD: MASP A - COMPLTD
```



9. Verify the changes using the `rtrv-card` command specifying the card that was removed in step 8.

For this example, enter these commands.

```
rtrv-card:loc=1201
```

```
rtrv-card:loc=1318
```

```
rtrv-card:loc=1311
```

When these commands have successfully completed, this message should appear.

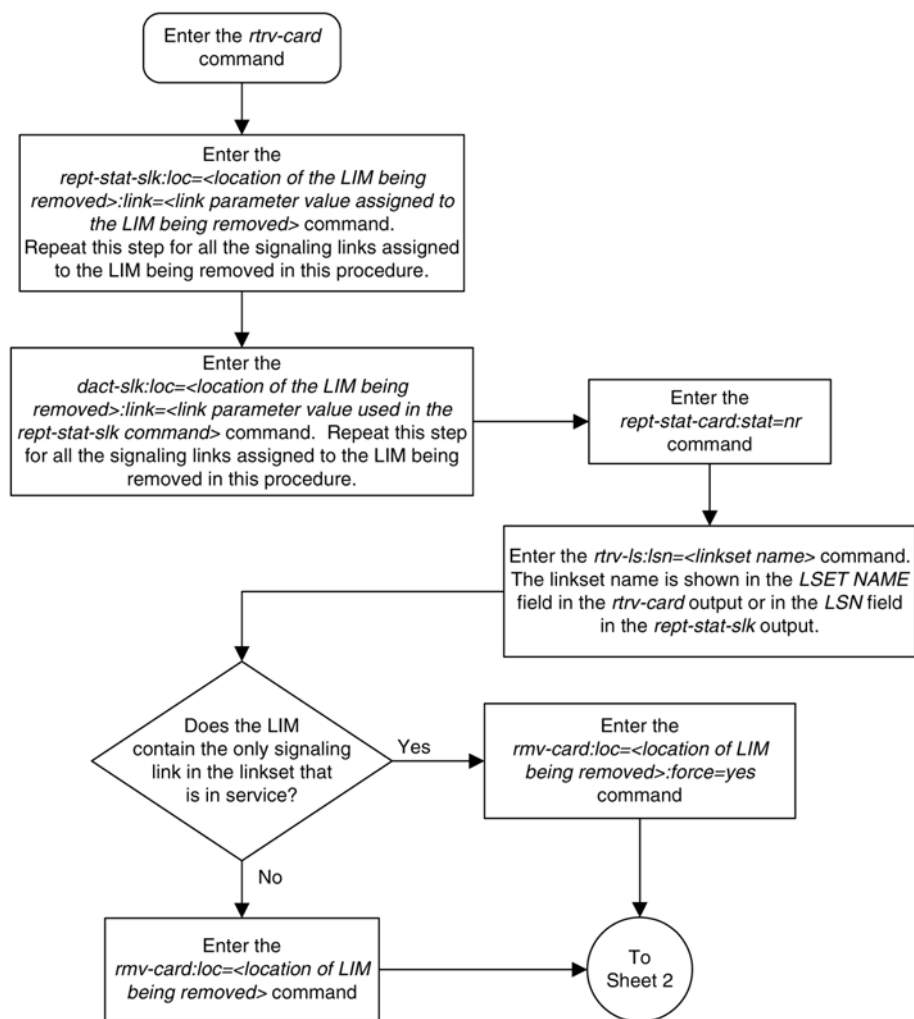
```
E2144 Cmd Rej: Location invalid for hardware configuration
```

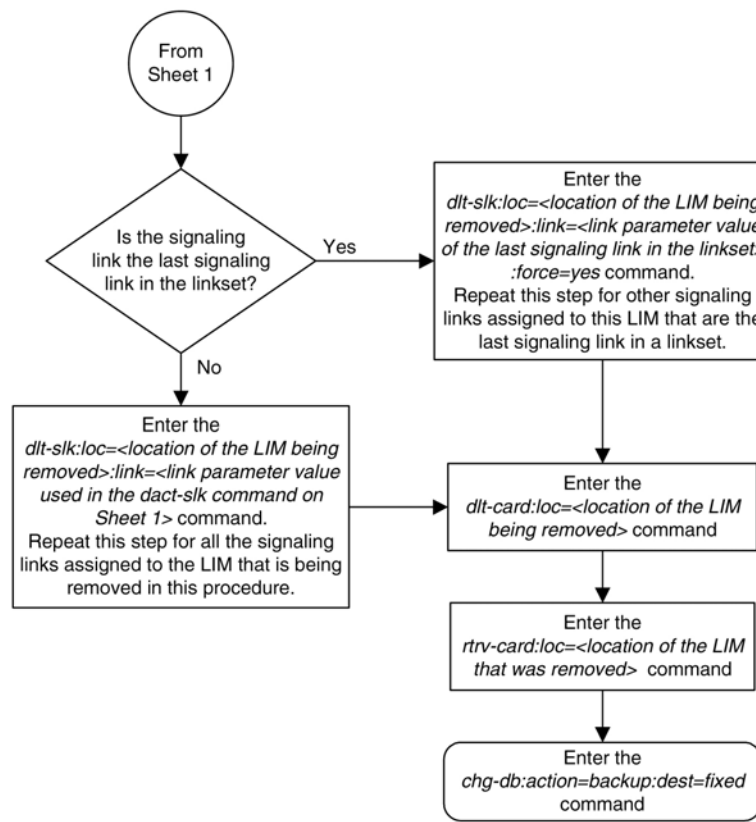
10. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 50: Removing an SS7 LIM**





## Configuring the UIM Threshold

This procedure is used to configure the threshold (the number of times during a specified period of time) a specific UIM (unsolicited information message) is displayed at an EAGLE 5 ISS terminal using the `set-uim-actthresh` command.

The `set-uim-actthresh` command uses these parameters.

**:uimn** – The number of the UIM that the threshold is being created for, or the threshold being changed. The number of the UIM must exist in the EAGLE 5 ISS. See the *Unsolicited Alarm and Information Messages Manual* for a list of the UIMs that can be displayed.

**:limit** – The number of UIMs that can be displayed in the amount of time specified by the **:intrvl** parameter.

**:intrvl** – The amount of time, in minutes, that the number of UIMs specified by the **:limit** parameter can be displayed at the EAGLE 5 ISS terminal.

**:force** – The `force=yes` parameter allows the **:limit** parameter to be set to 0 should the conditions at the EAGLE 5 ISS make this action necessary. Setting the **:limit** parameter to 0 prevents the specified UIM, and the information contained in the UIM, from being displayed at the EAGLE 5 ISS terminal. It is highly recommended that the **:limit** parameter value is not set to 0.

When the `limit=0` and the `force=yes` parameters are specified with the `set-uim-acthresh` command, this message appears in the scroll area of the terminal display.

Caution: Setting `LIMIT=0` suppresses UIM permanently

When creating a new UIM threshold, both the `limit` and `intrvl` parameters must be specified with the `set-uim-acthresh` command.

If you are changing an existing UIM threshold, either the `limit` or `intrvl` parameters must be specified with the `set-uim-acthresh` command.

The examples used in this procedure change the time interval for the existing UIM threshold for UIM 1155 from 30 minutes to 20 minutes, the number of UIMs displayed for existing UIM threshold for UIM 1162 from 100 to 25, and to create a new UIM threshold to display UIM 1075 for 175 times in 30 minutes. These changes are shown in [Table 14: Example UIM Threshold Configuration](#) on page 486.

**Table 14: Example UIM Threshold Configuration**

| UIM Number | Old Limit | Old Time Interval | New Limit | New Time Interval |
|------------|-----------|-------------------|-----------|-------------------|
| 1155       | 50        | 30                | No Change | 20                |
| 1162       | 100       | 5                 | 25        | No Change         |
| 1075       | N/A       | N/A               | 175       | 30                |

1. Display the UIM thresholds in the database using the `rtrv-uim-acthresh` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 08:50:12 GMT EAGLE5 36.0.0
UIMN LIMIT INTRVL
1155 50 30
1162 100 5
1216 200 15
```

The UIM Threshold Table is (3 of 499) 1% full.

2. Configure the UIM threshold using the `set-uim-acthresh` command.

For this example, enter these commands.

```
set-uim-acthresh:uimn=1155:intrvl=20
```

```
set-uim-acthresh:uimn=1162:limit=25
```

```
set-uim-acthresh:uimn=1075:limit=175:intrvl=30
```

When each of these commands has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 08:50:12 GMT EAGLE5 36.0.0
SET-UIM-ACTHRESH: MASP A - COMPLTD
```

3. Verify the changes using the `rtrv-uim-acthresh` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 08:50:12 GMT EAGLE5 36.0.0
UIMN LIMIT INTRVL
1075 175 30
1155 50 20
1162 25 5
1216 200 15
```

The UIM Threshold Table is (4 of 499) 1% full.

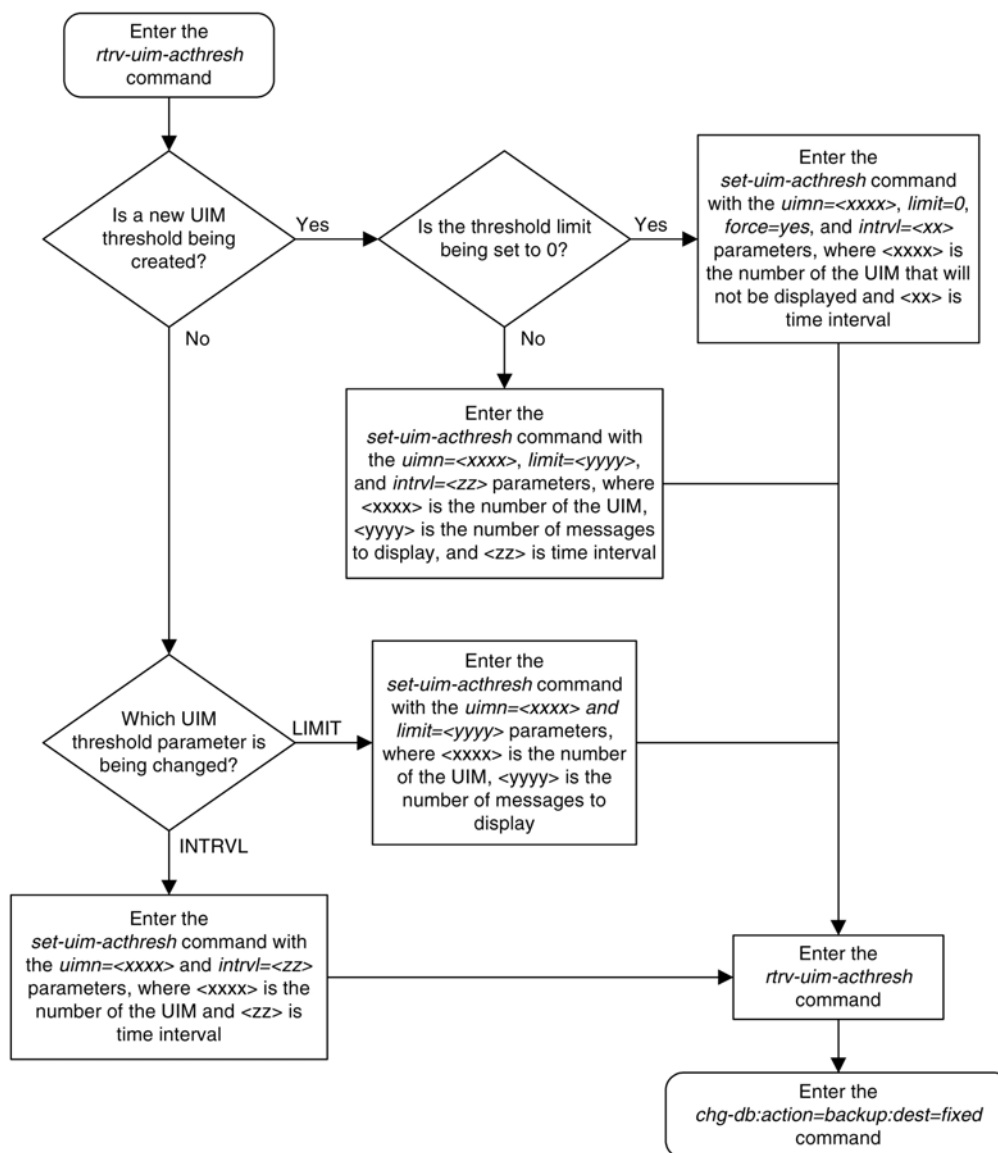
4. Back up the new changes using the `chg-db:action=backup:dest=fixedcommand`.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first

.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 51: Configuring the UIM Threshold**



## Removing a UIM Threshold

This procedure is used to remove a UIM threshold from the database using the `dlt-uim-acthresh` command. The `dlt-uim-acthresh` command has only one parameter, `uimn`, which specifies the UIM number of the UIM threshold that is being removed from the database.

The UIM threshold must be in the database.

The example in this procedure removes the UIM threshold for UIM 1216 from the database.

1. Display the UIM thresholds in the database using the `rtrv-uim-acthresh` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 08:50:12 GMT EAGLE5 36.0.0
UIMN LIMIT INTRVL
1075 175 30
1155 50 20
1162 25 5
1216 200 15
```

The UIM Threshold Table is (4 of 499) 1% full.

2. Remove a UIM threshold from the database using the `dlt-uim-acthresh` command.

For this example, enter this command.

```
dlt-uim-acthresh:uimn=1216
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 08:50:12 GMT EAGLE5 36.0.0
DLT-UIM-ACTHRESH: MASP A - COMPLTD
```

3. Verify the changes using the `rtrv-uim-acthresh` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 08:50:12 GMT EAGLE5 36.0.0
UIMN LIMIT INTRVL
1075 175 30
1155 50 20
1162 25 5
```

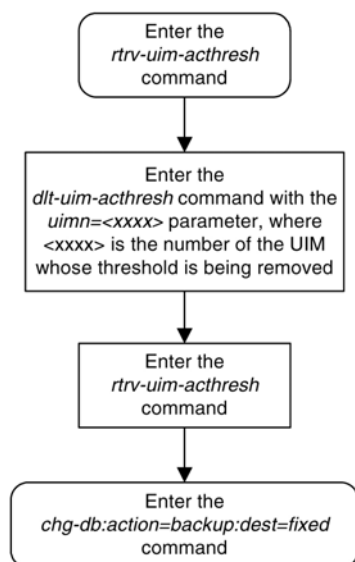
The UIM Threshold Table is (3 of 499) 1% full.

4. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 52: Removing a UIM Threshold**



## Configuring the Measurements Terminal for an EAGLE 5 ISS Containing 700 Signaling Links

This procedure is used to configure a terminal to collect measurement reports on an EAGLE 5 ISS that contains from 501 to 700 signaling links. The `chg-trm` command is used to configure this terminal and uses these parameters to configure this terminal.

**Note:** The terminal being configured in this procedure must be terminals 1 through 16. Telnet terminals cannot be specified in this procedure.

**Note:** If the EAGLE 5 ISS contains more than 700 signaling links, do not perform this procedure. The Measurements Platform is required to collect measurement reports for systems containing more the 700 signaling links. See the *Measurements Manual* for more information on the Measurements Platform.

:trm – Serial port number

:baud – Serial port baud rate

:sb – The number of stop bits used in communications with the device

:prty – Parity used by the device

:type – The type of device being connected.

:fc – The type of flow control used between the EAGLE 5 ISS and the output devices (vt320 terminal, modem, printer, or KSR terminal, or OAP terminal).

:tmout – The maximum amount of time that a login session on the specified port can remain idle (that is, no user input) on the port before being automatically logged off.

:mxinv – The login failure threshold

:dural – The length of time that the terminal is disabled after the login failure threshold has been exceeded.



:all – All unsolicited messages are received by the specified port

:traf – Traffic measurement related unsolicited messages are received by the specified port

**Note:**

There are other parameters that can be used with the `chg-trm` command but these parameters cannot be used in this procedure. For more information on these parameters, go to [Changing Terminal Characteristics](#) on page 430 procedure, or to the `chg-trm` command description in the *Commands Manual*.

The measurement terminal must be configured with these parameter values:

- `trm=<terminal being changed>`
- `baud=19200`
- `type=ksr`
- `traf=yes` – all other output message groups must be set to no.

The other parameters listed in this procedure do not have to be specified with the `chg-trm` command. If these parameters are not specified with the `chg-trm` command, these default values will be assigned to the measurements terminal:

- `prty` – even
- `sb` – 1
- `fc` – sw (software)
- `tmout` – 30 minutes
- `mxinv` – 5
- `dural` – 100 (1 minute, 0 seconds)

The terminal must be placed out of service before it can be configured.

If the terminal being changed has output message groups other than `traf` set to `yes`, the `all=no` parameter must be specified with the `chg-trm` command. The `chg-trm` command can then specified with the `traf=yes` parameter.

The messages assigned to the output message groups defined by the `traf` parameters are listed in the *Unsolicited Alarm and Information Messages Manual*.

The `tmout`, `dural`, and `mxinv` parameters can be applied to this terminal. See the "Security Parameters" section in the [Changing Terminal Characteristics](#) on page 430 procedure for more information on these parameters.

The total value of the terminals' baud rate cannot be greater than 172,032. If the total baud rate of the terminals exceeds 172,032, change the baud rates of the terminals so that the total baud rate is not greater than 172,032.

The output of the `rtrv-trm` command is displayed in two parts. The first part displays the communication security attributes of the terminal. The communication attributes of the terminal, BAUD, PRTY (parity), SB (stop bits), and DBTS (data bits), are displayed in the COMM field of the `rtrv-trm` output and are displayed in this format: BAUD–DBTS–PRTY–SB. The second part of the `rtrv-trm` command output displays the types of unsolicited messages the terminal may receive. An example of the `rtrv-trm` command output is shown in this example.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 36.0.0
TRM TYPE COMM FC TMOUT MXINV DURAL
3 VT320 9600-7-E-1 SW 30 5 99:59:59
```

```

TRM TRAF LINK SA SYS PU DB UIMRD
3 NO YES NO YES NO YES YES

 APP APP
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
3 YES YES YES YES YES YES YES YES YES YES NO NO

```

In this example, terminal 3 is running at 9600 baud with 7 data bits, even parity, and 1 stop bit.

The examples in this procedure are used to configure terminal 1 as the measurements terminal.

1. Display the values of all terminals using the `rtrv-trm` command.

This is an example of the possible output.

```

rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 36.0.0
TRM TYPE COMM FC TMOUT MXINV DURAL
1 VT320 9600-7-E-1 SW 30 5 99:59:59
2 KSR 9600-7-E-1 HW 30 5 INDEF
3 PRINTER 4800-7-E-1 HW 30 0 00:00:00
4 VT320 2400-7-E-1 BOTH 30 5 00:30:00
5 VT320 9600-7-0-1 NONE 30 5 00:00:30
6 VT320 9600-7-E-2 SW 30 9 INDEF
7 PRINTER 9600-7-N-2 HW 30 5 00:30:00
8 KSR 19200-7-E-2 BOTH 30 5 00:30:00
9 VT320 9600-7-E-1 SW 30 7 00:30:00
10 VT320 9600-7-E-1 HW 30 5 00:30:00
11 VT320 4800-7-E-1 HW 30 5 00:30:00
12 PRINTER 9600-7-E-1 HW 30 4 00:30:00
13 VT320 9600-7-0-1 NONE 30 5 00:30:00
14 VT320 9600-7-E-2 SW 30 8 00:30:00
15 VT320 9600-7-N-2 HW 30 5 00:30:00
16 VT320 9600-7-E-2 BOTH 30 3 00:30:00

TRM TRAF LINK SA SYS PU DB UIMRD
1 NO YES NO NO NO YES YES
2 NO NO NO NO NO NO NO
3 YES YES YES NO YES YES YES
4 YES NO NO NO NO NO NO
5 NO YES NO NO NO NO YES
6 NO NO YES NO NO NO NO
7 YES YES YES YES YES YES YES
8 NO NO NO NO YES NO YES
9 NO YES NO NO NO YES NO
10 NO NO NO NO NO NO YES
11 YES YES YES YES YES YES YES
12 YES YES YES YES YES YES YES
13 NO YES NO NO NO NO YES
14 NO NO YES NO NO NO NO
15 YES YES YES NO YES YES YES
16 NO NO NO NO YES NO YES

 APP APP
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
1 YES YES YES YES YES YES YES YES YES YES YES NO NO
2 YES YES YES YES YES YES YES YES YES YES YES NO NO
3 YES YES YES YES YES YES YES YES YES YES YES NO NO
4 YES YES YES YES YES NO YES YES YES YES YES NO NO
5 YES YES YES YES YES YES YES YES YES YES YES NO NO
6 YES YES YES YES YES YES YES YES YES YES YES NO NO
7 NO YES YES YES YES YES YES YES YES YES YES NO NO
8 YES YES YES YES YES YES YES YES YES YES YES YES YES
9 YES YES YES YES YES YES YES YES YES YES YES YES YES
10 NO NO NO NO NO NO NO NO NO NO NO NO NO

```

|    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 11 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 12 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 13 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 14 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 15 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 16 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |

2. Inhibit the terminal you wish to change using the `rmv - trm` command and specify the port you wish to inhibit.

If the terminal being changed is the last OAP port that is in service, the `force=yes` parameter must be used with the `rmv - trm` command. The OAP ports are shown by the entry `OAP` in the `TYPE` field in the `rtrv - trm` command output in step 1. For this example, enter this command.

```
rmv-trm:trm=1
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Inhibit message sent to terminal

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Command Completed.
```

3. Verify that the terminal that was inhibited in step 4 is in the OOS-MT-DSBLD state by entering the `rept-stat-trm` command.

For this command, enter this command.

```
rept-stat-trm:trm=1
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
1 OOS-MT-DSBLD MANUAL -----
Command Completed.
```

4. Configure the measurements terminal using the `chg - trm` command and making sure that only the `traf` output message group is set to `yes`.
  - a) If the output of the `rtrv - trm` command output in step 1 shows that all the output message groups are set to `no`, then only the `traf=yes` parameter needs to be specified for the output message group assignments as show in this example.

```
chg-trm:trm=1:type=ksr:baud=19200:traf=yes
```

- b) If however, the `rtrv - trm` command output shows that output message groups other than `traf` are set to `yes`, the `chg - trm` command must be entered with the `all=no` and the `traf=yes` parameter as shown in this example.

```
chg-trm:trm=1:type=ksr:baud=19200:traf=yes:all=no
```

For this example enter the command shown in substep b.

When the `chg - trm` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
CHG-TRM: MASP A - COMPLTD
```

5. Verify the changes made in step 4 by using the `rtrv-trm` command with the port number specified in step 4.

For this example, enter this command.

```
rtrv-trm:trm=1
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 36.0.0
TRM TYPE COMM FC TMOUT MXINV DURAL
1 KSR 19200-7-E-1 SW 30 5 00:01:00

TRM TRAF LINK SA SYS PU DB UIMRD
1 YES NO NO NO NO NO NO

 APP APP
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
1 NO NO NO NO NO NO NO NO NO NO NO NO
```

6. When the changes are complete, and if the terminal was inhibited in step 4, activate the terminal using the `rst-trm` command.

For this example, enter this command.

```
rst-trm:trm=1
```

When this command has successfully completed, this message should appear.

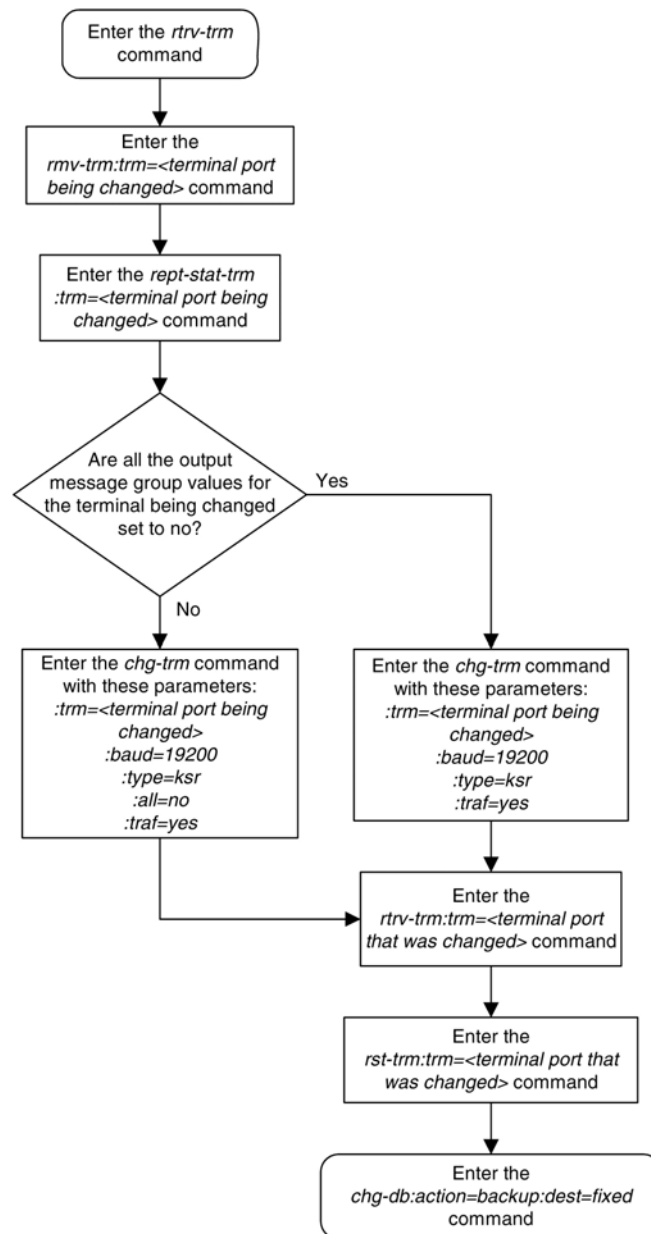
```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Allow message sent to terminal
```

7. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 53: Configuring the Measurements Terminal for an EAGLE 5 ISS Containing 700 Signaling Links**



## Adding an MCPM

This procedure is used to add an Measurement Collection & Polling Module), used for the Measurements Platform feature, to the database using the `ent -card` command. The MCPM provides an interface between the EAGLE 5 ISS and the customer's network. The Measurements Platform provides a dedicated processor for collecting and transferring measurements data to a customer supplied FTP server.

The `ent -card` command uses these parameters.

: loc – The location of the card being added to the database.

: type – The type of card being added to the database. For this procedure, the value of this parameter is `mcpm`.

: appl – The application software that is assigned to the card. For this procedure, the value of this parameter is `mcp`.

: force – Allow the LIM to be added to the database even if there are not enough service modules to support the number of LIMs in the EAGLE 5 ISS. This parameter does not apply to configuring MCPMs and should not be used.

The Measurements Platform feature requires a minimum of 2 MCPM cards (part number 870-2372-03 or later) with at least 2 GB of memory per card.

The Measurements Platform feature must be on in order to add an MCPM to the database. This can be verified with the `rtrv-feat` command. To enable the Measurements Platform feature, the `measplat=on` parameter must be specified with the `chg-feat` command.

**Note:** The Measurements Platform feature must be purchased before turning on the feature. If you are not sure whether you have purchased the Measurements Platform feature, contact your Tekelec Sales Representative or Account Representative.

The shelf to which the card is to be added, must already be in the database. This can be verified with the `rtrv-shlf` command. If the shelf is not in the database, see the [Adding a Shelf](#) on page 466 procedure.

After all required MCPMs have been configured in the database, go to the [Configuring the Measurements Platform Feature](#) on page 502 procedure and configure the IP links for these MCPMs and enable the Measurement Platform feature, if necessary.

The examples in this procedure are used to add an MCPM in card location 2107.

1. Verify that the MCPM (part number 870-2372-03 or later) being added to the database has been physically installed into the proper location.
2. Connect the Ethernet cables from the customer's network to Port A of the MCPM.
3. Display the cards in the database using the `rtrv-card` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 09:12:36 GMT EAGLE5 41.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
1101 DSM VSCCP
1102 TSM GLS
1103 DCM STPLAN
1113 GSPM OAM
1114 TDM-A
1115 GSPM OAM
1116 TDM-B
1117 MDAL
1201 LIMDS0 SS7ANSI sp2 A 0 sp1 B 0
1202 LIMDS0 SS7ANSI sp2 A 1 nsp3 B 0
1203 LIMDS0 SS7ANSI sp3 A 0
1204 LIMDS0 SS7ANSI sp3 A 1
1205 LIMDS0 SS7ANSI itu1 A 0
1206 LIMDS0 SS7ANSI nsp3 A 1 nsp4 B 0
1212 DSM VSCCP
1214 TSM GLS
1215 DCM STPLAN
1301 LIMATM ATMANSI lsnatm1 A 0
```

|      |        |         |         |    |   |     |    |   |
|------|--------|---------|---------|----|---|-----|----|---|
| 1303 | STC    | EROUTE  |         |    |   |     |    |   |
| 1305 | DCM    | STPLAN  |         |    |   |     |    |   |
| 1308 | LIMDS0 | SS7ANSI | sp6     | A  | 0 | sp7 | B  | 0 |
| 1311 | LIMDS0 | SS7ANSI | sp2     | A  | 2 | sp1 | B  | 1 |
|      |        |         | sp7     | A1 | 1 | sp3 | B1 | 2 |
| 1315 | LIMDS0 | SS7ANSI | sp7     | A  | 2 | sp5 | B  | 0 |
| 1318 | LIMATM | ATMANSI | lsnatm1 | A  | 1 |     |    |   |
| 2101 | STC    | EROUTE  |         |    |   |     |    |   |
| 2103 | STC    | EROUTE  |         |    |   |     |    |   |
| 2105 | STC    | EROUTE  |         |    |   |     |    |   |

The cards should be distributed throughout the EAGLE 5 ISS for proper power distribution. Refer to the *Installation Manual - EAGLE 5 ISS* for the shelf power distribution.

**Note:** If the `rtrv-card` output from step 3 shows an MCPM card, shown by the entries MCPM in the TYPE column and MCP in the APPL column, skip steps 4 and 5, and go to step 6.

- Verify that the Measurements Platform feature is enabled by entering the `rtrv-feat` command.

If the Measurements Platform feature is on, the MEASPLAT field should be set to on. For this example, the Measurements Platform feature is off.

**Note:** The `rtrv-feat` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-feat` command, see the `rtrv-feat` command description in the *Commands Manual*.

**Note:** If the Measurements Platform feature is on, skip step 5, and go to step 6.

- Turn the Measurements Platform feature on by entering this command.

```
chg-feat: measplat=on
```

**Note:** Once the Measurements Platform feature is turned on with the `chg-feat` command, it cannot be turned off.

The Measurements Platform feature must be purchased before turning on the feature. If you are not sure whether you have purchased the Measurements Platform feature, contact your Tekelec Sales Representative or Account Representative.

When the `chg-feat` has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 21:18:37 GMT EAGLE5 36.0.0
CHG-FEAT: MASP A - COMPLTD
```

- Add the MCPM using the `ent-card` command.

For this example, enter this commands.

```
ent-card: loc=2107: type=mcpm: appl=mcp
```

When each of these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
ENT-CARD: MASP A - COMPLTD
```

- Verify the changes using the `rtrv-card` command with the card location specified in step 6.

For this example, enter this command.

```
rtrv-card: loc=2107
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
2107 MCPM MCP
```

8. Back up the new changes using the `chg-db:action=backup:dest=fixedcommand`.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

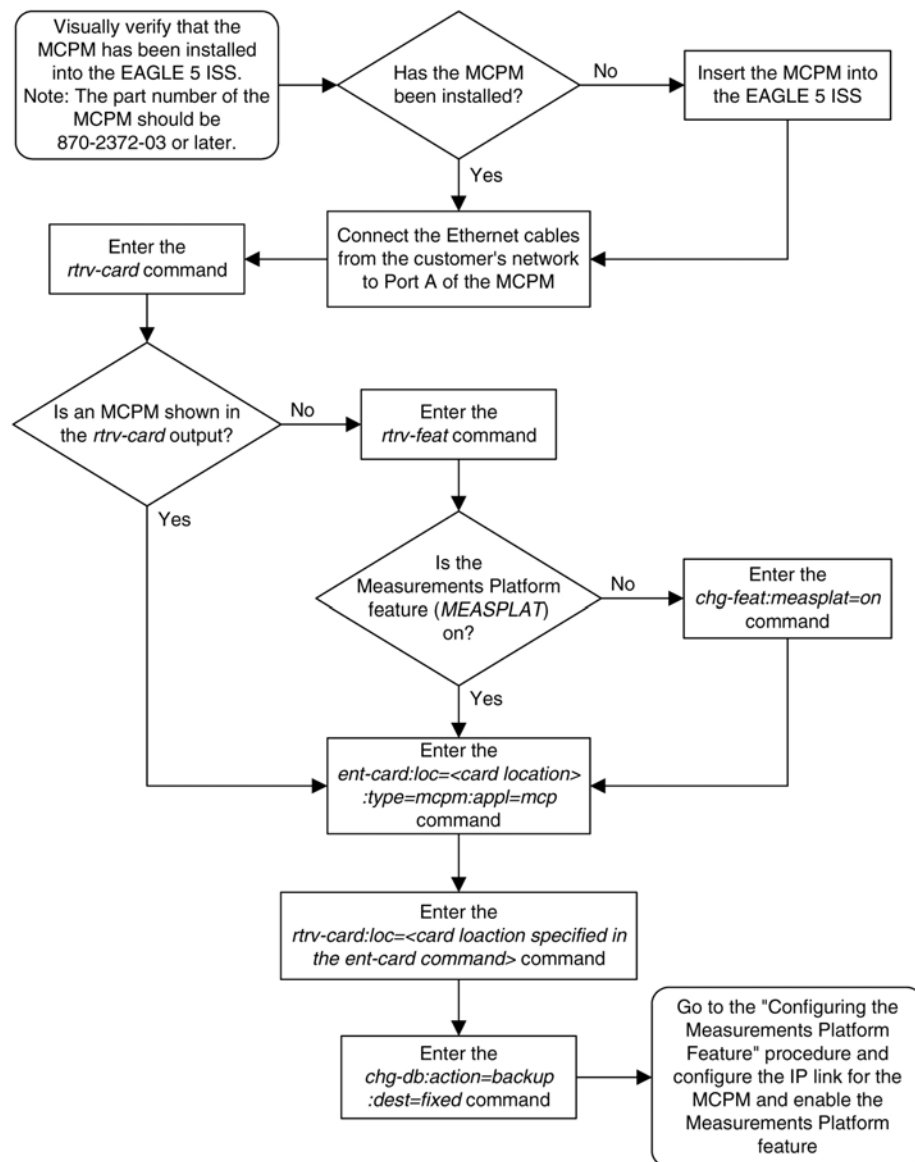
9. Go to the [Configuring the Measurements Platform Feature](#) on page 502 procedure and configure the IP links for these MCPMs and enable the Measurement Platform feature, if necessary.

#### Figure 54: Adding an MCPM

##### Note:

Before executing this procedure, make sure you have purchased the Measurements Platform feature. If you are not sure whether you have purchased the Measurements Platform feature, contact your Tekelec Sales Representative or Account Representative.





## Removing an MCPM

This procedure is used to remove an MCPM (Measurement Collection & Polling Module) from the database using the *dlt-card* command.



### CAUTION

**CAUTION:** If the MCPM is the last MCPM in service, removing this card from the database will disable the Measurements Platform feature.

The examples in this procedure are used to remove the MCPM in card location 2107.

**Canceling the REPT-STAT-CARD Command**

Because the `rept-stat-card` command used in this procedure can output information for a long period of time, the `rept-stat-card` command can be canceled and the output to the terminal stopped. There are three ways that the `rept-stat-card` command can be canceled.

- Press the F9 function key on the keyboard at the terminal where the `rept-stat-card` command was entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rept-stat-card` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rept-stat-card` command was entered, from another terminal other than the terminal where the `rept-stat-card` command was entered. To enter the `canc-cmd:trm=<xx>` command, the terminal must allow Security Administration commands to be entered from it and the user must be allowed to enter Security Administration commands. The terminal's permissions can be verified with the `rtrv-secu-trm` command. The user's permissions can be verified with the `rtrv-user` or `rtrv-secu-user` commands.

For more information about the `canc-cmd` command, go to the *Commands Manual*.

1. Display the cards in the database using the `rtrv-card` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 09:12:36 GMT EAGLE5 41.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
1101 DSM VSCCP
1102 TSM GLS
1103 DCM STPLAN
1113 GSPM OAM
1114 TDM-A
1115 GSPM OAM
1116 TDM-B
1117 MDAL
1201 LIMDS0 SS7ANSI sp2 A 0 sp1 B 0
1202 LIMDS0 SS7ANSI sp2 A 1 nsp3 B 0
1203 LIMDS0 SS7ANSI sp3 A 0
1204 LIMDS0 SS7ANSI sp3 A 1
1205 LIMDS0 SS7ANSI itu1 A 0
1206 LIMDS0 SS7ANSI nsp3 A 1 nsp4 B 0
1212 DSM VSCCP
1214 TSM GLS
1215 DCM STPLAN
1301 LIMATM ATMANSI lsnatm1 A 0
1303 STC EROUTE
1305 DCM STPLAN
1308 LIMDS0 SS7ANSI sp6 A 0 sp7 B 0
1311 LIMDS0 SS7ANSI sp2 A 2 sp1 B 1
 sp7 A1 1 sp3 B1 2
1315 LIMDS0 SS7ANSI sp7 A 2 sp5 B 0
1318 LIMATM ATMANSI lsnatm1 A 1
2101 STC EROUTE
2103 STC EROUTE
2105 STC EROUTE
2107 MCPM MCP
2108 MCPM MCP
2111 MCPM MCP
```

An MCPM is identified by the entries MCPM in the TYPE field and MCP in the APPL field.

2. Display the status of the MCPMs in the database with the `rept-stat-meas` command.

This is an example of the possible output.

```
rlghncxa03w 09-02-01 16:43:42 GMT EAGLE5 40.0.0

MEAS SS PST SST AST
 IS-NR Active -----
 ALARM STATUS = No Alarms

CARD VERSION TYPE PST SST AST
2107 P 101-009-000 EDSM IS-NR Active -----
 IP Link A IS-NR Active Available
2108 101-009-000 EDSM IS-NR Active -----
 IP Link A IS-NR Active Available
2111 101-009-000 EDSM IS-NR Active -----
 IP Link A IS-NR Active Available

CARD 2107 ALARM STATUS = No Alarms
CARD 2108 ALARM STATUS = No Alarms
CARD 2111 ALARM STATUS = No Alarms
```

3. Inhibit the MCPM using the `rmv-card` command, specifying the card location of the MCPM.

If the MCPM to be inhibited is the last MCPM that is in service, the `force=yes` parameter must also be specified. For this example, enter this command.

```
rmv-card:loc=2107
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
Card has been inhibited.
```

4. Remove the card using the `dlt-card` command.

The `dlt-card` command has only one parameter, `loc`, which is the location of the card. For this example, enter these commands.

```
dlt-card:loc=2107
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
DLT-CARD: MASP A - COMPLTD
```

5. Verify the changes using the `rtrv-card` command specifying the card that was removed in step 4.

For this example, enter these commands.

```
rtrv-card:loc=2107
```

When this command has successfully completed, this message should appear.

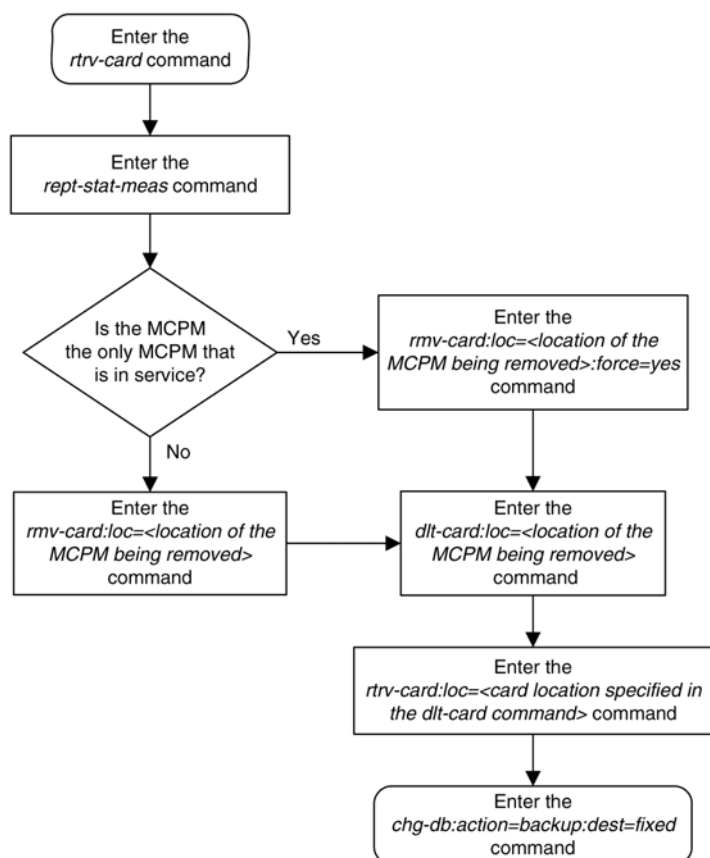
```
E2144 Cmd Rej: Location invalid for hardware configuration
```

6. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 55: Removing an MCPM**



## Configuring the Measurements Platform Feature

This procedure is used to configure IP communications link between the EAGLE 5 ISS and the customer's network, and to enable the Measurements Platform on the EAGLE 5 ISS using these commands:

- `ent-ip-host` – Configuring the IP host of the MCPM
- `chg-ip-card` – Configuring the IP address of the MCPM
- `chg-ip-lnk` – Configuring the IP link assigned to the MCPM
- `chg-measopts` – Enabling the Measurements Platform option

These commands contain parameters that are not used in this procedure. The *Commands Manual* contains a full description of these commands.

The Measurements Platform also requires 2 FTP servers. The FTP servers are configured in the database with one of these procedures.

- [Adding an FTP Server](#) on page 511
- [Changing an FTP Server](#) on page 519

MCPMs must be configured in the database before this procedure can be performed. This can be verified with the `rtrv-card` command.

If a Class B IP address is specified for the `ipaddr` parameter of the `chg-ip-lnk` command, the subnet address that results from the `ipaddr` and `submask` parameter values cannot be the same as the subnet address that results from the `pvn` and `pvnmask`, `fcna` and `fcnamask`, or `fcnb` and `fcnbmask` parameter values of the `chg-netopts` command. The `pvn` and `pvnmask`, `fcna` and `fcnamask`, or `fcnb` and `fcnbmask` parameter values can be verified by entering the `rtrv-netopts` command. Choose `ipaddr` and `submask` parameter values for the IP link to the MCPM whose resulting subnet address is not be the same as the subnet address that resulting from the `pvn` and `pvnmask`, `fcna` and `fcnamask`, or `fcnb` and `fcnbmask` parameter values of the `chg-netopts` command.

1. Display the cards in the database using the `rtrv-card` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 09:12:36 GMT EAGLE5 41.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
1101 DSM VSCCP
1102 TSM GLS
1103 DCM STPLAN
1113 GSPM OAM
1114 TDM-A
1115 GSPM OAM
1116 TDM-B
1117 MDAL
1201 LIMDS0 SS7ANSI sp2 A 0 sp1 B 0
1202 LIMDS0 SS7ANSI sp2 A 1 nsp3 B 0
1203 LIMDS0 SS7ANSI sp3 A 0
1204 LIMDS0 SS7ANSI sp3 A 1
1205 LIMDS0 SS7ANSI itu1 A 0
1206 LIMDS0 SS7ANSI nsp3 A 1 nsp4 B 0
1212 DSM VSCCP
1214 TSM GLS
1215 DCM STPLAN
1301 LIMATM ATMANSI lsnatm1 A 0
1303 STC EROUTE
1305 DCM STPLAN
1308 LIMDS0 SS7ANSI sp6 A 0 sp7 B 0
1311 LIMDS0 SS7ANSI sp2 A 2 sp1 B 1
 sp7 A1 1 sp3 B1 2
1315 LIMDS0 SS7ANSI sp7 A 2 sp5 B 0
1318 LIMATM ATMANSI lsnatm1 A 1
2101 STC EROUTE
2103 STC EROUTE
2105 STC EROUTE
2107 MCPM MCP
```

```
2108 MCPM MCP
2111 MCPM MCP
```

If no MCPMs are configured in the database, identified by the entries MCPM in the TYPE field and MCP in the APPL field, go to the [Adding an MCPM](#) on page 495 procedure and configure the required MCPMs.

2. Display the status of the MCPMs in the database with the `rept-stat-meas` command.

This is an example of the possible output.

```
rlghncxa03w 09-02-01 16:43:42 GMT EAGLE5 40.0.0

MEAS SS PST SST AST
 IS-NR Active -----
 ALARM STATUS = No Alarms
CARD VERSION TYPE PST SST AST
2107 101-009-000 EDSM IS-NR Active -----
 IP Link A
2108 P 101-009-000 EDSM IS-NR Active -----
 IP Link A
2111 101-009-000 EDSM IS-NR Active -----
 IP Link A

CARD 2107 ALARM STATUS = No Alarms
CARD 2108 ALARM STATUS = No Alarms
CARD 2111 ALARM STATUS = No Alarms
```

**Note:** If the status of the MCPM that the IP Link is being assigned to is OOS-MT DSBLD, skip step 3 and go to step 4.

3. Inhibit the MCPM using the `rmv-card` command, specifying the card location of the MCPM.

If the MCPM to be inhibited is the last MCPM that is in service, the `force=yes` parameter must also be specified. For this example, enter this command.

```
rmv-card: loc=2107
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
Card has been inhibited.
```

4. Display the current TCP/IP parameters associated with card in the database by entering the `rtrv-ip-card` command.

The following is an example of the possible output.

```
rlghncxa03w 08-06-01 09:12:36 GMT EAGLE5 39.0.0
LOC 2107
SRCHORDR SRVR
DNSA -----
DNSB -----
DEFROUTER -----
DOMAIN -----
BPIPADDR -----
BPSUBMASK -----
LOC 2108
SRCHORDR LOCAL
DNSA 150.1.1.2
DNSB -----
```

```

DEFROUTER 150.1.1.25
DOMAIN NC.TEKELEC.COM
BPIPADDR --
BPSUBMASK -----
LOC 2111
SRCHORDR LOCAL
DNSA 150.1.1.3
DNSB -----
DEFROUTER 150.1.1.28
DOMAIN NC.TEKELEC.COM
BPIPADDR -----
BPSUBMASK -----

```

- Assign a default router to the MCPM using the `chg-ip-card` command with these parameters: `loc`, `srchordr`, `domain`, and `defrouter`.

For this example, enter this command.

```
chg-ip-card:loc=2107:srchordr=local:domain=nc.tekelec.com
:defrouter=150.1.1.50
```

When this command has successfully completed, this message should appear.

```

rlghncxa03w 06-10-01 21:20:37 GMT EAGLE5 36.0.0
CHG-IP-CARD: MASP A - COMPLTD

```

**Note:** If a Class A or C IP address will be specified for the `ipaddr` parameter in step 8, skip step 6, and go to step 7.

- The subnet address that results from the `ipaddr` and `submask` parameter values of the `chg-ip-lnk` command cannot be the same as the subnet address that results from the `pvn` and `pvnmask`, `fcna` and `fcnamask`, or `fcnb` and `fcnbmask` parameter values of the `chg-netopts` command.

Display the `pvn`, `pvnmask`, `fcna`, `fcnamask`, `fcnb`, and `fcnbmask` parameter values of the `chg-netopts` command by entering the `rtrv-netopts` command.

If error message `E3967 Cmd Rej: E5IS must be on` is displayed after the `rtrv-netopts` command is executed, the `pvn`, `pvnmask`, `fcna`, `fcnamask`, `fcnb`, and `fcnbmask` parameters are not configured. Go to step 7.

This is an example of the possible output if the E5IS feature is on.

```

rlghncxa03w 09-02-28 21:17:37 GMT EAGLE5 40.1.0
NETWORK OPTIONS

PVN = 128.20.30.40
PVNMASK = 255.255.192.0
FCNA = 170.120.50.0
FCNAMASK = 255.255.240.0
FCNB = 170.121.50.0
FCNBMASK = 255.255.254.0

```

Choose `ipaddr` and `submask` parameter values for the IP link to the MCPM whose resulting subnet address is not be the same as the subnet address that resulting from the `pvn` and `pvnmask`, `fcna` and `fcnamask`, or `fcnb` and `fcnbmask` parameter values of the `chg-netopts` command. Go to step 7.

- Display the `rtrv-ip-lnk` command. IP link assignments using the

The following is an example of the possible output.

```
rlghncxa03w 08-12-01 21:20:37 GMT EAGLE5 40.0.0
LOC PORT IPADDR SUBMASK DUPLEX SPEED MACTYPE AUTO MCAST
2107 A -----
2107 B -----
2108 A 150.123.123.123 255.255.255.0 HALF 100 DIX NO YES
2108 B -----
2111 A 150.123.123.125 255.255.255.0 HALF 100 DIX NO YES
2111 B -----
IP-LNK table is (6 of 2048) 1% full.
```

8. Assign an IP link to the MCPM using the `chg-ip-lnk` command with these parameters: `loc`, `port=a`, `ipaddr`, `submask`, `speed=100`, `mcast=yes`.

For this example, enter this command.

```
chg-ip-lnk:loc=2107:port=a:ipaddr=150.1.1.1
:submask=255.255.255.0:speed=100:mcast=yes
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 21:20:37 GMT EAGLE5 36.0.0
CHG-IP-LNK: MASP A - COMPLTD
```

9. Display the current IP host information in the database by entering the `rtrv-ip-host` command.

The following is an example of the possible output.

```
rlghncxa03w 08-12-01 09:12:36 GMT EAGLE5 40.0.0
LOCAL IPADDR LOCAL HOST
150.1.1.2 GW102.NC.TEKELEC.COM
150.1.1.3 GW103.NC.TEKELEC.COM

REMOTE IPADDR REMOTE HOST
150.1.1.5 NCDEPTECONOMIC_DEVELOPMENT.SOUTHEASTERN_COORIDOR_ASHVL.GOV
IP Host table is (3 of 2048) 1% full
```

10. Assign an IP host to the MCPM using the `ent-ip-host` command.

For this example, enter this command.

```
ent-ip-host:host=gw100.nc.tekelec.com:ipaddr=150.1.1.1
```

When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:18:37 GMT EAGLE5 36.0.0
ENT-IP-HOST: MASP A - COMPLTD
```

11. Place the MCPM back into service using the `rst-card` specifying the location of the MCPM.

For this example, enter this command.

```
rst-card:loc=2107
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 21:20:37 GMT EAGLE5 36.0.0
Card has been allowed.
```



12. Verify the status of the MCPM using the `rept-stat-meas` command, specifying the location of the MCPM.

For this example, enter this command.

```
rept-stat-meas:loc=2107
```

```
rlghncxa03w 09-02-01 16:43:42 GMT EAGLE5 40.0.0

MEAS SS PST SST AST
 IS-NR Active -----
 ALARM STATUS = No Alarms

CARD VERSION TYPE PST SST AST
2107 P 101-009-000 EDSM IS-NR Active -----
 IP Link A IS-NR Active Available

CARD 2107 ALARM STATUS = No Alarms
```

13. Display the FTP Server configuration using the `rtrv-ftp-serv` command.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
FTP Client Security: OFF

APP IPADDR LOGIN PRI0

meas 1.255.0.100 ftpmeas3 3
 Path: ~meas\local
meas 1.255.0.101 ftpmeas2 2
 Path: mp\measurements\backup\dat

FTP SERV table is (2 of 10) 20% full
```

The EAGLE 5 ISS allows only two FTP servers for the Measurements Platform. If no FTP servers, or one FTP server is in the database, go to the [Adding an FTP Server](#) on page 511 procedure and add the required FTP server. If there are two FTP servers in the database, and you wish to change one or both of these FTP servers, go to the [Changing an FTP Server](#) on page 519 procedure.

14. Verify whether or not the Measurements Platform option is enabled (PLATFORMENABLE = on) using the `rtrv-measopts` command.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
PLATFORMENABLE = on
COLLECT15MIN = off
CLLIBASEDNAME = off

SYSTOTSTP = off
SYSTOTTT = off
```

**Note:** The `rtrv-measopts` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-measopts` command, see the `rtrv-measopts` command description in the *Commands Manual*.

**Note:** If the Measurements Platform option in step 14 is enabled, skip this step and go to step 16.

15. Enable the Measurements Platform option using the `chg-measopts` command with the `platformenable` parameter.

For this example, enter this command.

```
chg-measopts:platformenable=on
```

When the `chg-measopts` command has successfully completed, this message should appear.

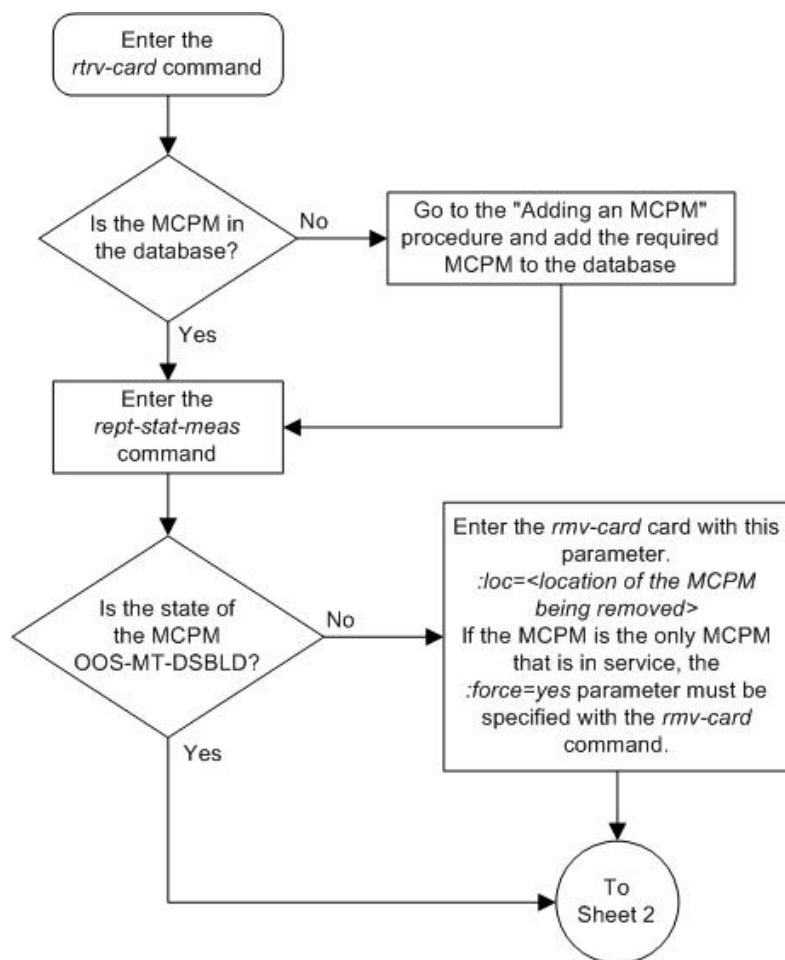
```
rlghncxa03w 06-10-01 00:22:57 GMT EAGLE5 36.0.0
CHG-MEAS-OPTS: MASP A - COMPLTD
```

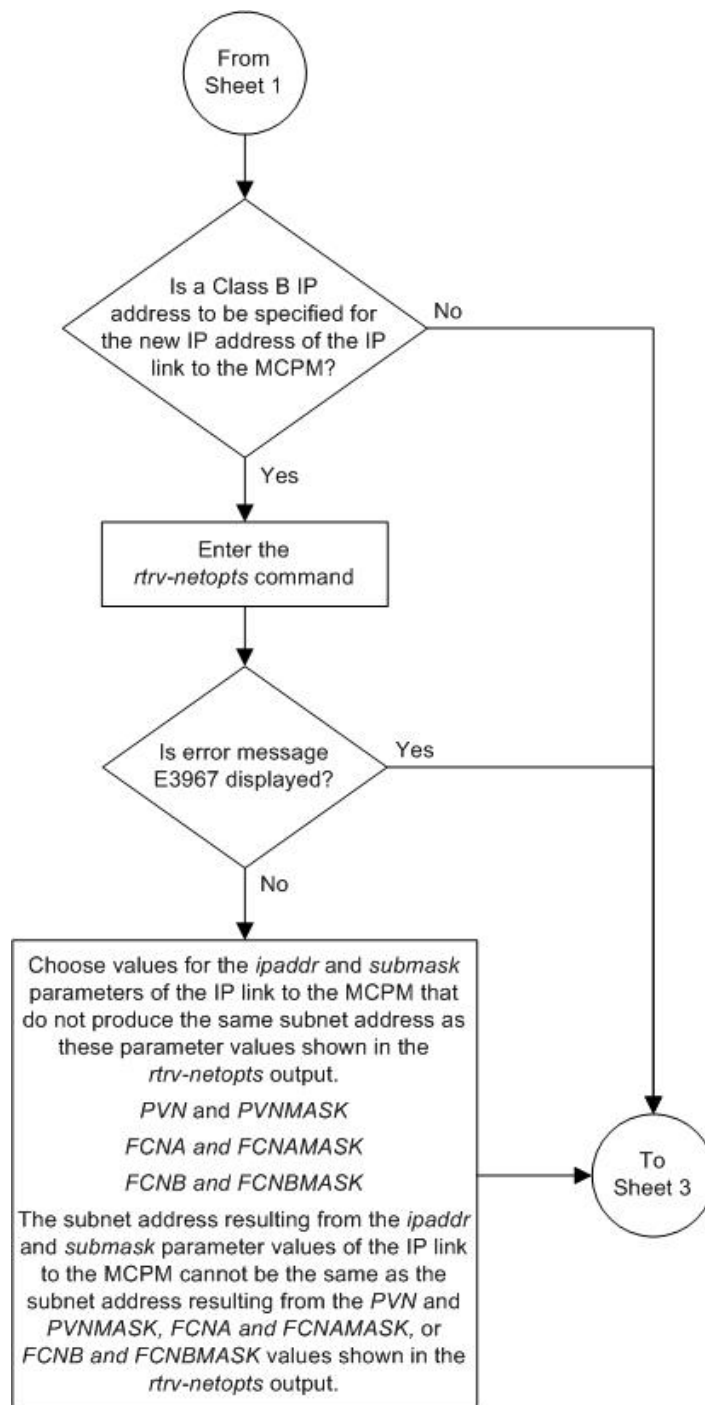
16. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

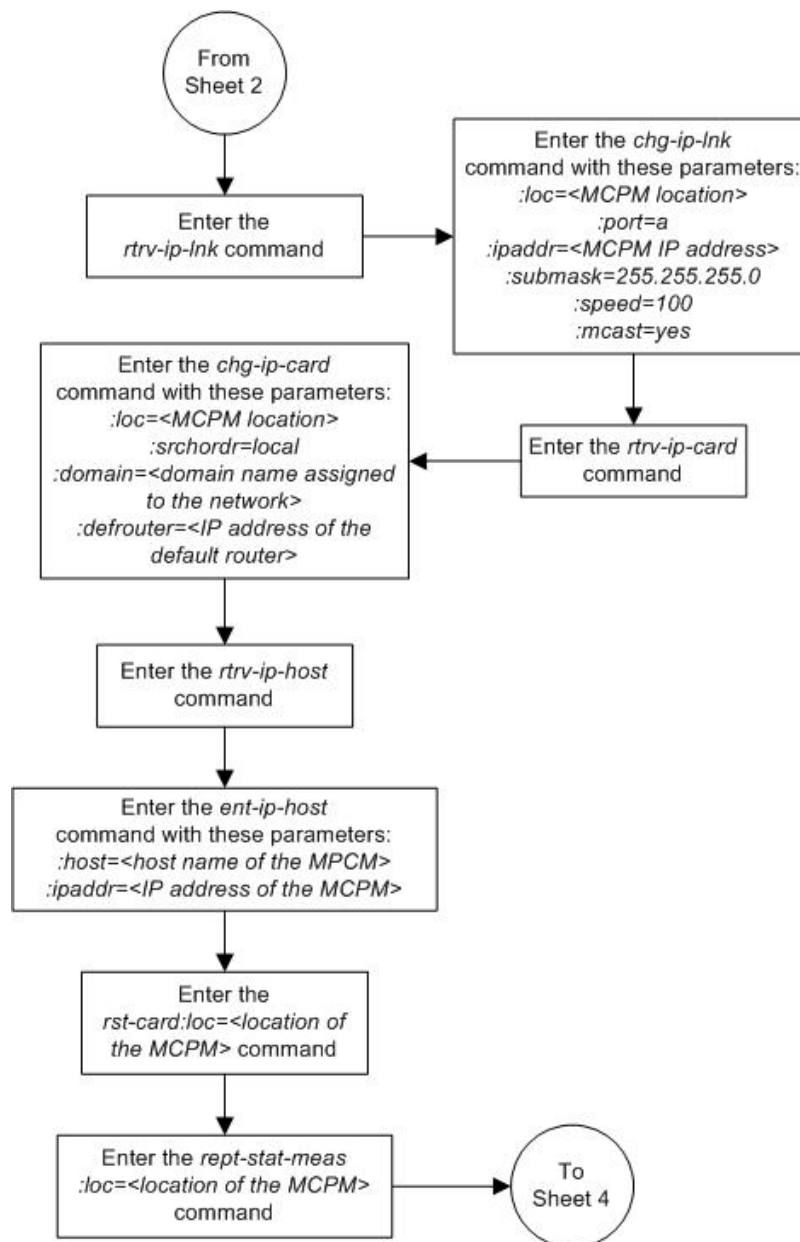
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

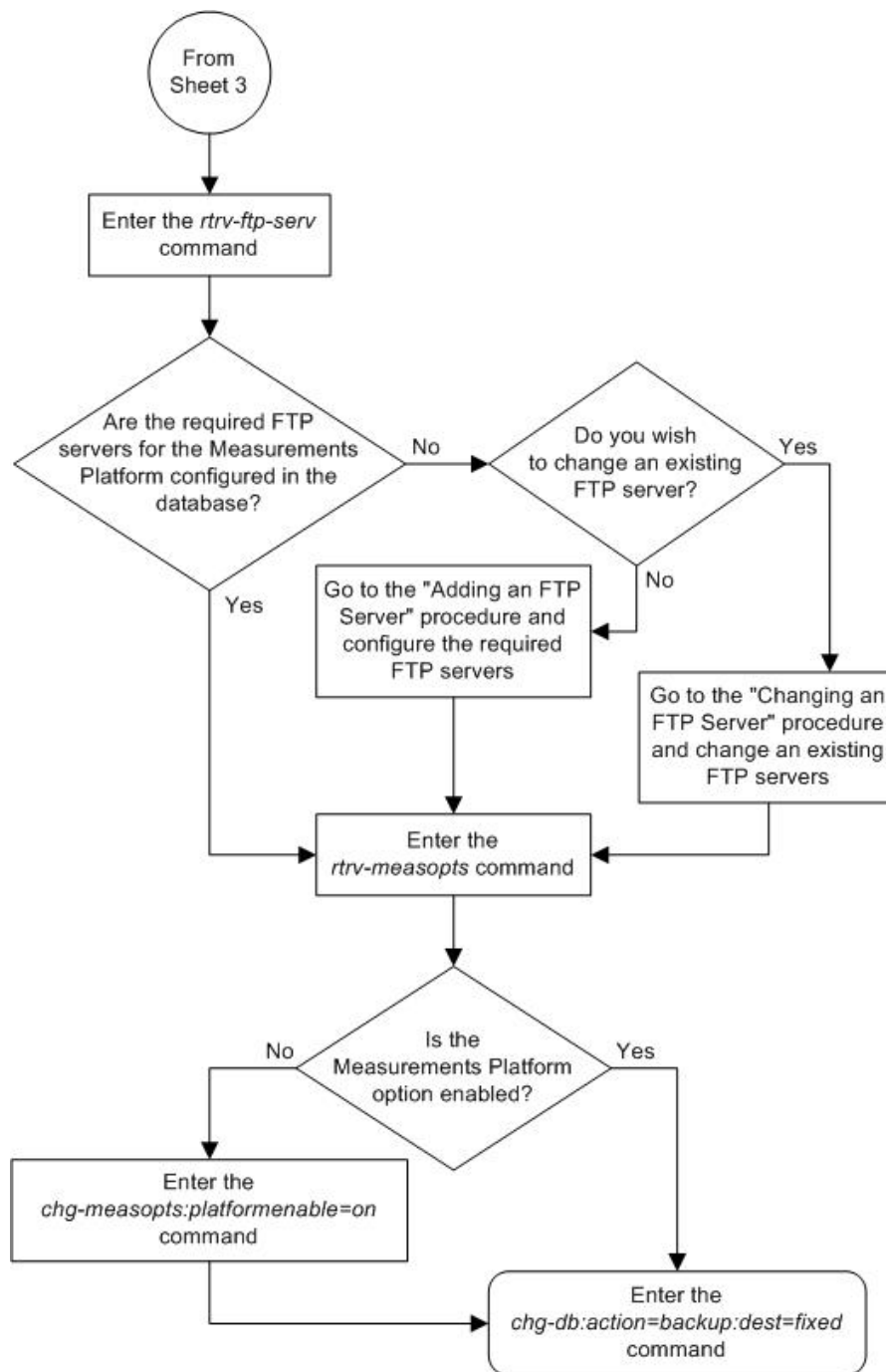
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

Figure 56: Configuring the Measurements Platform Feature









## Adding an FTP Server

This procedure is used to add FTP servers using the *ent -ftp-serv* command.

The *ent -ftp-serv* command uses these parameters.

: **app** – The application of the FTP server. There are four values for the **app** parameter:

- **meas** – The FTP servers for the Measurements Platform. A maximum of three FTP servers can be configured for this application.
- **db** – The FTP server for the database backup/restore application. Only one FTP server can be configured for this application.
- **dist** – the FTP server for the EAGLE 5 ISS software release distribution application. Only one FTP server can be configured for this application.
- **user** – The FTP servers for the FTP Retrieve and Replace feature. A maximum of two FTP servers can be configured for this application.



**CAUTION**

**CAUTION:** While this procedure can be used to add a USER FTP server, any USER FTP servers entered by this procedure will be overwritten by the FTP server configuration information sent to the EAGLE 5 ISS by the FTP-Based Table Retrieve Application (FTRA).

: **ipaddr** – The IP address of the FTP server.

: **login** – The name of the FTP server client.

: **path** – The path to the file on the EAGLE 5 ISS that is to be sent to the FTP server.

: **prio** – The priority of the FTP server, from 1 to 10.

The **app/ipaddr** parameter combination must be unique in the database.

The **login** parameter value can contain from 1 to 15 alpha-numeric characters. The alphabetic characters can be both upper and lower case characters.

The **path** parameter value is a mixed-case quoted character string with a valid FTP path format that can contain up to 100 characters.

After the FTP server is added to the database with the **ent - ftp - serv** command, the user is prompted for a password for this FTP server. The password can contain from 1 to 15 alpha-numeric characters. The alphabetic characters must be both upper and lower case characters. The password is not shown on the terminal screen as it is being entered and is not shown in the **rtrv - ftp - serv** output.

If the Eagle OA&M IP Security Enhancement Controlled Feature is enabled and activated, the FTP servers configured in this procedure must be secure FTP servers. The FTP-Based Table Retrieve Application (FTRA) and the Measurements Platform must support secure shell connections to the EAGLE 5 ISS. Enter the **rtrv - ctrl - feat** command to verify whether or not the Eagle OA&M IP Security Enhancement Controlled Feature is enabled and activated.

Because CSV measurement data files do not have unique names across multiple STPs, include the CLLI of the STP in the FTP server path for **meas** FTP servers.

1. Display the FTP servers in the database using the **rtrv - ftp - serv** command by entering this command..

```
rtrv-ftp-serv:mode=full
```

This is an example of the possible output.

```
rlghncxa03w 08-09-01 09:12:36 GMT EAGLE5 39.2.0
FTP Client Security: ON
```

| APP | IPADDR | LOGIN | PRI0 |
|-----|--------|-------|------|
|-----|--------|-------|------|

```

meas 1.255.0.100 ftpmeas3 3
 Path: ~meas\local

FTP SERV table is (1 of 10) 10% full
```

2. Add the FTP server to the database using the `ent-ftp-serv` command.

For this example, enter these commands.

```
ent-ftp-serv:app=meas:ipaddr=1.255.0.101:login=ftpmeas2:prio=2
:path="\tmp\measurements\backup\dat"
```

```
ent-ftp-serv:app=user:ipaddr=1.255.0.100:login=ftpuser1:prio=3
:path="\tmp\user"
```

```
ent-ftp-serv:app=user:ipaddr=1.255.0.102:login=ftpuser5:prio=7
:path="\tmp\backup\user"
```

```
ent-ftp-serv:app=db:ipaddr=10.20.50.102:login=dbuser1:prio=1
:path="~/eagle"
```

```
ent-ftp-serv:app=dist:ipaddr=100.200.50.102:login=dbuser1:prio=1
:path="~/eagle"
```

**CAUTION**

**CAUTION:** While this procedure can be used to add a USER FTP server, any USER FTP servers entered by this procedure will be overwritten by the FTP server configuration information sent to the EAGLE 5 ISS by the FTP-Based Table Retrieve Application (FTRA).

When each of these commands has successfully completed, the following message should appear.

```
rlghncxa03w 08-09-01 21:18:37 GMT EAGLE5 39.2.0
Enter Password :
FTP SERV table is (4 of 10) 40% full
ENT-FTP-SERV: MASP A - COMPLTD
```

```
rlghncxa03w 06-10-01 21:18:37 GMT EAGLE5 36.0.0
FTP SERV table is (4 of 10) 40% full
ENT-FTP-SERV: MASP A - COMPLTD
```

3. Enter a password for the FTP server added in [Step 2](#) on page 513 at the `PASSWORD:` prompt.

The password is not shown on the terminal screen as it is entered. The password can contain from 1 to 15 alpha-numeric characters. The alphabetic characters must be both upper and lower case characters.

4. Display the changes by entering this command.

```
rtrv-ftp-serv:mode=full
```

The following is an example of the possible output.

```
rlghncxa03w 08-09-01 09:12:36 GMT EAGLE5 39.2.0
FTP Client Security: ON
```

| APP   | IPADDR | LOGIN | PRI0 |
|-------|--------|-------|------|
| ----- | -----  | ----- | ---- |

|       |                              |          |   |
|-------|------------------------------|----------|---|
| db    | 10.20.50.102                 | dbuser1  | 1 |
| Path: | ~/eagle                      |          |   |
| dist  | 100.200.50.102               | dbuser1  | 1 |
| Path: | ~/eagle                      |          |   |
| meas  | 1.255.0.100                  | ftpmeas3 | 3 |
| Path: | ~meas\local                  |          |   |
| meas  | 1.255.0.101                  | ftpmeas2 | 2 |
| Path: | \tmp\measurements\backup\dat |          |   |
| user  | 1.255.0.100                  | ftpuser1 | 3 |
| Path: | \tmp\user                    |          |   |
| user  | 1.255.0.102                  | ftpuser5 | 7 |
| Path: | \tmp\backup\user             |          |   |

FTP SERV table is (6 of 10) 60% full

5. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first

.

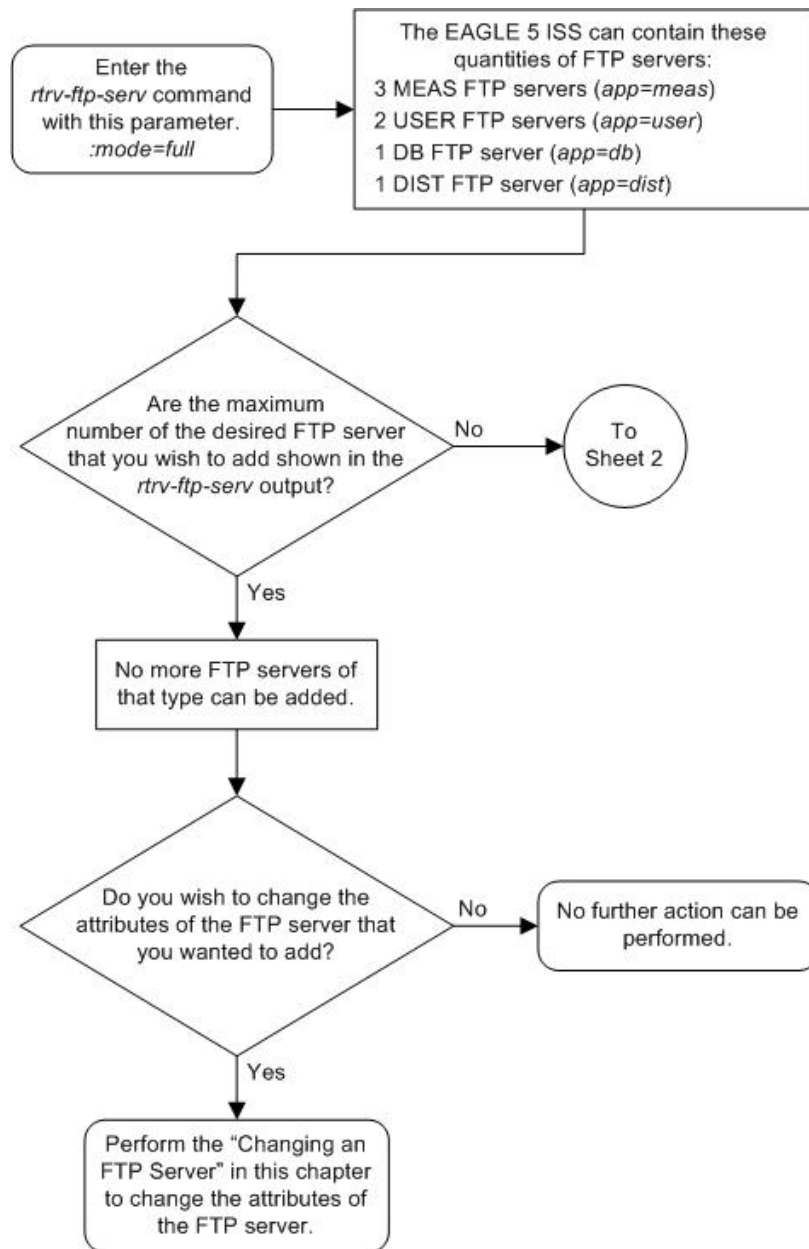
```

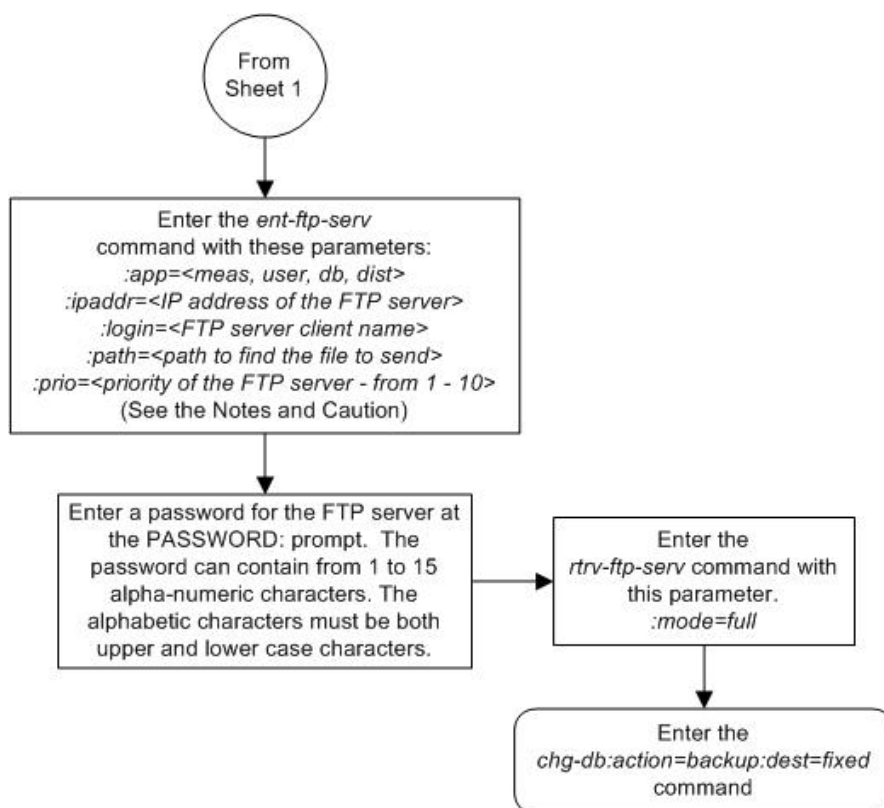
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.

```

**Figure 57: Adding an FTP Server**





**Notes:**

1. The *login* parameter value can contain from 1 to 15 alpha-numeric characters. The alphabetic characters can be both upper and lower case characters.
2. The *path* parameter value is a mixed-case quoted character string with a valid FTP path format that can contain up to 100 characters.
3. If the Eagle OAM IP Security Enhancement Controlled Feature is enabled and activated, the FTP servers configured in this procedure must be secure FTP servers and secure shell clients must be available. The FTP-Based Table Retrieve Application (FTRA) and the Measurements Platform must support secure shell connections to the EAGLE 5 ISS. Enter the *rtrv-ctrl-feat* command to verify whether or not the Eagle OAM IP Security Enhancement Controlled Feature is enabled and activated.
4. Because CSV measurement data files do not have unique names across multiple STPs, include the CLLI of the STP in the FTP server path for meas FTP servers.

**Caution:** This procedure can be used to add a USER FTP server, but any USER FTP servers entered by this procedure will be overwritten by the FTP server configuration information sent to the EAGLE 5 ISS by the FTP-Based Table Retrieve Application (FTRA). It is recommended that USER FTP servers be added at the FTRA. For more information on adding USER FTP servers at the FTRA, see the *FTP-Based Table Retrieve Application (FTRA) User Guide*.

## Removing an FTP Server

This procedure is used to remove an FTP server from the database using the `dlt-ftp-serv` command.

The `dlt-ftp-serv` command uses these parameters.

`:app` – The application of the FTP server. There are four values for the `app` parameter:

- `meas` – The FTP servers for the Measurements Platform
- `user` – The FTP servers for the FTP Retrieve and Replace feature.
- `db` – The FTP server for the database backup/restore application.
- `dist` – the FTP server for the EAGLE 5 ISS software release distribution application.

`:ipaddr` – The IP address of the FTP server.



### CAUTION

**CAUTION:** Removing all FTP servers for an application will disable the feature supported by the FTP servers.

1. Display the FTP servers in the database by entering this command.

```
rtrv-ftp-serv:mode=full
```

This is an example of the possible output.

```
rlghncxa03w 08-09-01 09:12:36 GMT EAGLE5 39.2.0
FTP Client Security: ON
```

| APP   | IPADDR                       | LOGIN    | PRI0 |
|-------|------------------------------|----------|------|
| ----- | -----                        | -----    | ---- |
| db    | 10.20.50.102                 | dbuser1  | 1    |
| Path: | ~/eagle                      |          |      |
| dist  | 100.200.50.102               | dbuser1  | 1    |
| Path: | ~/eagle                      |          |      |
| meas  | 1.255.0.100                  | ftpmeas3 | 3    |
| Path: | ~meas\local                  |          |      |
| meas  | 1.255.0.101                  | ftpmeas2 | 2    |
| Path: | \tmp\measurements\backup\dat |          |      |
| user  | 1.255.0.100                  | ftpuser1 | 3    |
| Path: | \tmp\user                    |          |      |
| user  | 1.255.0.102                  | ftpuser5 | 7    |
| Path: | \tmp\backup\user             |          |      |

```
FTP SERV table is (6 of 10) 60% full
```

2. Remove an FTP server from the database using the `dlt-ftp-serv` command.

For this example, enter this command.

```
dlt-ftp-serv:app=meas:ipaddr=1.255.0.101
```

When this command has successfully completed, the following message should appear.

```
rlghncxa03w 08-09-01 21:18:37 GMT EAGLE5 39.2.0
FTP SERV table is (5 of 10) 50% full
DLT-FTP-SERV: MASP A - COMPLTD
```

3. Display the changes by entering this command.

```
rtrv-ftp-serv:mode=full
```

The following is an example of the possible output.

```
rlghncxa03w 08-09-01 09:12:36 GMT EAGLE5 39.2.0
FTP Client Security: ON
```

| APP   | IPADDR           | LOGIN    | PRI0 |
|-------|------------------|----------|------|
| db    | 10.20.50.102     | dbuser1  | 1    |
| Path: | ~/eagle          |          |      |
| dist  | 100.200.50.102   | dbuser1  | 1    |
| Path: | ~/eagle          |          |      |
| meas  | 1.255.0.100      | ftpmeas3 | 3    |
| Path: | ~meas\local      |          |      |
| user  | 1.255.0.100      | ftpuser1 | 3    |
| Path: | \tmp\user        |          |      |
| user  | 1.255.0.102      | ftpuser5 | 7    |
| Path: | \tmp\backup\user |          |      |

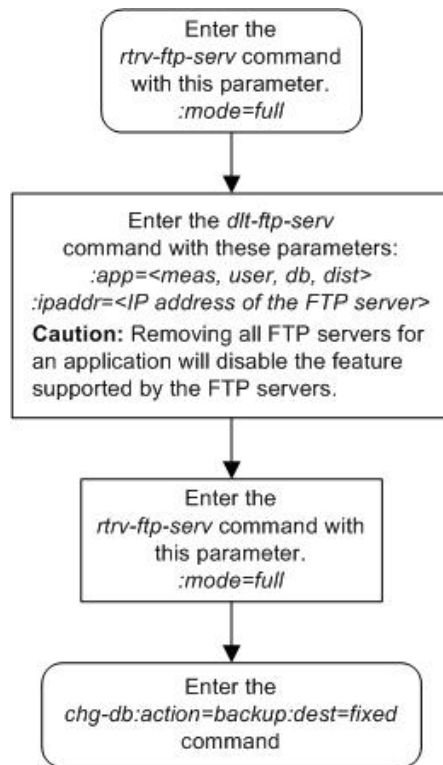
```
FTP SERV table is (5 of 10) 50% full
```

4. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 58: Removing an FTP Server**



## Changing an FTP Server

This procedure is used to change the values assigned to an FTP server using the `chg-ftp-serv` command.

The `chg-ftp-serv` command uses these parameters.

`:app` – The application of the FTP server. There are four values for the `app` parameter:

- `meas` – The FTP servers for the Measurements Platform
- `db` - The FTP server for the database backup/restore application.
- `dist` - the FTP server for the EAGLE 5 ISS software release distribution application.
- `user` – The FTP servers for the FTP Retrieve and Replace feature.



**CAUTION**

**CAUTION:** While this procedure can be used to change a USER FTP server configuration, any USER FTP server configurations changed by this procedure will be overwritten by the FTP server configuration information sent to the EAGLE 5 ISS by the FTP-Based Table Retrieve Application (FTRA).

`:ipaddr` – The IP address of the FTP server.

`:login` – The name of the FTP server client.

`:path` – The path to the file on the EAGLE 5 ISS that is to be sent to the FTP server.

`:prio` – The priority of the FTP server, from 1 to 10.

The `app` and `ipaddr` parameters must be specified with the `chg-ftp-serv` command. The IP address of the FTP server cannot be changed with the `chg-ftp-serv` command. If you wish to change the IP address of the FTP server, the FTP server must first be removed with the [Removing an FTP Server](#) on page 517 procedure, then re-entered with the new IP address using the [Adding an FTP Server](#) on page 511 procedure.

The `login` parameter value can contain from 1 to 15 alpha-numeric characters. The alphabetic characters can be both upper and lower case characters.

The `path` parameter value is a mixed-case quoted character string with a valid FTP path format that can contain up to 100 characters.

If the `login` parameter value is changed, the user is prompted for a password for this FTP server. The password can contain from 1 to 15 alpha-numeric characters. The alphabetic characters must be both upper and lower case characters. The password is not shown on the terminal screen as it is being entered and is not shown in the `rtrv-ftp-serv` output.

If the Eagle OA&M IP Security Enhancement Controlled Feature is enabled and activated, the FTP servers configured in this procedure must be secure FTP servers. The FTP-Based Table Retrieve Application (FTRA) and the Measurements Platform must support secure shell connections to the EAGLE 5 ISS. Enter the `rtrv-ctrl-feat` command to verify whether or not the Eagle OA&M IP Security Enhancement Controlled Feature is enabled and activated.

Because CSV measurement data files do not have unique names across multiple STPs, include the CLLI of the STP in the FTP server path for `meas` FTP servers.

1. Display the FTP servers in the database by entering this command.

```
rtrv-ftp-serv:mode=full
```

This is an example of the possible output.

```
rlghncxa03w 08-09-01 09:12:36 GMT EAGLE5 39.2.0
FTP Client Security: ON
```

| APP   | IPADDR                       | LOGIN    | PRI0 |
|-------|------------------------------|----------|------|
| db    | 10.20.50.102                 | dbuser1  | 1    |
| Path: | ~/eagle                      |          |      |
| dist  | 100.200.50.102               | dbuser1  | 1    |
| Path: | ~/eagle                      |          |      |
| meas  | 1.255.0.100                  | ftpmeas3 | 3    |
| Path: | ~meas\local                  |          |      |
| meas  | 1.255.0.101                  | ftpmeas2 | 2    |
| Path: | \tmp\measurements\backup\dat |          |      |
| user  | 1.255.0.100                  | ftpuser1 | 3    |
| Path: | \tmp\user                    |          |      |
| user  | 1.255.0.102                  | ftpuser5 | 7    |
| Path: | \tmp\backup\user             |          |      |

```
FTP SERV table is (6 of 10) 60% full
```

2. Change the FTP server to the database using the `chg-ftp-serv` command.

For this example, enter this command.

```
chg-ftp-serv:app=meas:ipaddr=1.255.0.101:login=meas25:prio=1
```

When this command has successfully completed, the following message should appear.

```
rlghncxa03w 08-09-01 21:18:37 GMT EAGLE5 39.2.0
Enter Password :
CHG-FTP-SERV: MASP A - COMPLTD
```

**Note:** If the login parameter was not specified in this step, continue the procedure with [Step 4](#) on page 521.

3. Enter a password for the FTP server changed in [Step 2](#) on page 520 at the PASSWORD: prompt.

The password is not shown on the terminal screen as it is entered. The password can contain from 1 to 15 alpha-numeric characters. The alphabetic characters must be both upper and lower case characters.

4. Display the changes by entering this command.

```
rtrv-ftp-serv:mode=full
```

The following is an example of the possible output.

```
rlghncxa03w 08-09-01 09:12:36 GMT EAGLE5 39.2.0
FTP Client Security: ON
```

| APP   | IPADDR                       | LOGIN    | PRI0 |
|-------|------------------------------|----------|------|
| ----- | -----                        | -----    | ---- |
| db    | 10.20.50.102                 | dbuser1  | 1    |
| Path: | ~/eagle                      |          |      |
| dist  | 100.200.50.102               | dbuser1  | 1    |
| Path: | ~/eagle                      |          |      |
| meas  | 1.255.0.100                  | ftpmeas3 | 3    |
| Path: | ~meas\local                  |          |      |
| meas  | 1.255.0.101                  | meas25   | 1    |
| Path: | \tmp\measurements\backup\dat |          |      |
| user  | 1.255.0.100                  | ftpuser1 | 3    |
| Path: | \tmp\user                    |          |      |
| user  | 1.255.0.102                  | ftpuser5 | 7    |
| Path: | \tmp\backup\user             |          |      |

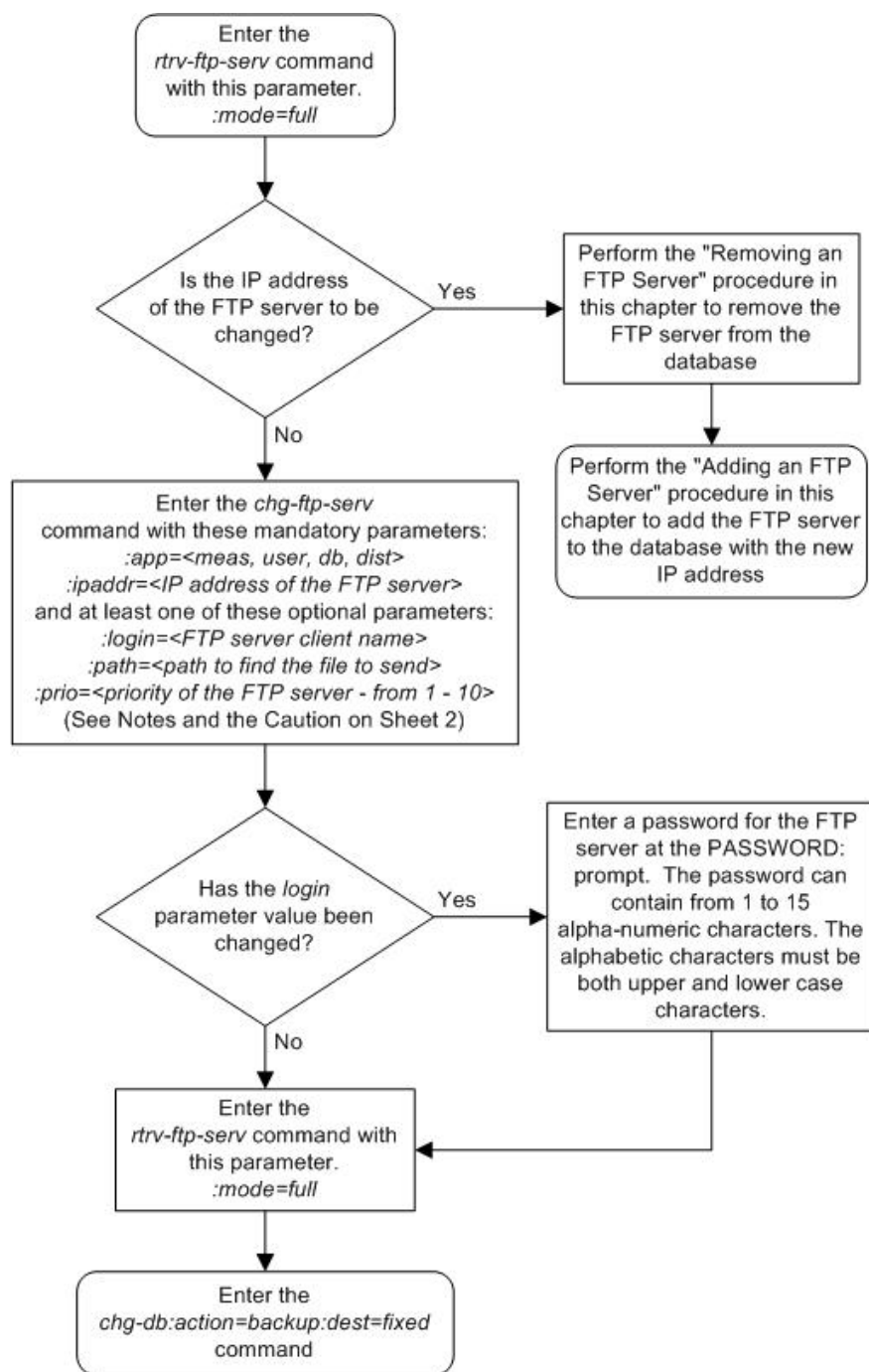
```
FTP SERV table is (6 of 10) 60% full
```

5. Back up the new changes using the chg-db:action=backup:dest=fixed command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 59: Changing an FTP Server**





**Notes:**

1. The *login* parameter value can contain from 1 to 15 alpha-numeric characters. The alphabetic characters can be both upper and lower case characters.

2. The *path* parameter value is a mixed-case quoted character string with a valid FTP path format that can contain up to 100 characters.

3. If the Eagle OAM IP Security Enhancement Controlled Feature is enabled and activated, the FTP servers configured in this procedure must be secure FTP servers and secure shell clients must be available. The FTP-Based Table Retrieve Application (FTRA) and the Measurements Platform must support secure shell connections to the EAGLE 5 ISS. Enter the *rtrv-ctrl-feat* command to verify whether or not the Eagle OAM IP Security Enhancement Controlled Feature is enabled and activated.

4. Because CSV measurement data files do not have unique names across multiple STPs, include the CLLI of the STP in the FTP server path for *meas* FTP servers.

**Caution:** Changes to the USER FTP server configurations in this procedure may interfere with the operation of the FTP-Based Table Retrieve Application (FTRA). It is recommended that any changes to the USER FTP server configurations be made at the FTRA. For more information on making these changes at the FTRA, see the *FTP-Based Table Retrieve Application (FTRA) User Guide*.

## Adding an IPSM

This procedure is used to add an IPSM (IP Services Module), used for the IP User Interface feature, to the database using the *ent -card* command. The IPSM provides eight IP based connections to the EAGLE 5 ISS's user interface through a telnet client. The card being provisioned in this procedure can be one of the cards shown in [Table 15: IPSM Part Numbers](#) on page 523.

**Table 15: IPSM Part Numbers**

| Card Type | Part Number                           |
|-----------|---------------------------------------|
| IPSM      | 870-2371-02, 870-2371-06, 870-2371-13 |
| E5-IPSM   | 870-2877-01                           |

The *ent -card* command uses these parameters.

: *loc* – The location of the card being added to the database.

: *type* – The type of card being added to the database. For this procedure, the value of this parameter is *ipsm*.

: *appl* – The application software that is assigned to the card. For this procedure, the value of this parameter is *ips*.

: *force* – Allow the LIM to be added to the database even if there are not enough service modules to support the number of LIMs in the EAGLE 5 ISS. This parameter does not apply to configuring IPSMs and should not be used.

The IP User Interface (Telnet) feature is not required to be enabled and activated in order to add an IPSM, but the IP User Interface (Telnet) feature must be enabled and activated so that the user can use a telnet client to establish a connection to the EAGLE 5 ISS. This can be verified with the

`rtrv-ctrl-feat` command. To enable and activate the IP User Interface (Telnet) feature, go to the [Activating Controlled Features](#) on page 606 procedure.

The shelf to which the card is to be added, must already be in the database. This can be verified with the `rtrv-shlf` command. If the shelf is not in the database, see the [Adding a Shelf](#) on page 466 procedure.

If an E5-IPSM is being provisioned in this procedure, HIPR cards must be installed into card locations 9 and 10 in the shelf that the E5-IPSM will occupy. If HIPR cards are not installed in the shelf that the E5-IPSM will occupy, the E5-IPSM will not function when the E5-IPSM is inserted into the shelf. Enter the `rept-stat-gpl:gpl=hipr` command to verify whether or not HIPR cards are installed in the same shelf as the E5-IPSM being provisioned in this procedure.

If the Eagle OA&M IP Security Enhancement feature is enabled and activated, shown in the `rtrv-ctrl-feat` output, when an IPSM is installed into the EAGLE 5 ISS, UIM 1493, SSH Host Keys Regenerated, is displayed. UIM 1493 contains the public host key fingerprint which is used to establish a secure connection with an SSH client. If the secure connection is to be made with the FTTRA, the public host key fingerprint displayed in UIM 1493 must be added to the `hosts.xml` file in the FTTRA. Record the public host key fingerprint information displayed in UIM 1493 if a secure connection to the FTTRA will be made. For more information about editing the `hosts.xml` file on the FTTRA, see the *FTP-Based Table Retrieve Application (FTTRA) User Guide*.

An IP link must be assigned to the IPSM. The IP links can be verified using the `rtrv-ip-lnk` command. IP links are configured using the `chg-ip-lnk` command.

After an IPSM is configured in the database and placed into service, eight telnet terminals are configured in the database with default values for the security and output group parameters. If you wish to change the security and output group parameter values, go to the [Changing Terminal Characteristics](#) on page 430 procedure.

If a Class B IP address is specified for the `ipaddr` parameter of the `chg-ip-lnk` command, the subnet address that results from the `ipaddr` and `submask` parameter values cannot be the same as the subnet address that results from the `pvn` and `pvnmask`, `fcna` and `fcnamask`, or `fcnb` and `fcnbmask` parameter values of the `chg-netopts` command. The `pvn` and `pvnmask`, `fcna` and `fcnamask`, or `fcnb` and `fcnbmask` parameter values can be verified by entering the `rtrv-netopts` command. Choose `ipaddr` and `submask` parameter values for the IP link to the IPSM whose resulting subnet address is not be the same as the subnet address that resulting from the `pvn` and `pvnmask`, `fcna` and `fcnamask`, or `fcnb` and `fcnbmask` parameter values of the `chg-netopts` command.

The examples in this procedure are used to add an IPSM in card location 2107.

1. Display the cards in the database using the `rtrv-card` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 09:12:36 GMT EAGLE5 41.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
1101 DSM VSCCP
1102 TSM GLS
1103 DCM STPLAN
1113 GSPM OAM
1114 TDM-A
1115 GSPM OAM
1116 TDM-B
1117 MDAL
1201 LIMDS0 SS7ANSI sp2 A 0 sp1 B 0
1202 LIMDS0 SS7ANSI sp2 A 1 nsp3 B 0
```

|      |        |         |         |    |   |      |    |   |
|------|--------|---------|---------|----|---|------|----|---|
| 1203 | LIMDS0 | SS7ANSI | sp3     | A  | 0 |      |    |   |
| 1204 | LIMDS0 | SS7ANSI | sp3     | A  | 1 |      |    |   |
| 1205 | LIMDS0 | SS7ANSI | itu1    | A  | 0 |      |    |   |
| 1206 | LIMDS0 | SS7ANSI | nsp3    | A  | 1 | nsp4 | B  | 0 |
| 1212 | DSM    | VSCCP   |         |    |   |      |    |   |
| 1214 | TSM    | GLS     |         |    |   |      |    |   |
| 1215 | DCM    | STPLAN  |         |    |   |      |    |   |
| 1301 | LIMATM | ATMANSI | lsnatm1 | A  | 0 |      |    |   |
| 1303 | STC    | EROUTE  |         |    |   |      |    |   |
| 1305 | DCM    | STPLAN  |         |    |   |      |    |   |
| 1308 | LIMDS0 | SS7ANSI | sp6     | A  | 0 | sp7  | B  | 0 |
| 1311 | LIMDS0 | SS7ANSI | sp2     | A  | 2 | sp1  | B  | 1 |
|      |        |         | sp7     | A1 | 1 | sp3  | B1 | 2 |
| 1315 | LIMDS0 | SS7ANSI | sp7     | A  | 2 | sp5  | B  | 0 |
| 1318 | LIMATM | ATMANSI | lsnatm1 | A  | 1 |      |    |   |
| 2101 | STC    | EROUTE  |         |    |   |      |    |   |
| 2103 | STC    | EROUTE  |         |    |   |      |    |   |
| 2105 | STC    | EROUTE  |         |    |   |      |    |   |

The cards should be distributed throughout the EAGLE 5 ISS for proper power distribution. Refer to the *Installation Manual - EAGLE 5 ISS* for the shelf power distribution.

**Note:** The EAGLE 5 ISS can contain a maximum of 3 IPSMs. If the `rtrv-card` output shows that there are three IPSMs in the EAGLE 5 ISS, this procedure cannot be performed.

**Note:** If the card being added in this procedure is not an E5-IPSM card, skip step 2 and go to step 3.

- Verify that HIPR cards are installed in card locations 9 and 10 in the shelf that will contain the E5-IPSM card being added in this procedure. Enter this command.

```
rept-stat-gpl:gpl=hipr
```

This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:40:26 GMT EAGLE5 37.0.0
GPL CARD RUNNING APPROVED TRIAL
HIPR 1109 126-002-000 126-002-000 126-003-000
HIPR 1110 126-002-000 126-002-000 126-003-000
HIPR 1209 126-002-000 126-002-000 126-003-000
HIPR 1210 126-002-000 126-002-000 126-003-000
HIPR 1309 126-002-000 126-002-000 126-003-000
HIPR 1310 126-002-000 126-002-000 126-003-000
HIPR 2109 126-002-000 126-002-000 126-003-000
HIPR 2110 126-002-000 126-002-000 126-003-000
Command Completed
```

If HIPR cards are installed in the shelf that will contain the E5-IPSM card, go to step 3.

If HIPR cards are not installed on the shelf that will contain the E5-IPSM card, go to the *Installation Manual - EAGLE 5 ISS* and install the HIPR cards. Once the HIPR cards have been installed, go to step 3.

- Install the IPSM into the proper card location.

If the OA&M IP Security Enhancements feature is enabled and activated, UIM 1493, SSH Host Keys Regenerated, is displayed when the IPSM is installed into the card location. UIM 1493 contains the public host key fingerprint which is used to establish a secure connection with an SSH client. If the secure connection is to be made with the FTRA, the public host key fingerprint displayed in UIM 1493 must be added to the `hosts.xml` file in the FTRA. Record the public host key fingerprint information displayed in UIM 1493 if a secure connection to the FTRA will be made. For more information about editing the `hosts.xml` file on the FTRA, see the *FTP-Based Table Retrieve Application (FTRA) User Guide*.

4. Add the IPSM using the `ent-card` command.

For this example, enter this commands.

```
ent-card: loc=2107:type=ipsm:appl=ips
```

When this command has successfully completed, these messages should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
Telnet auto-provisioning activated, 8 terminals are being added:
Telnet terminal 17 Added at location 2107.
Telnet terminal 18 Added at location 2107.
Telnet terminal 19 Added at location 2107.
Telnet terminal 20 Added at location 2107.
Telnet terminal 21 Added at location 2107.
Telnet terminal 22 Added at location 2107.
Telnet terminal 23 Added at location 2107.
Telnet terminal 24 Added at location 2107.

ENT-CARD: MASP A - COMPLTD
```

5. Verify the changes using the `rtrv-card` command with the card location specified in step 4.

For this example, enter this command.

```
rtrv-card: loc=2107
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
2107 IPSM IPS
```

6. Verify that the terminals shown as added in step 4 have been added by entering the `rtrv-trm` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 39.0.0
TRM TYPE COMM FC TMOUT MXINV DURAL
1 VT320 9600-7-E-1 SW 30 5 99:59:59
2 KSR 9600-7-E-1 HW 30 5 INDEF
3 PRINTER 4800-7-E-1 HW 30 0 00:00:00
4 VT320 2400-7-E-1 BOTH 30 5 00:30:00
5 VT320 9600-7-0-1 NONE 30 5 00:00:30
6 VT320 9600-7-E-2 SW 30 9 INDEF
7 PRINTER 9600-7-N-2 HW 30 5 00:30:00
8 KSR 19200-7-E-2 BOTH 30 5 00:30:00
9 VT320 9600-7-E-1 SW 30 7 00:30:00
10 VT320 9600-7-E-1 HW 30 5 00:30:00
11 VT320 4800-7-E-1 HW 30 5 00:30:00
12 PRINTER 9600-7-E-1 HW 30 4 00:30:00
13 VT320 9600-7-0-1 NONE 30 5 00:30:00
14 VT320 9600-7-E-2 SW 30 8 00:30:00
15 VT320 9600-7-N-2 HW 30 5 00:30:00
16 VT320 9600-7-E-2 BOTH 30 3 00:30:00

TRM TYPE LOC TMOUT MXINV DURAL SECURE
17 TELNET 2107 60 5 00:30:00
18 TELNET 2107 60 5 00:30:00
19 TELNET 2107 60 5 00:30:00
20 TELNET 2107 60 5 00:30:00
21 TELNET 2107 60 5 00:30:00
```

|    |        |      |    |   |          |
|----|--------|------|----|---|----------|
| 22 | TELNET | 2107 | 60 | 5 | 00:30:00 |
| 24 | TELNET | 2107 | 60 | 5 | 00:30:00 |

| TRM | LOGINTMR<br>(sec) | LOGOUTTMR<br>(sec) | PNGTIMEINT<br>(msec) | PNGFAILCNT |
|-----|-------------------|--------------------|----------------------|------------|
| 17  | none              | none               | none                 | 1          |
| 18  | none              | none               | none                 | 1          |
| 19  | none              | none               | none                 | 1          |
| 20  | none              | none               | none                 | 1          |
| 21  | none              | none               | none                 | 1          |
| 22  | none              | none               | none                 | 1          |
| 23  | none              | none               | none                 | 1          |
| 24  | none              | none               | none                 | 1          |

| TRM | TRAF | LINK | SA  | SYS | PU  | DB  | UIMRD |
|-----|------|------|-----|-----|-----|-----|-------|
| 1   | NO   | YES  | NO  | YES | NO  | YES | YES   |
| 2   | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 3   | YES  | YES  | YES | NO  | YES | YES | YES   |
| 4   | YES  | NO   | NO  | NO  | NO  | NO  | NO    |
| 5   | NO   | YES  | NO  | NO  | NO  | NO  | YES   |
| 6   | NO   | NO   | YES | NO  | NO  | NO  | NO    |
| 7   | YES  | YES  | YES | YES | YES | YES | YES   |
| 8   | NO   | NO   | NO  | NO  | YES | NO  | YES   |
| 9   | NO   | YES  | NO  | NO  | NO  | YES | NO    |
| 10  | NO   | NO   | NO  | NO  | NO  | NO  | YES   |
| 11  | YES  | YES  | YES | YES | YES | YES | YES   |
| 12  | YES  | YES  | YES | YES | YES | YES | YES   |
| 13  | NO   | YES  | NO  | NO  | NO  | NO  | YES   |
| 14  | NO   | NO   | YES | NO  | NO  | NO  | NO    |
| 15  | YES  | YES  | YES | NO  | YES | YES | YES   |
| 16  | NO   | NO   | NO  | NO  | YES | NO  | YES   |
| 17  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 18  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 19  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 20  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 21  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 22  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 23  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 24  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |

| TRM | APP<br>SERV | APP<br>SS | CARD | CLK | DBG | GTT | GWS | MEAS | MON | MPS | SEAS | SLAN |
|-----|-------------|-----------|------|-----|-----|-----|-----|------|-----|-----|------|------|
| 1   | YES         | YES       | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 2   | YES         | YES       | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 3   | YES         | YES       | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 4   | YES         | YES       | YES  | YES | YES | NO  | YES | YES  | YES | YES | NO   | NO   |
| 5   | YES         | YES       | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 6   | YES         | YES       | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 7   | NO          | YES       | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 8   | YES         | YES       | YES  | YES | YES | YES | YES | YES  | YES | YES | YES  | YES  |
| 9   | YES         | YES       | YES  | YES | YES | YES | YES | YES  | YES | YES | YES  | YES  |
| 10  | YES         | YES       | YES  | YES | YES | YES | YES | YES  | YES | YES | YES  | YES  |
| 11  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 12  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 13  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 14  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 15  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 16  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 17  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 18  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 19  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 20  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 21  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 22  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |

|    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 23 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 24 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |

If you wish to change the output parameter values or the `logintmr`, `logouttmr`, `pngfailcnt`, or the `pngtimeint` parameter values for the telnet terminals added in this procedure, perform the [Changing Terminal Characteristics](#) on page 430 procedure.

**Note:** If a Class A or C IP address will be specified for the `ipaddr` parameter in step 9, skip step 7 and go to step 8.

- The subnet address that results from the `ipaddr` and `submask` parameter values of the `chg-ip-lnk` command cannot be the same as the subnet address that results from the `pvn` and `pvnmask`, `fcna` and `fcnamask`, or `fcnb` and `fcnbmask` parameter values of the `chg-netopts` command.

Display the `pvn`, `pvnmask`, `fcna`, `fcnamask`, `fcnb`, and `fcnbmask` parameter values of the `chg-netopts` command by entering the `rtrv-netopts` command.

If error message E3967 Cmd Rej: E5IS must be on is displayed after the `rtrv-netopts` command is executed, the `pvn`, `pvnmask`, `fcna`, `fcnamask`, `fcnb`, and `fcnbmask` `pvn` and `pvnmask` parameters are not configured. Go to step 8.

This is an example of the possible output if the E5IS feature is on.

```
rlghncxa03w 06-10-28 21:17:37 GMT EAGLE5 36.0.0
NETWORK OPTIONS

PVN = 128.20.30.40
PVNMASK = 255.255.192.0
```

```
rlghncxa03w 09-02-28 21:17:37 GMT EAGLE5 40.1.0
NETWORK OPTIONS

PVN = 128.20.30.40
PVNMASK = 255.255.192.0
FCNA = 170.120.50.0
FCNAMASK = 255.255.240.0
FCNB = 170.121.50.0
FCNBMASK = 255.255.254.0
```

Choose `ipaddr` and `submask` parameter values for the IP link to the IPSM whose resulting subnet address is not be the same as the subnet address that resulting from the `pvn` and `pvnmask`, `fcna` and `fcnamask`, or `fcnb` and `fcnbmask` parameter values of the `chg-netopts` command. Go to step 8.

- Display the IP link data assigned to the IPSM using the `rtrv-ip-lnk` command with the IPSM's location and the `port=a` parameter.

For this example, enter this command.

```
rtrv-ip-lnk:loc=2107:port=a
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:20:37 GMT EAGLE5 36.0.0
LOC PORT IPADDR SUBMASK DUPLEX SPEED MACTYPE AUTO MCAST
2107 A ----- ----- HALF 10 DIX NO NO
```

- Assign an IP link to the IPSM using the `chg-ip-lnk` command with these parameters: `loc`, `port=a`, `ipaddr`, `submask`, `speed=100`.

For this example, enter this command.

```
chg-ip-lnk:loc=2107:port=a:ipaddr=150.1.1.1:submask=255.255.255.0:speed=100
```

**Note:** If either the `ipaddr` or `submask` parameters are specified, then both parameters must be specified, unless the `ipaddr=0.0.0.0` parameter is specified, then the `submask` parameter is not required. The `ipaddr=0.0.0.0` parameter disables the IP link.

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 21:20:37 GMT EAGLE5 36.0.0
CHG-IP-LNK: MASP A - COMPLTD
```

10. Verify the changes made in step 9 using the `rtrv-ip-lnk` command and specifying the card location and port values used in step 9.

For this example, enter this command.

```
rtrv-ip-lnk:loc=2107:port=a
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:20:37 GMT EAGLE5 36.0.0
LOC PORT IPADDR SUBMASK DUPLEX SPEED MACTYPE AUTO MCAST
2107 A 150.1.1.1 255.255.255.0 HALF 100 DIX NO NO
```

11. Display the current IP host information in the database by entering the `rtrv-ip-host` command with the IP address of the IP link shown in step 10.

For this example, enter this command.

```
rtrv-ip-host:ipaddr=150.1.1.1
```

No IP address and IP host entry is displayed, as shown in the following example.

```
rlghncxa03w 08-12-01 09:12:36 GMT EAGLE5 40.0.0
IPADDR HOST
IP Host table is (2 of 2048) 1% full
```

12. Assign an IP host to the IPSM using the `ent-ip-host` command.

For this example, enter this command.

```
ent-ip-host:host=ip.nc.tekelec.com:ipaddr=150.1.1.1
```

When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:18:37 GMT EAGLE5 36.0.0
ENT-IP-HOST: MASP A - COMPLTD
```

13. Display the IP card attributes of the IPSM using the `rtrv-ip-card` command specifying the IPSM's location.

For this example, enter this command.

```
rtrv-ip-card:loc=2107
```

The following is an example of the possible output.

```
rlghncxa03w 08-06-01 21:20:37 GMT EAGLE5 39.0.0
LOC 2107
```

```

SRCHORDR SRVR
DNSA -----
DNSB -----
DEFROUTER -----
DOMAIN -----
SCTPCSUM crc32c
BPIPADDR -----
BPSUBMASK -----

```

14. Change the IP card attributes of the IPSM using the `chg-ip-card` command with these values: IPSM card location, local search order, domain, and the default router for the IPSM.

For this example, enter this command.

```
chg-ip-card:loc=2107:srchordr=local:domain=ip.nc.tekelec.com:defrouter=150.1.1.250
```

The following is an example of the possible output.

**Note:** The network portion of the default router's IP address (`defrouter`) must be the same as the network portion of the IP address specified in the `chg-ip-lnk` (step 6) and `ent-ip-host` (step 10) commands. The value of the last octet of the default router's IP address must be from 1 to 254.

When this command has successfully completed, this message should appear.

```

rlghncxa03w 06-10-01 21:20:37 GMT EAGLE5 36.0.0
CHG-IP-CARD: MASP A - COMPLTD

```

15. Verify the changes made in step 14 using the `rtrv-ip-card` command specifying the IPSM's location.

For this example, enter this command.

```
rtrv-ip-card:loc=2107
```

The following is an example of the possible output.

```

rlghncxa03w 08-06-01 21:20:37 GMT EAGLE5 39.0.0
LOC 2107
SRCHORDR LOCAL
DNSA -----
DNSB -----
DEFROUTER 150.1.1.250
DOMAIN ip.nc.tekelec.com
SCTPCSUM crc32c
BPIPADDR -----
BPSUBMASK -----

```

16. Verify that the IP User Interface (Telnet) feature is enabled and turned on, and if secure connections to the EAGLE 5 ISS are to be used, verify that the OA&M IP Security Enhancements feature is enabled and activated by entering the `rtrv-ctrl-feat` command.

This is an example of the possible output.

```

rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

```



| Feature Name | Partnum   | Status | Quantity |
|--------------|-----------|--------|----------|
| Telnet       | 893005701 | off    | ----     |

**Note:** The `rtrv-ctrl-feat` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-ctrl-feat` command, see the `rtrv-ctrl-feat` command description in the *Commands Manual*.

If the IP User Interface (Telnet) feature is enabled and turned on (`status = on`), go to step 17.

If the IP User Interface (Telnet) feature is not enabled or turned on, perform the [Activating Controlled Features](#) on page 606 procedure to enable and turn on the IP User Interface (Telnet) feature.

If UIM 1493 was displayed when the IPSM was installed in step 2, the OA&M IP Security Enhancements feature is enabled and turned on. If the OA&M IP Security Enhancements feature is enabled and turned on (shown by the entry `EAGLE OA&M IP Security` in the `rtrv-ctrl-feat` output with the `status = on`), go to step 17.

If the OA&M IP Security Enhancements feature is not enabled or turned on, and secure connections are to the EAGLE 5 ISS are to be used, perform the [Activating the Eagle OA&M IP Security Enhancement Controlled Feature](#) on page 614 procedure to enable and turn on the OA&M IP Security Enhancements feature.

17. Place the IPSM into service using the `rst-card` specifying the location of the IPSM.

For this example, enter this command.

```
rst-card:loc=2107
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 21:20:37 GMT EAGLE5 36.0.0
Card has been allowed.
```

If the OA&M IP Security Enhancements feature is enabled and activated, UIM 1494, SSH Host Keys Loaded, is displayed. UIM 1494 contains the public host key fingerprint which is used to establish a secure connection with an SSH client. If the secure connection is to be made with the FTTRA, the public host key fingerprint displayed in UIM 1494 must be added to the `hosts.xml` file in the FTTRA. If the public host key fingerprint was not recorded in step 3, record the public host key fingerprint information displayed in UIM 1494 if a secure connection to the FTTRA will be made. For more information about editing the `hosts.xml` file on the FTTRA, see the *FTP-Based Table Retrieve Application (FTTRA) User Guide*.

18. Put the terminals that were created when the IPSM was added in step 4 into service with the `rst-trm` command. For this example, enter these commands.

```
rst-trm:trm=17
rst-trm:trm=18
rst-trm:trm=19
rst-trm:trm=20
rst-trm:trm=21
rst-trm:trm=22
rst-trm:trm=23
```

```
rst-trm:trm=24
```

This message should appear when each of these commands have successfully completed.

```
rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
Allow message sent to terminal
```

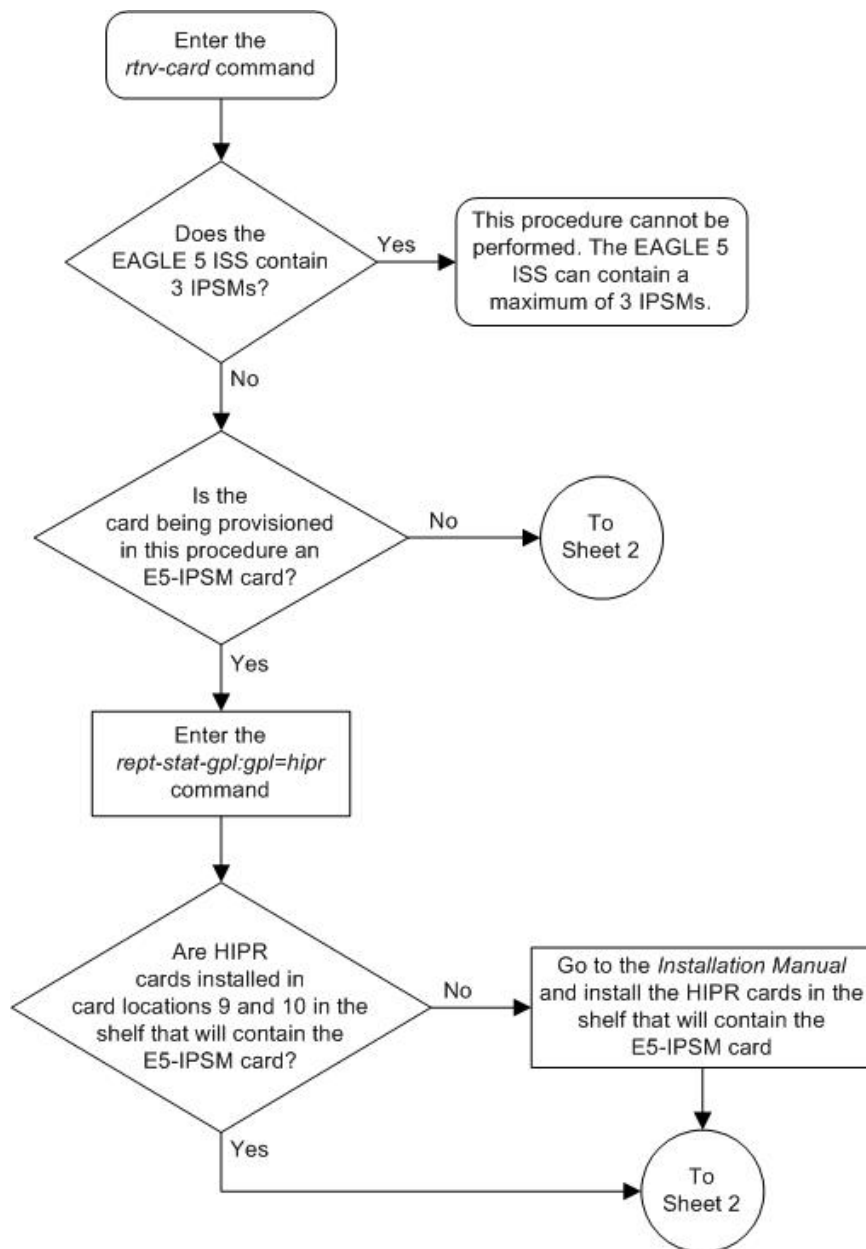
```
rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
Command Completed.
```

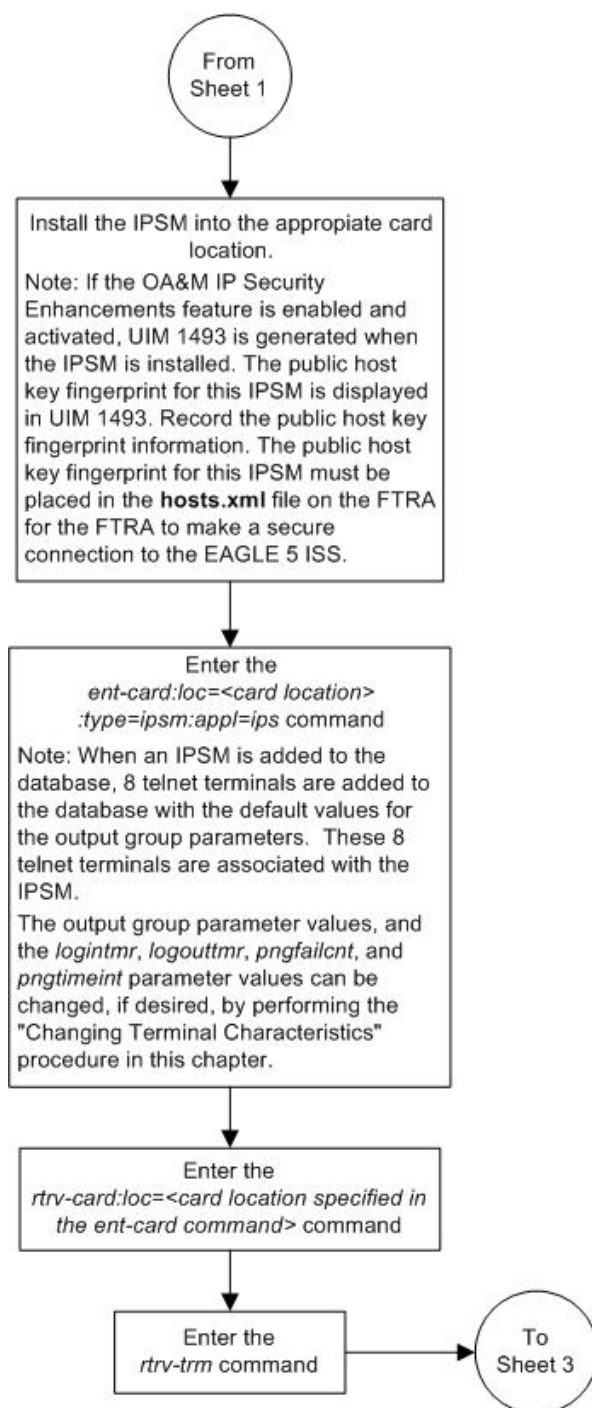
19. Back up the new changes using the `chg-db:action=backup:dest=fixedcommand`.

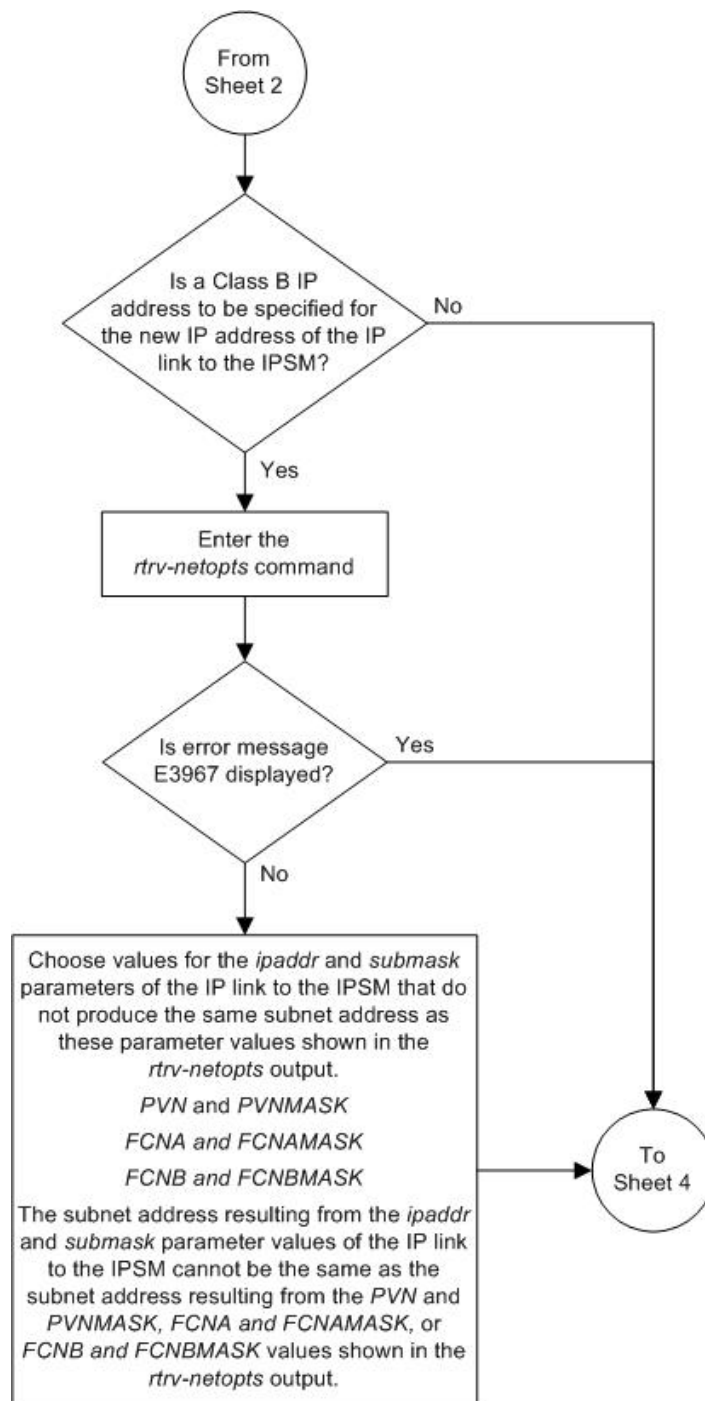
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

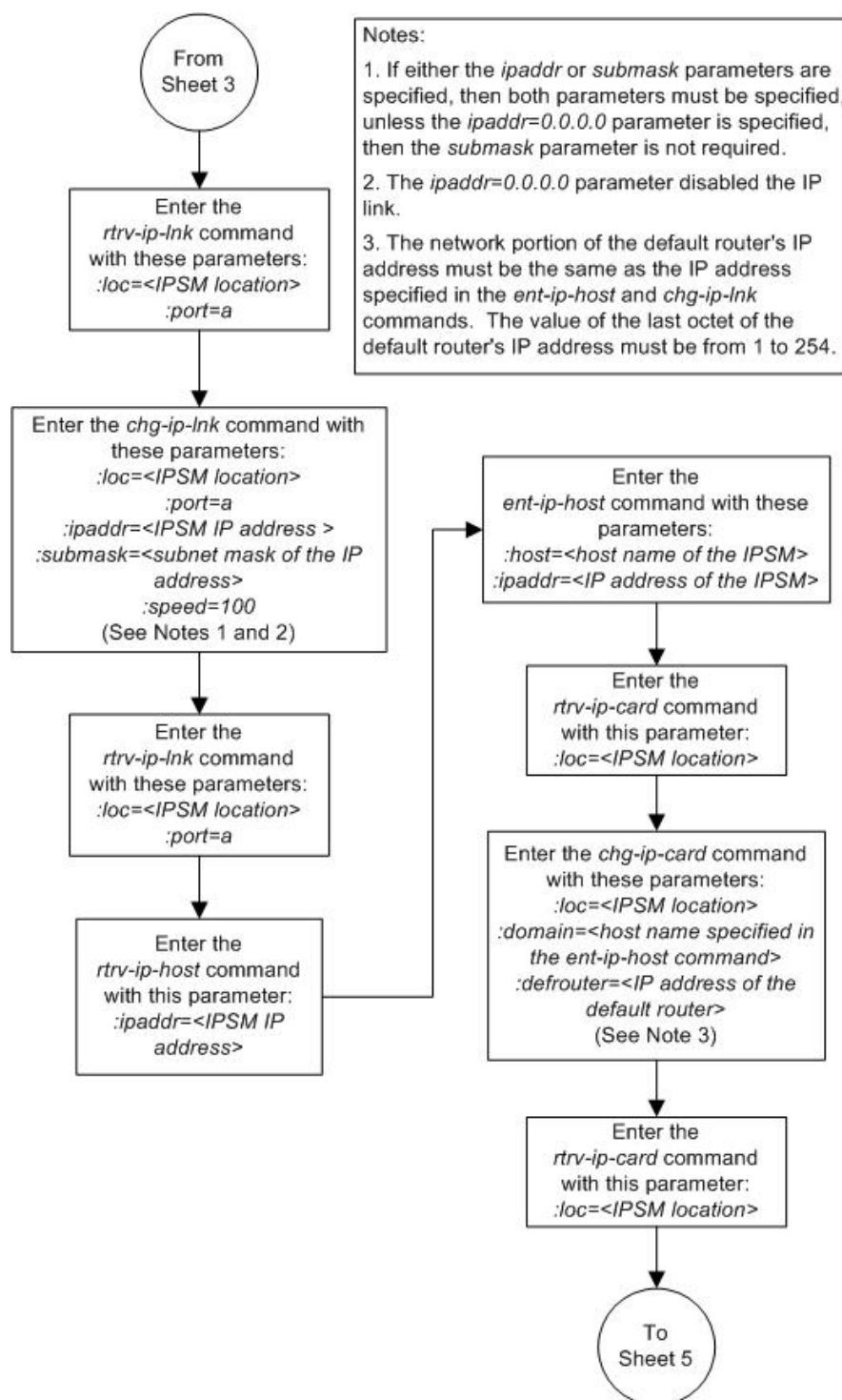
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

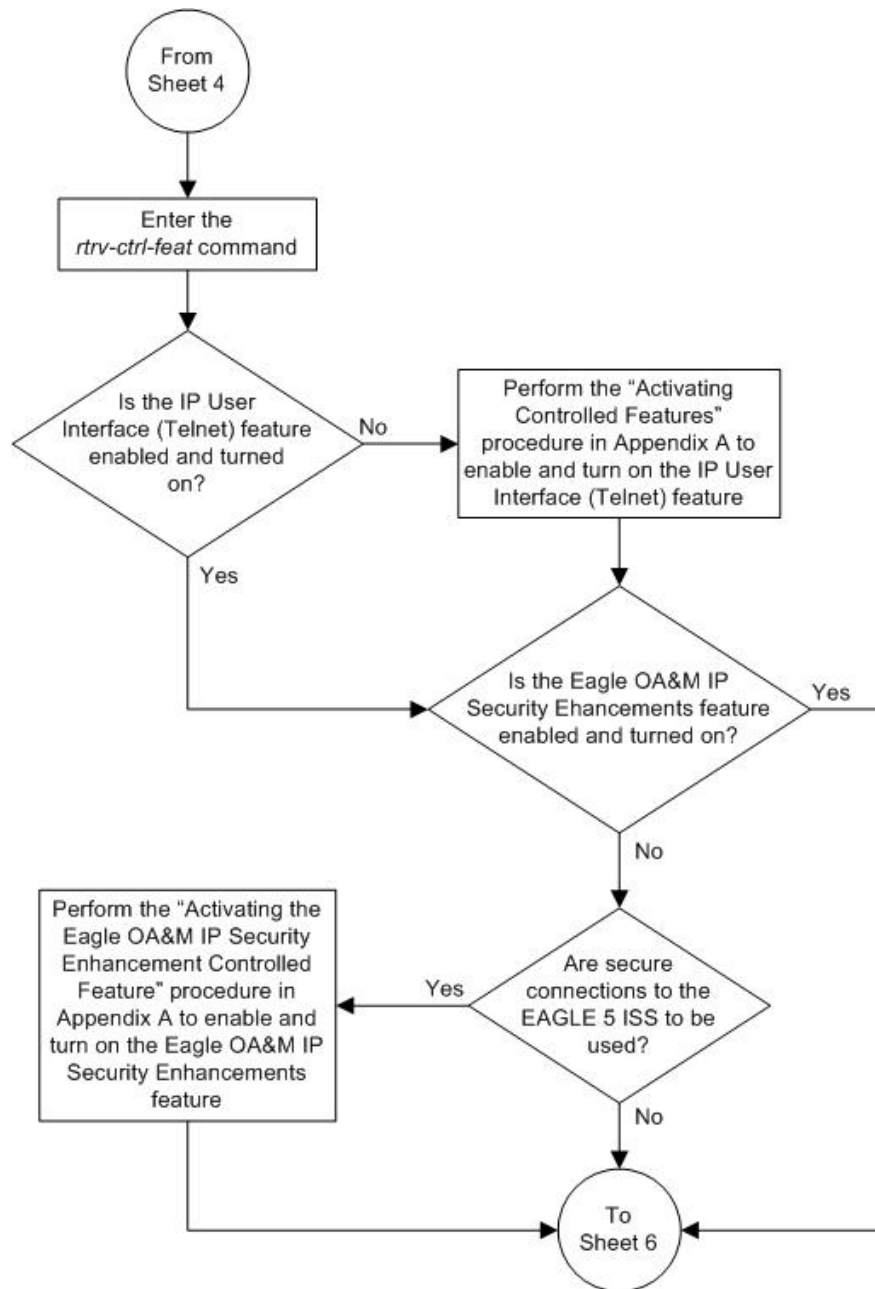
**Figure 60: Adding an IPSM**

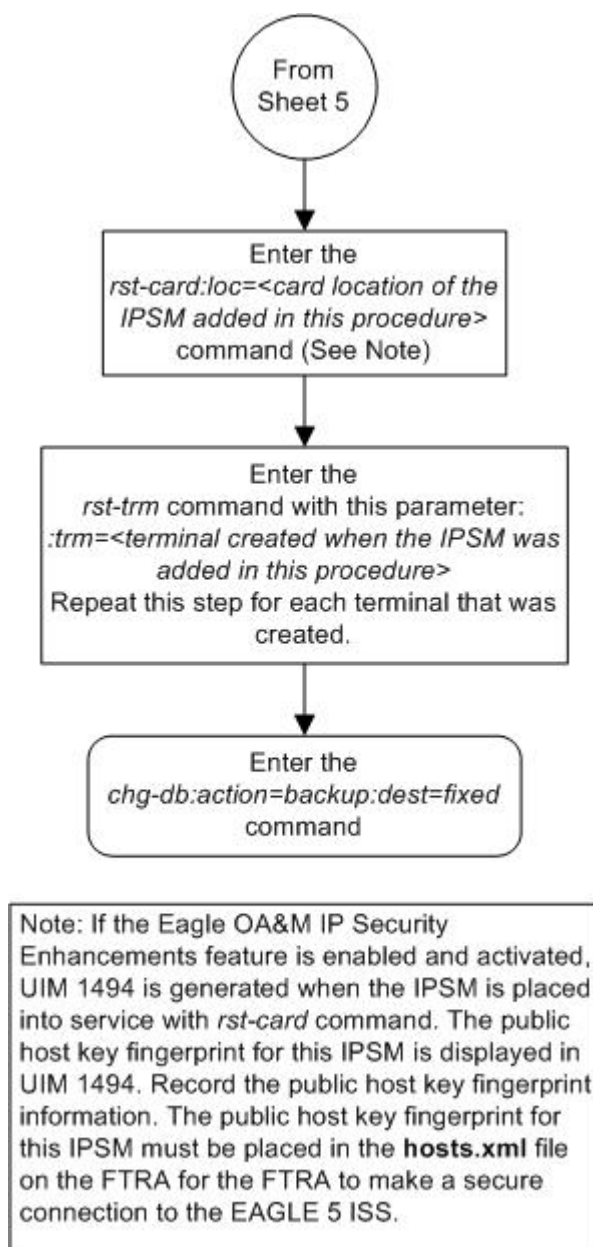












## Removing an IPSM

This procedure is used to remove an IPSM ( IP Services Module - a card running the *ips* application) from the database using the *dlt-card* command.



CAUTION

**CAUTION:** If the IPSM is the last IPSM in service, removing this card from the database will disable the IP User Interface (Telnet) feature.



All terminals associated with the IPSM being removed must be out of service. The terminals are displayed using the `rtrv-trm` command. The state of the terminals is displayed using the `rept-stat-trm` command.

The examples in this procedure are used to remove the IPSM in card location 2107.

### Canceling the REPT-STAT-CARD Command

Because the `rept-stat-card` command used in this procedure can output information for a long period of time, the `rept-stat-card` command can be canceled and the output to the terminal stopped. There are three ways that the `rept-stat-card` command can be canceled.

- Press the F9 function key on the keyboard at the terminal where the `rept-stat-card` command was entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rept-stat-card` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rept-stat-card` command was entered, from another terminal other than the terminal where the `rept-stat-card` command was entered. To enter the `canc-cmd:trm=<xx>` command, the terminal must allow Security Administration commands to be entered from it and the user must be allowed to enter Security Administration commands. The terminal's permissions can be verified with the `rtrv-secu-trm` command. The user's permissions can be verified with the `rtrv-user` or `rtrv-secu-user` commands.

For more information about the `canc-cmd` command, go to the *Commands Manual*.

1. Display the cards in the database using the `rtrv-card` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-01 09:12:36 GMT EAGLE5 41.0.0
CARD TYPE APPL LSET NAME LINK SLC LSET NAME LINK SLC
1101 DSM VSCCP
1102 TSM GLS
1103 DCM STPLAN
1113 GSPM OAM
1114 TDM-A
1115 GSPM OAM
1116 TDM-B
1117 MDAL
1201 LIMDS0 SS7ANSI sp2 A 0 sp1 B 0
1202 LIMDS0 SS7ANSI sp2 A 1 nsp3 B 0
1203 LIMDS0 SS7ANSI sp3 A 0
1204 LIMDS0 SS7ANSI sp3 A 1
1205 LIMDS0 SS7ANSI itu1 A 0
1206 LIMDS0 SS7ANSI nsp3 A 1 nsp4 B 0
1212 DSM VSCCP
1214 TSM GLS
1215 DCM STPLAN
1301 LIMATM ATMANSI lsnatm1 A 0
1303 STC EROUTE
1305 DCM STPLAN
1308 LIMDS0 SS7ANSI sp6 A 0 sp7 B 0
1311 LIMDS0 SS7ANSI sp2 A 2 sp1 B 1
1315 LIMDS0 SS7ANSI sp7 A1 1 sp3 B1 2
1318 LIMATM ATMANSI lsnatm1 A 1 sp5 B 0
2101 STC EROUTE
2103 STC EROUTE
```

|      |      |        |
|------|------|--------|
| 2105 | STC  | EROUTE |
| 2107 | IPSM | IPS    |
| 2108 | IPSM | IPS    |
| 2111 | IPSM | IPS    |

An IPSM is identified by the entries IPSM in the TYPE field and IPS in the APPL field.

2. Display the status of the IPSM being removed from the database with the `rept-stat-card` command and specifying the card location of the IPSM.

For this example, enter this command.

```
rept-stat-card:loc=2107
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:43:42 GMT EAGLE5 36.0.0
CARD VERSION TYPE GPL PST SST AST
2107 114-001-000 IPSM IPS IS-NR Active -----

 ALARM STATUS = No Alarms.
 BPDCM GPL = 002-122-000
 IMT BUS A = Conn
 IMT BUS B = Conn
Command Completed.
```

If the IPSM is out of service, shown by the entry 00S-MT-DSBLD in the PST column, skip steps 3 through 5, and go to step 6.

3. Display the terminals using the `rtrv-trm` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 39.0.0
TRM TYPE COMM FC TMOUT MXINV DURAL
1 VT320 9600-7-E-1 SW 30 5 99:59:59
2 KSR 9600-7-E-1 HW 30 5 INDEF
3 PRINTER 4800-7-E-1 HW 30 0 00:00:00
4 VT320 2400-7-E-1 BOTH 30 5 00:30:00
5 VT320 9600-7-0-1 NONE 30 5 00:00:30
6 VT320 9600-7-E-2 SW 30 9 INDEF
7 PRINTER 9600-7-N-2 HW 30 5 00:30:00
8 KSR 19200-7-E-2 BOTH 30 5 00:30:00
9 VT320 9600-7-E-1 SW 30 7 00:30:00
10 VT320 9600-7-E-1 HW 30 5 00:30:00
11 VT320 4800-7-E-1 HW 30 5 00:30:00
12 PRINTER 9600-7-E-1 HW 30 4 00:30:00
13 VT320 9600-7-0-1 NONE 30 5 00:30:00
14 VT320 9600-7-E-2 SW 30 8 00:30:00
15 VT320 9600-7-N-2 HW 30 5 00:30:00
16 VT320 9600-7-E-2 BOTH 30 3 00:30:00

TRM TYPE LOC TMOUT MXINV DURAL SECURE
17 TELNET 2107 60 5 00:30:00 yes
18 SEAS 2107 60 5 00:30:00 yes
19 TELNET 2107 60 5 00:30:00 yes
20 TELNET 2107 60 5 00:30:00 yes
21 TELNET 2107 60 5 00:30:00 yes
22 TELNET 2107 60 5 00:30:00 yes
23 TELNET 2107 60 5 00:30:00 yes
24 TELNET 2107 60 5 00:30:00 yes
25 TELNET 2108 60 5 00:30:00 yes
26 TELNET 2108 60 5 00:30:00 yes
27 SEAS 2108 60 5 00:30:00 yes
```

|    |        |      |    |   |          |     |
|----|--------|------|----|---|----------|-----|
| 28 | TELNET | 2108 | 60 | 5 | 00:30:00 | yes |
| 29 | TELNET | 2108 | 60 | 5 | 00:30:00 | yes |
| 30 | TELNET | 2108 | 60 | 5 | 00:30:00 | yes |
| 31 | TELNET | 2108 | 60 | 5 | 00:30:00 | yes |
| 32 | TELNET | 2108 | 60 | 5 | 00:30:00 | yes |
| 33 | TELNET | 2111 | 60 | 5 | 00:30:00 | yes |
| 34 | TELNET | 2111 | 60 | 5 | 00:30:00 | yes |
| 35 | TELNET | 2111 | 60 | 5 | 00:30:00 | yes |
| 36 | TELNET | 2111 | 60 | 5 | 00:30:00 | yes |
| 37 | TELNET | 2111 | 60 | 5 | 00:30:00 | yes |
| 38 | TELNET | 2111 | 60 | 5 | 00:30:00 | yes |
| 39 | TELNET | 2111 | 60 | 5 | 00:30:00 | yes |
| 40 | TELNET | 2111 | 60 | 5 | 00:30:00 | yes |

| TRM | LOGINTMR<br>(sec) | LOGOUTTMR<br>(sec) | PNGTIMEINT<br>(msec) | PNGFAILCNT |
|-----|-------------------|--------------------|----------------------|------------|
| 17  | none              | none               | none                 | 1          |
| 19  | none              | none               | none                 | 1          |
| 20  | none              | none               | none                 | 1          |
| 21  | none              | none               | none                 | 1          |
| 22  | none              | none               | none                 | 1          |
| 23  | none              | none               | none                 | 1          |
| 24  | none              | none               | none                 | 1          |
| 25  | none              | none               | none                 | 1          |
| 26  | none              | none               | none                 | 1          |
| 28  | none              | none               | none                 | 1          |
| 29  | none              | none               | none                 | 1          |
| 30  | none              | none               | none                 | 1          |
| 31  | none              | none               | none                 | 1          |
| 32  | none              | none               | none                 | 1          |
| 33  | none              | none               | none                 | 1          |
| 34  | none              | none               | none                 | 1          |
| 35  | none              | none               | none                 | 1          |
| 36  | none              | none               | none                 | 1          |
| 37  | none              | none               | none                 | 1          |
| 38  | none              | none               | none                 | 1          |
| 39  | none              | none               | none                 | 1          |
| 40  | none              | none               | none                 | 1          |

| TRM | TRAF | LINK | SA | SYS | PU | DB  | UIMRD |
|-----|------|------|----|-----|----|-----|-------|
| 1   | NO   | YES  | NO | YES | NO | YES | YES   |
| 2   | NO   | NO   | NO | NO  | NO | NO  | NO    |
| .   |      |      |    |     |    |     |       |
| .   |      |      |    |     |    |     |       |
| 39  | NO   | NO   | NO | NO  | NO | NO  | NO    |
| 40  | NO   | NO   | NO | NO  | NO | NO  | NO    |

| TRM | APP<br>SERV | APP<br>SS | CARD | CLK | DBG | GTT | GWS | MEAS | MON | MPS | SEAS | SLAN |
|-----|-------------|-----------|------|-----|-----|-----|-----|------|-----|-----|------|------|
| 1   | YES         | YES       | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 2   | YES         | YES       | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| .   |             |           |      |     |     |     |     |      |     |     |      |      |
| .   |             |           |      |     |     |     |     |      |     |     |      |      |
| 39  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 40  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |

4. Display the status of the terminals by entering the `rept-stat-trm` command.

This is an example of the possible output.

```

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST

```

|    |       |        |       |
|----|-------|--------|-------|
| 1  | IS-NR | Active | ----- |
| 2  | IS-NR | Active | ----- |
| 3  | IS-NR | Active | ----- |
| 4  | IS-NR | Active | ----- |
| 5  | IS-NR | Active | ----- |
| 6  | IS-NR | Active | ----- |
| 7  | IS-NR | Active | ----- |
| 8  | IS-NR | Active | ----- |
| 9  | IS-NR | Active | ----- |
| 10 | IS-NR | Active | ----- |
| 11 | IS-NR | Active | ----- |
| 12 | IS-NR | Active | ----- |
| 13 | IS-NR | Active | ----- |
| 14 | IS-NR | Active | ----- |
| 15 | IS-NR | Active | ----- |
| 16 | IS-NR | Active | ----- |
| 17 | IS-NR | Active | ----- |
| 18 | IS-NR | Active | ----- |
| 19 | IS-NR | Active | ----- |
| 20 | IS-NR | Active | ----- |
| 21 | IS-NR | Active | ----- |
| 22 | IS-NR | Active | ----- |
| 23 | IS-NR | Active | ----- |
| 24 | IS-NR | Active | ----- |
| 25 | IS-NR | Active | ----- |
| 26 | IS-NR | Active | ----- |
| 27 | IS-NR | Active | ----- |
| 28 | IS-NR | Active | ----- |
| 29 | IS-NR | Active | ----- |
| 30 | IS-NR | Active | ----- |
| 31 | IS-NR | Active | ----- |
| 32 | IS-NR | Active | ----- |
| 33 | IS-NR | Active | ----- |
| 34 | IS-NR | Active | ----- |
| 35 | IS-NR | Active | ----- |
| 36 | IS-NR | Active | ----- |
| 37 | IS-NR | Active | ----- |
| 38 | IS-NR | Active | ----- |
| 39 | IS-NR | Active | ----- |
| 40 | IS-NR | Active | ----- |

Command Completed.

**Note:** If all the terminals associated with the IPSM being removed from the database are out of service, shown by the entry OOS-MT-DSBLD in the PST column, skip step 5, and go to step 6.

5. Place the terminals associated with the IPSM being removed out of service using the `rmv-trm` command.

For this example, enter these commands.

```
rmv-trm:trm=17
```

```
rmv-trm:trm=18
```

```
rmv-trm:trm=19
```

```
rmv-trm:trm=20
```

```
rmv-trm:trm=21
```

```
rmv-trm:trm=22
```

```
rmv-trm:trm=23
```

```
rmv-trm:trm=24
```

**Note:** If the IPSM that will be removed in this procedure contains the last in-service SEAS terminal, the `force=yes` parameter must be specified with the `rmv-trm` command for that SEAS terminal.

**CAUTION:**

Placing these terminals out of service will disable any Telnet sessions running on these terminals.

If the status of any terminals associated with the IPSM being removed shown in the `PST` field in step 4 is `OOS-MT-DSBLD` (out-of-service maintenance disabled), the terminal is already out of service and the `rmv-trm` command does not need to be executed for that terminal.

When these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Inhibit message sent to terminal

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Command Completed.
```

6. Place the IPSM out of service using the `rmv-card` command, specifying the card location of the IPSM.

For this example, enter this command.

```
rmv-card:loc=2107
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
Card has been inhibited.
```

7. Remove the card using the `dlt-card` command.

The `dlt-card` command has only one parameter, `loc`, which is the location of the card. For this example, enter these commands.

```
dlt-card:loc=2107
```

**Note:** If the IPSM that was removed in this step contains a SEAS terminal, the entry for that SEAS terminal is removed from the SEAS over IP configuration and is not shown in the `rtrv-seas-config` output. This message is displayed after the `dlt-card` command has been entered.

Invalidating the Terminal data in SEASCFG Table

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
DLT-CARD: MASP A - COMPLTD
```

8. Verify the changes using the `rtrv-card` command specifying the card that was removed in step 7.

For this example, enter these commands.

```
rtrv-card:loc=2107
```

When this command has successfully completed, this message should appear.

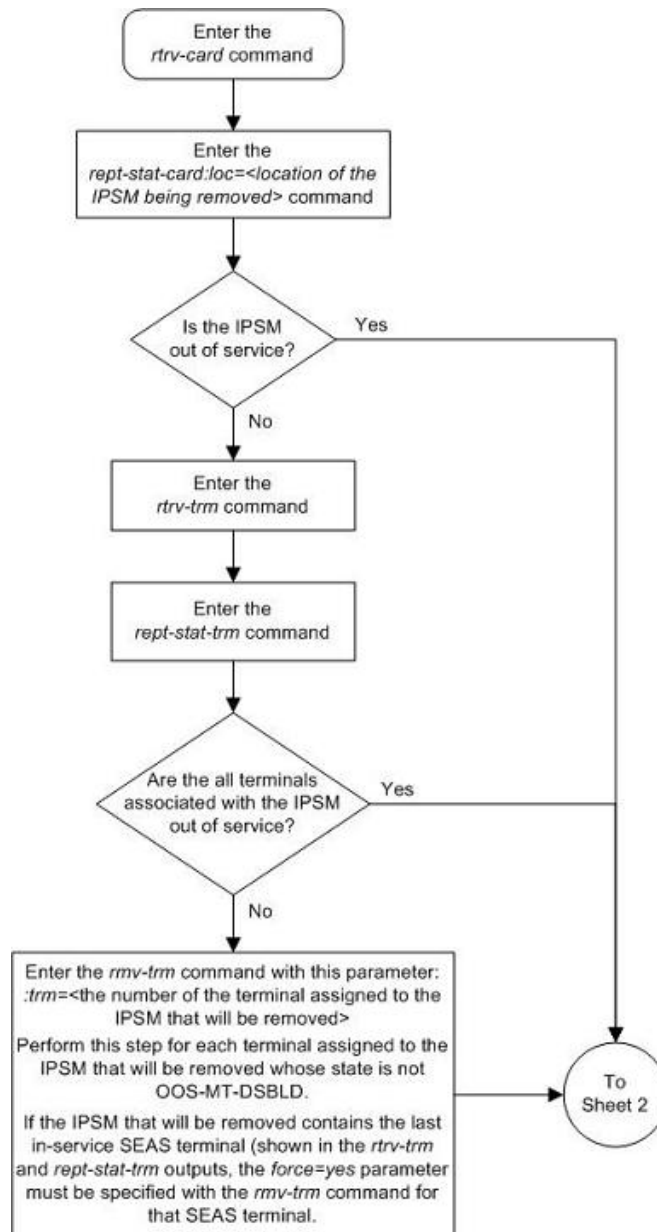
```
E2144 Cmd Rej: Location invalid for hardware configuration
```

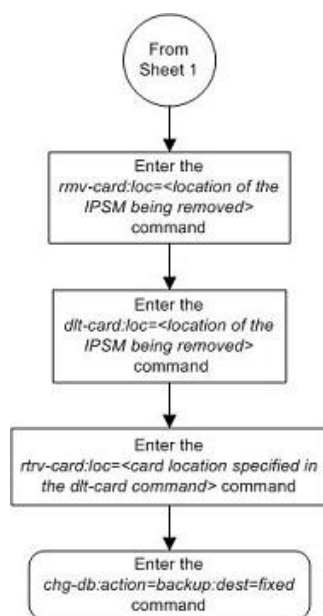
9. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 61: Removing an IPSM**





## Configuring the Options for the Network Security Enhancements Feature

This procedure is used to configure the EAGLE 5 ISS to enhance its network security by discarding messages that should not be received. Four options are set using the `chg-stpopts` command to support this feature.

- SECMTPSID – The EAGLE 5 ISS should not receive a message where the OPC is equal to the EAGLE 5 ISS's own true, secondary or capability point codes.
- SECMTPMATE – The EAGLE 5 ISS should not receive a message with the true, secondary, or capability point code of the mate STP other than across the C link.
- SECMTPSNM – the EAGLE 5 ISS should not receive an MTP network management message unless:
  - The OPC is an adjacent point code
  - The EAGLE 5 ISS has a route to the OPC of the MTP network management message on the linkset which the message was received.
  - The EAGLE 5 ISS has a route to the destination field in the message (if applicable to the concerned message) on the linkset which the message was received.
- SECMTPSCMG – the EAGLE 5 ISS should not receive an SCCP network management message unless:
  - The EAGLE 5 ISS has a route to the OPC of the SCMG message on the linkset, on which the message was received.
  - The EAGLE 5 ISS has a route to the affected point code in the message on the linkset on which the message was received.



This option will only apply to SSP and SOR messages. This feature will not affect the following messages: SSA, SST, SOG, SBR, SNR and SRT.

Each of these options have four values which determine how the EAGLE 5 ISS handles the messages controlled by the options.

- NOTIFY – The specified option is active and UIMs are generated.
- SILENT – The specified option is active, but no UIMs are generated.
- TEST – The specified option is not active, but UIMS are generated as if the option was active.
- OFF – The specified option is not active.

The system default value for each of these options is OFF.

To set these options, the Network Security Enhancements feature must be enabled and activated. This can be verified with the `rtrv-ctrl-feat` command. To enable and activate the Network Security Enhancements feature, go to the [Activating Controlled Features](#) on page 606 procedure.

If the Network Security Enhancements feature is not enabled and activated, the Network Security Enhancement options are not displayed in the `rtrv-stpopts` output.

When the Network Security Enhancements feature is enabled and activated for the first time, each option is displayed in the `rtrv-stpopts` output with the system default value (OFF). When the Network Security Enhancements feature is enabled and activated after the feature was disabled, each option is displayed in the `rtrv-stpopts` output with the value that the option was assigned when the feature was disabled.

1. Display the Network Security Enhancements options using the `rtrv-stpopts` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
STP OPTIONS

SECMTPSID notify
SECMPMATE test
SECMTPSNM silent
SECMTPSCMG off
```

**Note:** The `rtrv-stpopts` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-stpopts` command, see the `rtrv-stpopts` command description in the *Commands Manual*.

**Note:** If the Network Security Enhancement options are shown in the `rtrv-stpopts` output in step 1, skip step 2, and go to step 3.

2. Verify that the Network Security Enhancements feature is enabled and activated, by entering the `rtrv-ctrl-feat` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
```

| Feature Name             | Partnum   | Status | Quantity |
|--------------------------|-----------|--------|----------|
| Network Security Enhance | 893009101 | off    | ----     |

**Note:** The `rtrv-ctrl-feat` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-ctrl-feat` command, see the `rtrv-ctrl-feat` command description in the *Commands Manual*.

If the Network Security Enhancements feature is not enabled or activated, go to the [Activating Controlled Features](#) on page 606 procedure and enable and activate the Network Security Enhancements feature.

**CAUTION**

**CAUTION:** If the Network Security Enhancements feature is temporarily enabled, the Network Security Enhancement options can be set and used only for the amount of time shown in the **Trial Period Left** column in the `rtrv-ctrl-feat` output.

3. Change the Network Security Enhancement options.

For this example, enter this command.

```
chg-stpopts:secmtpsid=silent:secmtpmate=notify
:secmtpsnm=notify:secmtpscmg=notify
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 00:22:57 GMT EAGLE5 36.0.0
CHG-STPOPTS: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-stpopts` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
STP OPTIONS

SECMTPSID silent
SECMTPMATE notify
SECMTPSNM notify
SECMTPSCMG notify
```

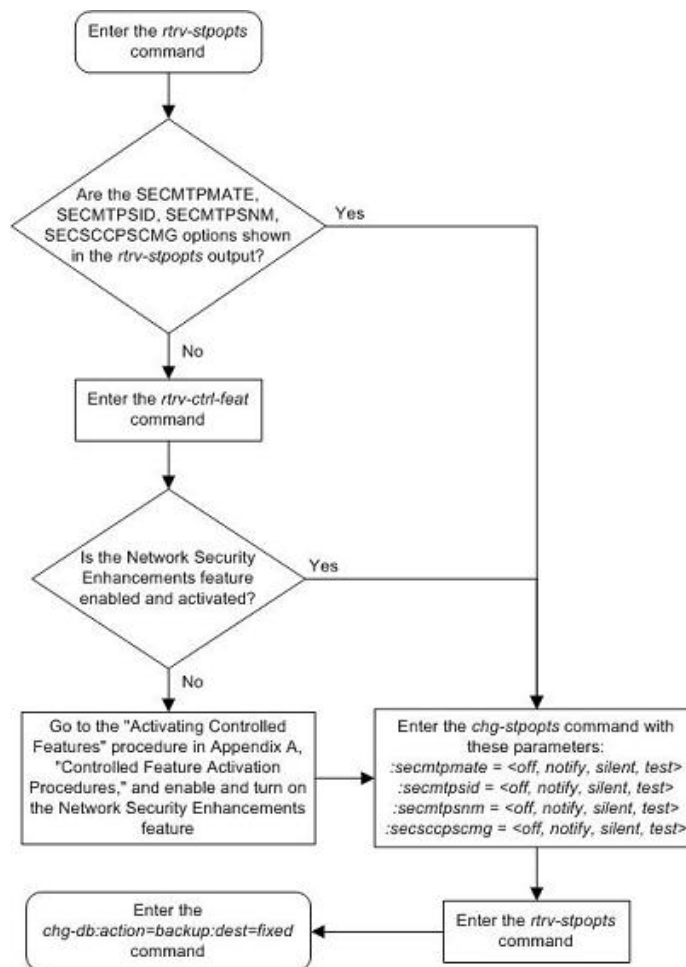
**Note:** The `rtrv-stpopts` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-stpopts` command, see the `rtrv-stpopts` command description in the *Commands Manual*.

5. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 62: Configuring the Options for the Network Security Enhancements Feature**



## Configuring the Restore Device State Option

This procedure is used to configure the restore device state option using the `chg-stpopts` command and the `rstrdev` parameter. The `rstrdev` parameter has two values, `on` or `off`. The system default value is `off`.

If the value of the restore device state option is `off` (`rstrdev=off`), the EAGLE 5 ISS does not retain the manually initiated state (for example, `OOS-MT-DSBLD`) for the signaling links, TCP/IP data links, cards, or the terminals after either the `init-sys` command is executed, or when a MASP role change occurs (the active MASP becomes the standby MASP and the standby MASP becomes the active MASP). After the `init-sys` command executes, the EAGLE 5 ISS attempts to bring all provisioned links, cards, and terminals on line, including those that were previously out of service. You will need to manually put each device back into its previous state after the EAGLE 5 ISS is back on line. If the `init-sys` command is being executed, it is advisable to print or electronically capture the output of the EAGLE 5 ISS's `rept-stat-slk`, `rept-stat-dlk`, `rept-stat-card`, and `rept-stat-trm` commands for reference before issuing the `init-sys` command. During a MASP role change, current processing for the role change occurs and the state of the out-of-service devices may change. To restore a device to its previous state, issue the

appropriate inhibit/deactivate command listed in the *Commands Manual* in the Related Commands section for each of the above `rept-stat` commands.

If the value of the restore device state option is on (`rstrdev=on`), the state the signaling links, TCP/IP data links, cards, and terminals is not changed after the `init-sys` command is executed or a MASP role change occurs. No manual intervention is required to put the device back into its previous state after the EAGLE 5 ISS is back on line.

If the restore device state option is on (`rstrdev=on`) and the database is being restored with the `chg-db:action=restore` command, the state of the cards, SS7 signaling links, TCP/IP data links, and terminals before the `chg-db:action=restore` and `init-sys` commands are performed will not be maintained after these commands are performed. The persistent device state table becomes obsolete and is disabled. UIM 1257 is generated.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
1234.1257 SYSTEM INFO DB Restore has cleared and disabled PDS
```

1. Display the existing values for the restore device state parameter by entering the `rtrv-stpopts` command.

The value for the restore device state parameter is shown in the `RSTRDEV` field. This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
STP OPTIONS

RSTRDEV off
```

**Note:**

The `rtrv-stpopts` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-stpopts` command, see the `rtrv-stpopts` command description in the *Commands Manual*.

2. Change the restore device state parameter.

For this example, enter this command.

```
chg-stpopts:rstrdev=on
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 00:22:57 GMT EAGLE5 36.0.0
CHG-STPOPTS: MASP A - COMPLTD
```

3. Verify the changes using the `rtrv-stpopts` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
STP OPTIONS

RSTRDEV on
```

**Note:**

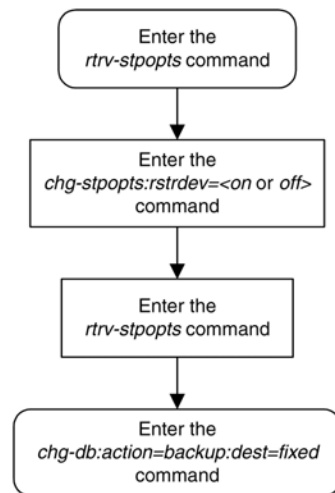
The `rtrv-stpopts` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-stpopts` command, see the `rtrv-stpopts` command description in the *Commands Manual*.

4. Backup the new changes using the `chg-db:action=backup:dest=fixedcommand`.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 63: Configuring the Restore Device State Option**



## Adding an Entry to the Frame Power Alarm Threshold Table

This procedure is used to add an entry to the frame power alarm threshold table. The frame power alarm threshold table defines the power level threshold, in amps, for each frame in the EAGLE 5 ISS. The power level threshold determines when alarms regarding the amount of power used by the frame are generated. Three alarms can be generated for the power levels.

- UAM 0522 - a minor alarm indicating that the power level for the frame has reached 90% of the threshold value.
- UAM 0521 - a major alarm indicating that the power level for the frame has reached 95% of the threshold value.
- UAM 0520 - a critical alarm indicating that the power level for the frame has reached 98% of the threshold value.

More information on these alarms is shown in the *Unsolicited Alarm and Information Messages Manual*.

The power alarm threshold table for each frame is configured using the `ent - frm - pwr` command with these parameters:

`:frm` – The name of the frame being added to the power alarm threshold table, `cf00`, `ef00`, `ef01`, `ef02`, `ef03`, or `ef04`.

`:thrshld` – The power threshold value, from 30 to 65 amps.

The frame being added in this procedure must be configured in the database. This can be verified by displaying the shelves in the EAGLE 5 ISS with the `rtrv-shlf` command. The number assigned to each configured frame is shown in the `SHELF FRAME` column of the `rtrv-shlf` output. [Table 16: Frame Power Alarm Threshold Table Frame Designations](#) on page 552 shows the name of each frame used in the Frame Power Alarm Threshold table and the corresponding frame number shown in the `SHELF FRAME` column of the `rtrv-shlf` output.

**Table 16: Frame Power Alarm Threshold Table Frame Designations**

| Name of the Frame in the Frame Power Alarm Threshold Table | Frame Numbers shown in the Shelf Frame Column of the RTRV-SHLF Output |
|------------------------------------------------------------|-----------------------------------------------------------------------|
| CF00                                                       | 1                                                                     |
| EF00                                                       | 2                                                                     |
| EF01                                                       | 3                                                                     |
| EF02                                                       | 4                                                                     |
| EF03                                                       | 5                                                                     |
| EF04                                                       | 6                                                                     |

The `thrshld` parameter is optional. If the `thrshld` parameter value is not specified, the `thrshld` value is set to 30.

1. Display the frame power alarm thresholds by entering the `rtrv-frm-pwr` command.

This is an example of the possible output

.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
Frame Power Threshold (Amps)

cf00 56
ef00 36

FRAME POWER THRESHOLD table is (2 of 10) 20% full;
RTRV-FRM-PWR: MASP A - COMPLTD
```

2. Display the shelves configured in the database by entering the `rtrv-shlf` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
SHELF DISPLAY
FRAME SHELF TYPE
1 1 CONTROL
1 2 EXTENSION
1 3 EXTENSION
2 1 EXTENSION
```

|   |   |           |
|---|---|-----------|
| 2 | 2 | EXTENSION |
| 2 | 3 | EXTENSION |
| 3 | 1 | EXTENSION |

To add an entry to the Frame Power Alarm Threshold table, the frame must be shown in the `rtrv-shlf` output. [Table 16: Frame Power Alarm Threshold Table Frame Designations](#) on page 552 shows the name of the frames used in the Frame Power Alarm Threshold table and the corresponding frame numbers shown in the `SHELF FRAME` column of the `rtrv-shlf` output.

If the frame you wish to add to the Frame Power Alarm Threshold table is shown in the `rtrv-shlf` output, go to step 3.

If all the frames shown in the `rtrv-shlf` output are shown in the `rtrv-frm-pwr` output, the only actions that can be taken is to either remove an entry from the Frame Power Alarm Threshold table, or to change an entry in the Frame Power Alarm Threshold table. To remove an entry from the Frame Power Alarm Threshold table, perform the [Removing an Entry from the Frame Power Alarm Threshold Table](#) on page 556 procedure. To change an entry in the Frame Power Alarm Threshold table, perform the [Changing an Entry in the Frame Power Alarm Threshold Table](#) on page 560 procedure. If you do not wish to perform either of these actions, this procedure is finished.

3. Display the power consumption of the frame that will be added to the Frame Power Alarm Threshold table by entering the `rtrv-stp` command with these parameters:

```
display=power
```

```
frm =<frame to be added>
```

For this example, enter this command.

```
rtrv-stp:display=power:frm=ef01
```

This is an example of the possible output.

| rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0 |                                   |          |                                          |      |
|-------------------------------------------------|-----------------------------------|----------|------------------------------------------|------|
| Frame                                           | Power Threshold<br>(Amps) (Watts) |          | Power Consumption<br>(Amps) (Watts)      |      |
| EF01                                            | +30                               | +1440    | 14.06                                    | 675  |
| Card                                            | Part Number                       | Revision | Power Consumption<br>(MilliAmps) (Watts) |      |
| 3101                                            | 870-1293-13                       | D        | 313                                      | 15   |
| 3102                                            | 870-1293-13                       | D        | 313                                      | 15   |
| 3103                                            | 870-2671-03                       | M        | 1563                                     | 75   |
| 3104                                            | 870-1293-13                       | D        | 313                                      | 15   |
| 3105                                            | 870-2061-01                       | K        | 542                                      | 26   |
| 3106                                            | 870-1984-13                       | M        | 646                                      | 31   |
| 3107                                            | 870-1984-13                       | M        | 646                                      | 31   |
| 3108                                            | 870-2372-14                       | J        | 521                                      | 25   |
| 3109                                            | MUX                               |          | 313                                      | 15   |
| 3110                                            | MUX                               |          | 313                                      | 15   |
| 3111                                            | 870-2061-01                       | A        | 542                                      | 26   |
| 3112                                            | 870-2061-01                       | A        | 542                                      | 26   |
| 3113                                            | 850-0549-01                       | A        | + 313                                    | + 15 |
| 3114                                            | + 870-2198-07                     | M        | + 1563                                   | + 75 |
| 3115                                            | 850-0549-01                       | A        | 313                                      | 15   |
| 3116                                            | + 870-2198-07                     | M        | 1563                                     | 75   |
| 3117                                            | 870-2371-13                       | E        | 625                                      | 30   |
| 3118                                            | 870-1293-13                       | B        | 521                                      | 25   |

```
FAN ASSYs Power Consumption
Command Completed.
```

2604

125

4. Add the entry to the Frame Power Alarm Threshold table by entering the `ent -frm -pwr` command with these parameters.

```
frm =<frame to be added>
```

```
thrshld=<frame power threshold level>
```

A minor alarm (UAM 0522) is generated when the power level for the frame reaches 90% of the threshold value. A major alarm (UAM 0521) is generated when the power level for the frame reaches 95% of the threshold value. A critical alarm (UAM 0520) is generated when the power level for the frame reaches 98% of the threshold value.

The `thrshld` parameter is optional. If the `thrshld` parameter value is not specified, the `thrshld` value is set to 30.

For this example, enter this command.

```
ent -frm -pwr :frm=ef01:thrshld=35
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 00:22:57 GMT EAGLE5 36.0.0
FRAME POWER THRESHOLD table is (3 of 10) 30% full
ENT-FRM-PWR: MASP A - COMPLTD
```

5. Verify the changes by entering the `rtrv -frm -pwr` command with frame entry specified in step 4.

For this example, enter this command.

```
rtrv -frm -pwr :frm=ef01
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0

Frame Power Threshold (Amps)

ef01 35

FRAME POWER THRESHOLD table is (3 of 10) 30% full;
RTRV-FRM-PWR: MASP A - COMPLTD
```

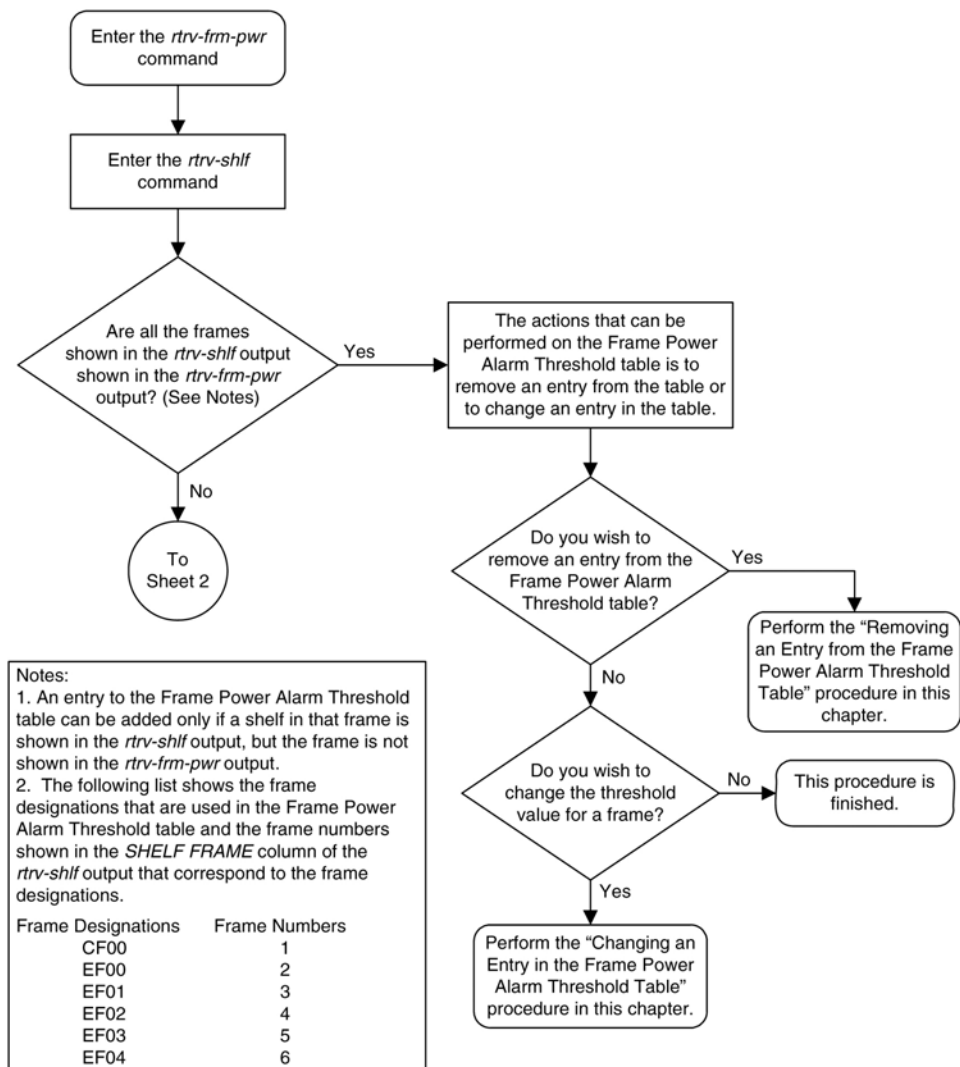
6. Backup the new changes using the `chg -db :action=backup:dest=fixed` command.

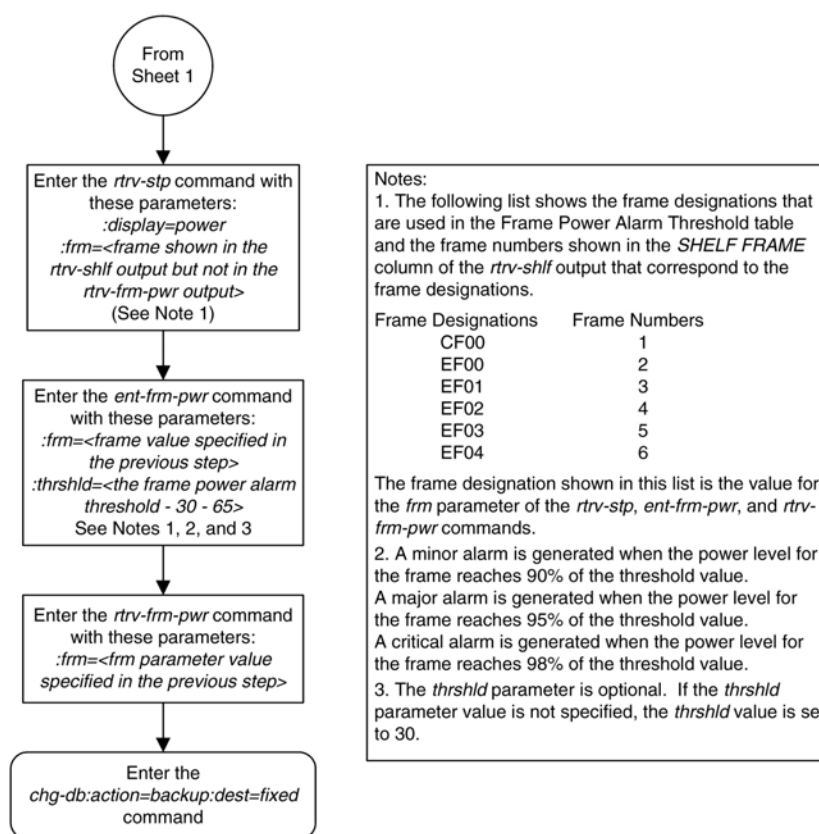
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 64: Adding an Entry to the Frame Power Alarm Threshold Table**







## Removing an Entry from the Frame Power Alarm Threshold Table

This procedure is used to remove an existing entry from the frame power alarm threshold table. The entry in the power alarm threshold table is removed using the *dlt-frm-pwr* command with this parameter:

**:frm** – The name of the frame being removed from the power alarm threshold table, cf00, ef00, ef01, ef02, ef03, or ef04.

The frame being removed from the frame power alarm threshold table must be configured in the frame power alarm threshold table.

When a frame entry is removed, a default threshold setting of 30 amps is assigned to the frame. If the amount of power currently used by the frame is 27 amps or more, an alarm will be generated when this frame entry is removed. The alarm that will be generated will depend of the amount of power the frame is using.

- A minor alarm (UAM 0522) is generated when the power level for the frame reaches 90% of the threshold value.
- A major alarm (UAM 0521) is generated when the power level for the frame reaches 95% of the threshold value.
- A critical alarm (UAM 0520) is generated when the power level for the frame reaches 98% of the threshold value.

More information on these alarms is shown in the *Unsolicited Alarm and Information Messages Manual*.

For example, if the frame is using 27 amps, and the frame is removed resulting in the default 30 amp threshold, minor alarm 0522 is generated because 27 amps is the threshold at which minor alarm 0522 is generated (90% of 30 amps is 27 amps).

If the frame is using 30 amps or more, and the frame is removed resulting in the default 30 amp threshold, critical alarm 0520 is generated because that amount of power used by the frame is 100% or more of the threshold value, and a critical alarm is generated at 98% of the threshold value.

The power being used by the frame is displayed in the **Power Consumption (Amps)** column in the **rtrv-stp** output.

1. Display the frame power alarm thresholds by entering the **rtrv-frm-pwr** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0

Frame Power Threshold (Amps)

cf00 56
ef00 36
ef01 35

FRAME POWER THRESHOLD table is (3 of 10) 30% full;
RTRV-FRM-PWR: MASP A - COMPLTD
```

2. Display the power consumption of the frame that will be removed from the Frame Power Alarm Threshold table by entering the **rtrv-stp** command with these parameters:

**display=power**

**frm =<frame to be removed from step 1>**

For this example, enter this command.

**rtrv-stp:display=power:frm=ef01**

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0

Frame Power Threshold Power Consumption
(Amps) (Watts) (Amps) (Watts)

EF01 35 1440 14.06 675

Card Part Number Revision Power Consumption

3101 870-1293-13 D 313 15
3102 870-1293-13 D 313 15
3103 870-2671-03 M 1563 75
3104 870-1293-13 D 313 15
3105 870-2061-01 K 542 26
3106 870-1984-13 M 646 31
3107 870-1984-13 M 646 31
3108 870-2372-14 J 521 25
3109 MUX 313 15
```

|                             |               |   |        |      |
|-----------------------------|---------------|---|--------|------|
| 3110                        | MUX           |   | 313    | 15   |
| 3111                        | 870-2061-01   | A | 542    | 26   |
| 3112                        | 870-2061-01   | A | 542    | 26   |
| 3113                        | 850-0549-01   | A | + 313  | + 15 |
| 3114                        | + 870-2198-07 | M | + 1563 | + 75 |
| 3115                        | 850-0549-01   | A | 313    | 15   |
| 3116                        | + 870-2198-07 | M | 1563   | 75   |
| 3117                        | 870-2371-13   | E | 625    | 30   |
| 3118                        | 870-1293-13   | B | 521    | 25   |
| FAN ASSYS Power Consumption |               |   | 2604   | 125  |
| Command Completed.          |               |   |        |      |

When a frame entry is removed, a default threshold setting of 30 amps is assigned to the frame. If the amount of power currently used by the frame is 27 amps or more, shown in the **Power Consumption (Amps)** column in the **rtrv-stp** output, an alarm will be generated when this frame entry is removed. The alarm that will be generated will depend of the amount of power the frame is using. See the introduction to this procedure for the alarm information.

If you still wish to remove this frame entry even if an alarm will be generated, go to step 3. If you do not wish to remove this frame entry, repeat this step with another frame entry from step 1.

If you do not wish to repeat this step with another frame entry from step 1, this procedure is finished.

- Remove the frame entry from the Frame Power Alarm Threshold table by entering the **dlt-frm-pwr** command with this parameter.

**frm** =<frame to be removed>

For this example, enter this command.

**dlt-frm-pwr:frm=ef01**

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 00:22:57 GMT EAGLE5 36.0.0
FRAME POWER THRESHOLD table is (2 of 10) 20% full
DLT-FRM-PWR: MASP A - COMPLTD
```

- Verify the changes by entering the **rtrv-frm-pwr** command with frame entry specified in step 3.

For this example, enter this command.

**rtrv-frm-pwr:frm=ef01**

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0

Frame Power Threshold (Amps)

ef01 35

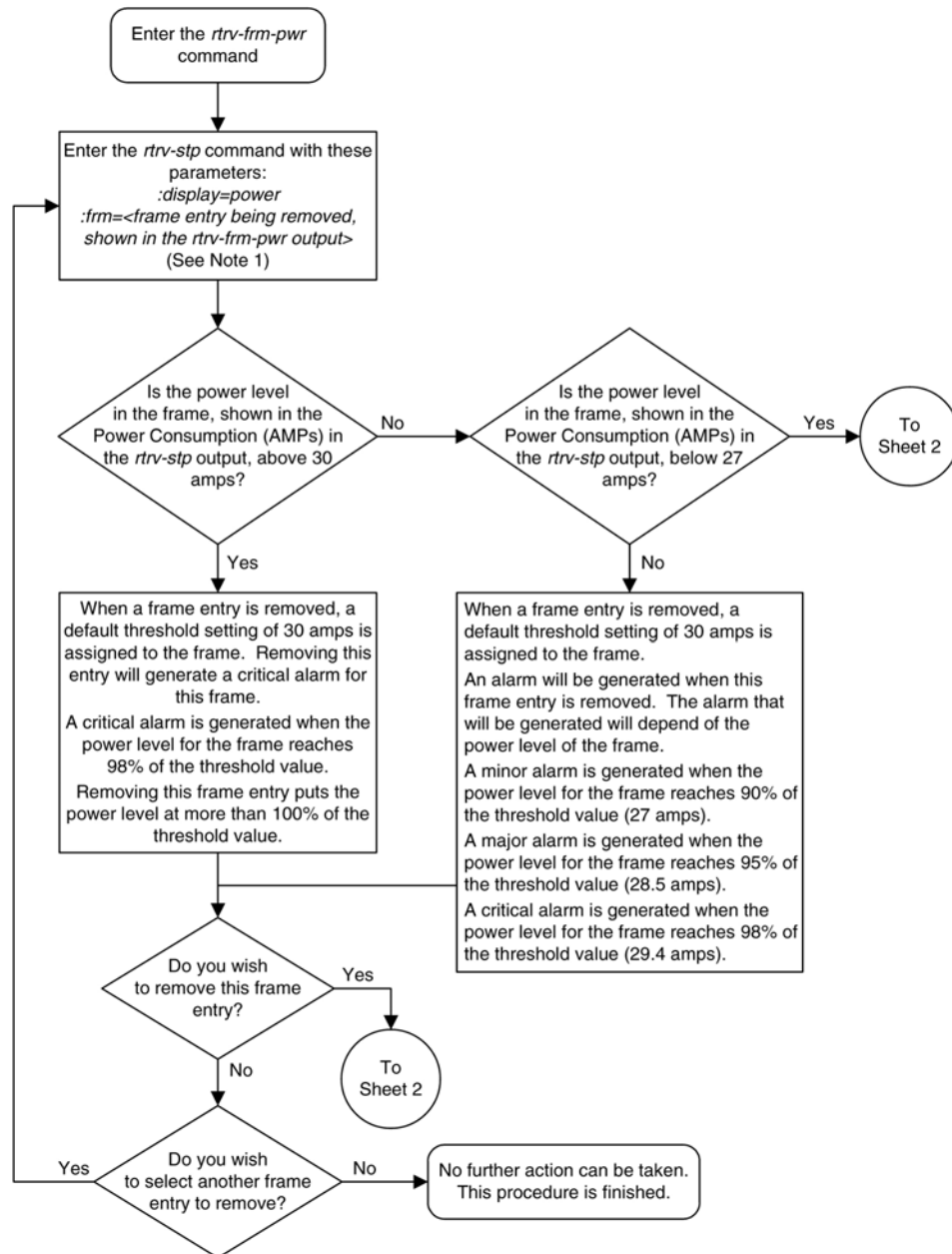
FRAME POWER THRESHOLD table is (2 of 10) 20% full;
RTRV-FRM-PWR: MASP A - COMPLTD
```

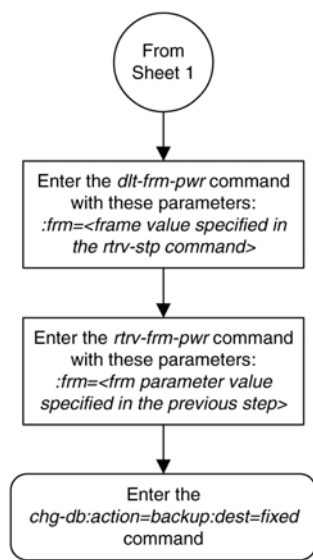
- Backup the new changes using the **chg-db:action=backup:dest=fixed** command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

Figure 65: Removing an Entry from the Frame Power Alarm Threshold Table





## Changing an Entry in the Frame Power Alarm Threshold Table

This procedure is used to change an existing entry in the frame power alarm threshold table. The frame entry in the power alarm threshold table is changed using the `chg-frm-pwr` command with these parameters:

**:frm** – The name of the frame being added to the power alarm threshold table, cf00, ef00, ef01, ef02, ef03, or ef04.

**:thrshld** – The power threshold value, from 30 to 65 amps.

The frame power alarm threshold table defines the power level threshold, in amps, for each frame in the EAGLE 5 ISS. The power level threshold determines when alarms regarding the amount of power used by the frame are generated. Three alarms can be generated for the power levels.

- UAM 0522 - a minor alarm indicating that the power level for the frame has reached 90% of the threshold value.
- UAM 0521 - a major alarm indicating that the power level for the frame has reached 95% of the threshold value.
- UAM 0520 - a critical alarm indicating that the power level for the frame has reached 98% of the threshold value.

More information on these alarms is shown in the *Unsolicited Alarm and Information Messages Manual*.

When setting the threshold value (the `thrshld` parameter value), the threshold value should be greater than the amount of power being used by the frame. The power being used by the frame is displayed in the **Power Consumption (Amps)** column in the `rtrv-stp` output. The threshold value should also be high enough to avoid generating any alarms.

*Table 17: Power Level to Generate a Minor Alarm* on page 561 shows selected threshold values and the power levels for a frame that would generate a minor alarm for that threshold value.

Table 17: Power Level to Generate a Minor Alarm

| Threshold Value | Power Level to Generate a Minor Alarm |
|-----------------|---------------------------------------|
| 30              | 27                                    |
| 35              | 31.5                                  |
| 40              | 36                                    |
| 45              | 40.5                                  |
| 50              | 45                                    |
| 55              | 49.5                                  |
| 60              | 54                                    |
| 65              | 58.5                                  |

1. Display the frame power alarm thresholds by entering the `rtrv-frm-pwr` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
Frame Power Threshold (Amps)

cf00 56
ef00 36
ef01 35

FRAME POWER THRESHOLD table is (3 of 10) 30% full;
RTRV-FRM-PWR: MASP A - COMPLTD
```

2. Display the power consumption of the frame that will be changed in the Frame Power Alarm Threshold table by entering the `rtrv-stp` command with these parameters:

`display=power`

`frm =<frame being changed>`

For this example, enter this command.

`rtrv-stp:display=power:frm=ef01`

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
Frame Power Threshold Power Consumption
(Amps) (Watts) (Amps) (Watts)

EF01 30 1440 14.06 675
```

| Card                        | Part Number   | Revision | Power Consumption |         |
|-----------------------------|---------------|----------|-------------------|---------|
|                             |               |          | (MilliAmps)       | (Watts) |
| ----                        | -----         | -----    | -----             | -----   |
| 3101                        | 870-1293-13   | D        | 313               | 15      |
| 3102                        | 870-1293-13   | D        | 313               | 15      |
| 3103                        | 870-2671-03   | M        | 1563              | 75      |
| 3104                        | 870-1293-13   | D        | 313               | 15      |
| 3105                        | 870-2061-01   | K        | 542               | 26      |
| 3106                        | 870-1984-13   | M        | 646               | 31      |
| 3107                        | 870-1984-13   | M        | 646               | 31      |
| 3108                        | 870-2372-14   | J        | 521               | 25      |
| 3109                        | MUX           |          | 313               | 15      |
| 3110                        | MUX           |          | 313               | 15      |
| 3111                        | 870-2061-01   | A        | 542               | 26      |
| 3112                        | 870-2061-01   | A        | 542               | 26      |
| 3113                        | 850-0549-01   | A        | + 313             | + 15    |
| 3114                        | + 870-2198-07 | M        | + 1563            | + 75    |
| 3115                        | 850-0549-01   | A        | 313               | 15      |
| 3116                        | + 870-2198-07 | M        | 1563              | 75      |
| 3117                        | 870-2371-13   | E        | 625               | 30      |
| 3118                        | 870-1293-13   | B        | 521               | 25      |
| FAN ASSYs Power Consumption |               |          | 2604              | 125     |
| Command Completed.          |               |          |                   |         |

3. Changed the entry in the Frame Power Alarm Threshold table by entering the `chg - frm - pwr` command with these parameters.

`frm =<frame being changed>`

`thrshld=<frame power threshold level>`

A minor alarm (UAM 0522) is generated when the power level for the frame reaches 90% of the threshold value. A major alarm (UAM 0521) is generated when the power level for the frame reaches 95% of the threshold value. A critical alarm (UAM 0520) is generated when the power level for the frame reaches 98% of the threshold value. When setting the threshold value, the threshold value should be greater than the Power Consumption (Amps) value shown in the `rtrv - stp` output in step 2, and high enough to avoid generating any alarms. See [Table 17: Power Level to Generate a Minor Alarm](#) on page 561 for some examples of threshold values and the power levels for a frame to generate a minor alarm for these threshold values.

For this example, enter this command.

`ent - frm - pwr : frm=ef01 : thrshld=45`

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 00:22:57 GMT EAGLE5 36.0.0
FRAME POWER THRESHOLD table is (3 of 10) 30% full
ENT-FRM-PWR: MASP A - COMPLTD
```

4. Verify the changes by entering the `rtrv - frm - pwr` command with frame entry specified in step 3.

For this example, enter this command.

`rtrv - frm - pwr : frm=ef01`

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
```



```

Frame Power Threshold (Amps)

ef01 45

FRAME POWER THRESHOLD table is (3 of 10) 30% full;
RTRV-FRM-PWR: MASP A - COMPLTD

```

5. Backup the new changes using the `chg-db:action=backup:dest=fixedcommand`.

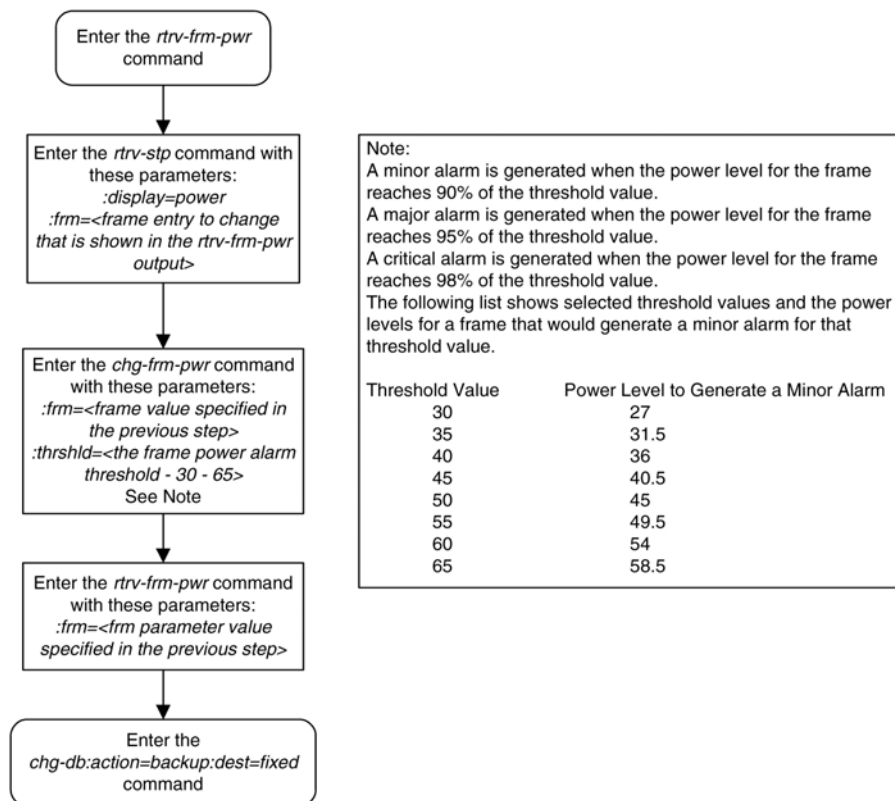
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```

BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.

```

**Figure 66: Changing an Entry in the Frame Power Alarm Threshold Table**





# Chapter 5

## SEAS Over IP Configuration Procedures

---

### Topics:

- [\*Introduction.....566\*](#)
- [\*Activating the SEAS over IP Feature.....568\*](#)
- [\*Performing the Initial SEAS Configuration.575\*](#)
- [\*Configuring SEAS Terminals.....581\*](#)
- [\*Changing the Existing SEAS Configuration.....593\*](#)
- [\*Turning the SEAS Over IP Feature Off.....601\*](#)

Chapter 5, SEAS Over IP Configuration Procedures, describes the procedures used to configure the SEAS over IP feature.

## Introduction

The SEAS over IP feature is a TCP/IP-based interface for SEAS that creates a path between the EAGLE 5 ISS and the CCS MR (Common Channel Signaling Message Router). The CCS MR is a stand-alone, self-contained system developed by Telcordia that provides a centralized mechanism for routing CCS network operations traffic between STPs/SCPs and existing and new OSs.

This feature replaces the EOAPs for SEAS and uses E5-IPSMs to provide the path for each SEAS TCP/IP link. One of the eight telnet terminals on the E5-IPSM is used to provide the connection from the EAGLE 5 ISS and the CCS MR. This terminal is referred to as a SEAS terminal.

The EAGLE 5 ISS can contain a maximum of two SEAS terminals. Only one SEAS terminal can be assigned to an E5-IPSM. The remaining seven telnet terminals on the E5-IPSM continue to provide generic IP-based services such as Telnet and FTP.

The EOAP-based SEAS functionality and the SEAS over IP feature can be present on an EAGLE 5 ISS, but the EOAP-based SEAS functionality and the SEAS over IP feature cannot operate at the same time. If the SEAS over IP feature is turned on, and the EOAP-based SEAS functionality is provisioned, the EOAP-based SEAS traffic stops, and SEAS traffic is handled by the SEAS over IP feature. If the SEAS over IP feature is turned off, and the EOAP-based SEAS functionality is provisioned correctly, the SEAS over IP traffic stops and the SEAS traffic is handled by the EOAP-based SEAS functionality. If the EOAP-based SEAS functionality is not provisioned or not provisioned correctly when the SEAS over IP feature is turned off, SEAS traffic stops and the SEAS feature is disabled. The EOAP-based SEAS functionality is discussed in more detail in the *System Manual - EOAP*.

### SEAS over IP Feature Configurations

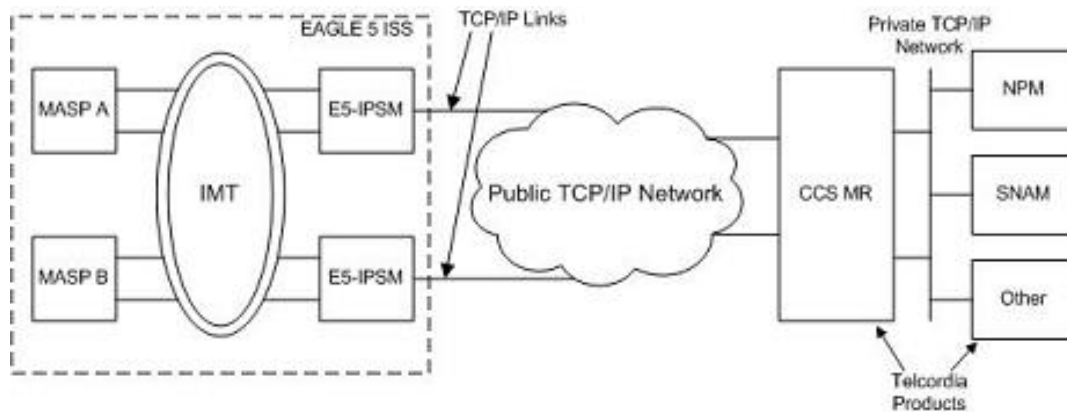
The SEAS over IP feature supports three configurations"

- Dual SEAS terminals with a single CCS MR
- Dual SEAS terminals with dual CCS MRs
- One SEAS terminal with one CCS MR.

#### Dual SEAS Terminals with a Single CCS MR SEAS Configuration

The two SEAS terminals are connected to a single CCS MR as shown in [Figure 67: Dual SEAS Terminals with Single CCS MR SEAS Configuration](#) on page 566. The two SEAS terminals operate in a redundant fashion allowing a maximum of two active connections to the CCS MR. While the connection to the CCS MR is dedicated to SEAS, the other terminals on the E5-IPSM may still be used for other IP-based operations, such as Telnet and FTP, or their secure counterparts, SSH and SFTP. Different SEAS information can be transmitted and received separately over each connection to the CCS MR.

**Figure 67: Dual SEAS Terminals with Single CCS MR SEAS Configuration**

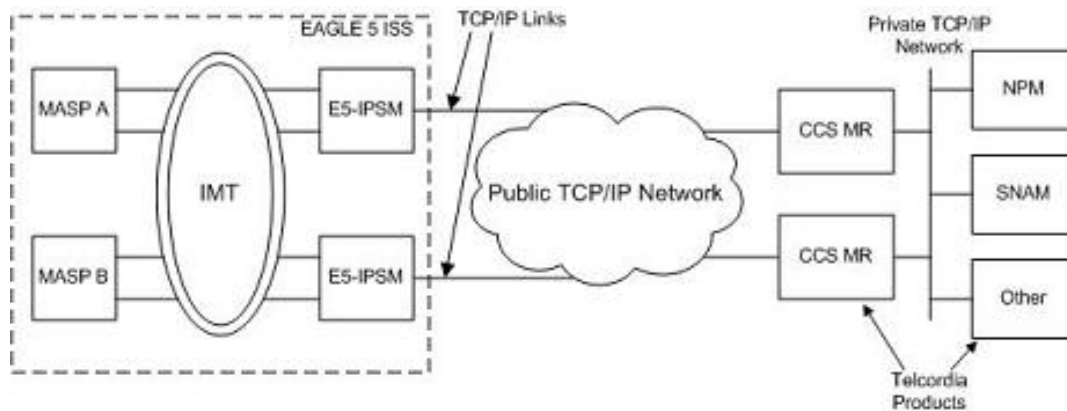


### Dual SEAS Terminals with Dual CCS MRs SEAS Configuration

When the two SEAS terminals are connected to two CCS MRs, as shown in [Figure 68: Dual SEAS Terminals with Dual CCS MRs SEAS Configuration](#) on page 567, the operation of the SEAS connections is similar to the "Dual SEAS Terminals with a Single CCS MR SEAS Configuration" section with the following exceptions:

- Each SEAS terminal is configured with a connection to one of the CCS MRs.
- The pair of CCS MRs operate in a round robin manner if they each have an active connection to a SEAS terminal. When the EAGLE 5 ISS receives a command request from a CCS MR, the response to the command request is sent to the CCS MR on the same TCP connection that the CCS MR used to send the command request.

**Figure 68: Dual SEAS Terminals with Dual CCS MRs SEAS Configuration**



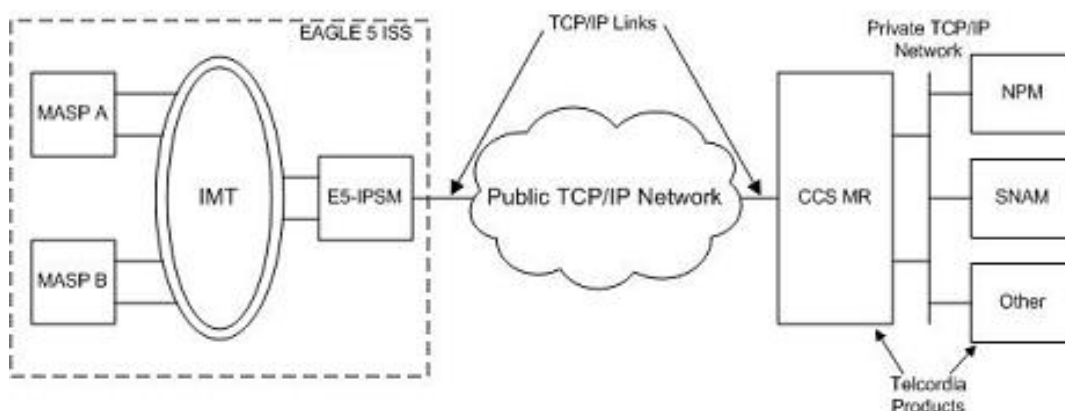
### Simplex SEAS Terminal Operation

With the simplex SEAS terminal operation, there is only one SEAS terminal connected to one CCS MR. There are no redundant connections to the CCS MR and this configuration is intended to serve as a restricted mode of operation until another SEAS terminal is returned to service. The simplex mode of operation is not recommended as a standard mode of operation for the SEAS over IP feature.

- All SEAS information is transmitted over this single IP connection to the CCS MR.

- The SEAS system will be in an IS-ANR/Restricted state while the system is in the simplex SEAS terminals operation and a major alarm, UAM 0348, is generated for the SEAS system. Refer to the *Unsolicited Alarm and Information Messages Manual* for more information on UAM 0348.

**Figure 69: Simplex SEAS Terminal Configuration**



### Provisioning the SEAS over IP Feature

To provision the SEAS over IP feature, perform these steps.

1. Add the E5-IPSMs to the database using the `ent - card` command. Perform the [Adding an IPSM](#) on page 523 procedure.
2. Enable the SEAS over IP feature using the `enable-ctrl-feat` command. Perform the [Activating the SEAS over IP Feature](#) on page 568 procedure.
3. Configure the SEAS connections using the `chg-seas-config` command. Perform the [Performing the Initial SEAS Configuration](#) on page 575 procedure.
4. Configure the SEAS terminals using the `chg-trm` command. Perform the [Configuring SEAS Terminals](#) on page 581 procedure.
5. Turn the SEAS over IP feature on using the `chg-ctrl-feat` command. Perform the [Activating the SEAS over IP Feature](#) on page 568 procedure.

## Activating the SEAS over IP Feature

This procedure is used to enable and turn on the SEAS over IP feature using the feature's part number and a feature access key.

The feature access key is based on the feature's part number and the serial number of the EAGLE 5 ISS, making the feature access key site-specific.

The `enable-ctrl-feat` command enables the feature by inputting the feature's access key and the feature's part number with these parameters:

: fak – The feature access key provided by Tekelec.

: part num – The Tekelec-issued part number of the SEAS over IP feature, 893018801.

Once this feature is enabled, it is permanently enabled. This feature cannot be enabled with a temporary feature access key.

The Telnet feature (IP User Interface), part number 893005701, must be enabled and turned on before the SEAS over IP feature can be enabled. Perform the [Activating Controlled Features](#) on page 606 procedure to enable and turn on the Telnet feature.

Once the SEAS over IP feature has been enabled, the SEAS over IP feature must be turned on with the `chg-ctrl-feat` command. The `chg-ctrl-feat` command uses these parameters:

`:partnum` – The Tekelec-issued part number of the SEAS over IP feature, 893018801.

`:status=on` – used to turn the SEAS over IP feature on.

**Note:** To turn the SEAS over IP feature on in step 5, these items must be provisioned in the database.

- The `seasc11i` value must be provisioned.
- The IP address and port for at least one connection must be provisioned.
- At least one SEAS terminal must be provisioned.
- If the Eagle OAM IP Security Enhancement feature is enabled and turned on, the `login` and `hname` values for at least one connection must be provisioned.

If you wish to provision the EAGLE 5 ISS for the SEAS over IP feature at this time, perform these procedures.

- [Performing the Initial SEAS Configuration](#) on page 575
- [Configuring SEAS Terminals](#) on page 581

Once the SEAS over IP feature has been turned on, it can be turned off. For more information on turning the SEAS over IP feature off, go to the [Turning the SEAS Over IP Feature Off](#) on page 601 procedure.

The status of the SEAS over IP and Telnet features is shown with the `rtrv-ctrl-feat` command.

**CAUTION**

**CAUTION:** When the SEAS over IP feature is turned on, and the SEAS terminals and SEAS configuration is provisioned, SEAS traffic is sent to the CCS MR using the SEAS terminals. If the OAP-based SEAS configuration has been provisioned, the OAP-based SEAS traffic stops.

1. Display the status of the controlled features by entering the `rtrv-ctrl-feat` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
```

| Feature Name              | Partnum   | Status | Quantity |
|---------------------------|-----------|--------|----------|
| HC-MIM SLK Capacity       | 893012707 | on     | 64       |
| Command Class Management  | 893005801 | off    | ----     |
| LNP Short Message Service | 893006601 | on     | ----     |
| Intermed GTT Load Sharing | 893006901 | off    | ----     |
| XGTT Table Expansion      | 893006101 | off    | ----     |
| XMAP Table Expansion      | 893007710 | on     | 3000     |
| Large System # Links      | 893005910 | on     | 2000     |
| Routesets                 | 893006401 | on     | 6000     |

```
The following features have been temporarily enabled:
```

| Feature Name        | Partnum | Status | Quantity | Trial Period Left |
|---------------------|---------|--------|----------|-------------------|
| Zero entries found. |         |        |          |                   |

The following features have expired temporary keys:

| Feature Name        | Partnum |
|---------------------|---------|
| Zero entries found. |         |

If the SEAS over IP feature is enabled and turned on, no further action is necessary. This procedure does not need to be performed.

If the SEAS over IP feature is enabled and but not turned on, skip steps 2 and 3 and go to step 4.

If the SEAS over IP feature is not enabled, go to step 2.

2. To enable the SEAS over IP feature, the Telnet feature must be enabled and turned on. The Eagle OA&M IP Security Enhancement feature can also be used with the SEAS over IP feature. If the `rtrv-ctrl-feat` output in step 1 shows that the Telnet and Eagle OA&M IP Security Enhancement features are enabled and turned on, skip this step and go to step 3.

If the `rtrv-ctrl-feat` output in step 1 shows that the Telnet is not enabled or turned on, perform the [Activating Controlled Features](#) on page 606 procedure to enable and turn on the Telnet feature.

The Eagle OA&M IP Security Enhancement feature can be enabled and turned on if the Telnet feature is not enabled and turned on. After the Telnet feature is enabled, and the `rtrv-ctrl-feat` output shows that the Eagle OA&M IP Security Enhancement feature is enabled and turned on, go to step 3.

If the Eagle OA&M IP Security Enhancement feature is not enabled and turned on, and you do not wish to use the If the Eagle OA&M IP Security Enhancement feature with the SEAS over IP feature, go to step 3.

If the Eagle OA&M IP Security Enhancement feature is not enabled and turned on, and you wish to use the If the Eagle OA&M IP Security Enhancement feature with the SEAS over IP feature, perform the [Activating the Eagle OA&M IP Security Enhancement Controlled Feature](#) on page 614 procedure to enable and turn on the Activating the Eagle OA&M IP Security Enhancement Controlled Feature. When the Activating the Eagle OA&M IP Security Enhancement Controlled Feature is enabled and turned on, go to step 3.

3. Enable the SEAS over IP feature with the `enable-ctrl-feat` command specifying the part number for the SEAS over IP feature and the feature access key. Enter this command.

```
enable-ctrl-feat:partnum=893018801:fak=<SEAS over IP feature access key>
```

**Note:** The SEAS over IP feature cannot be enabled with a temporary feature access key.

**Note:** The values for the feature access key (the `fak` parameter) are provided by Tekelec. If you do not have the feature access key for the SEAS over IP feature, contact your Tekelec Sales Representative or Account Representative.



When the `enable-ctrl-feat` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
ENABLE-CTRL-FEAT: MASP B - COMPLTD
```

**Note:** To turn the SEAS over IP feature on in step 5, these items must be provisioned in the database.

- The `seascli` value must be provisioned.
- The IP address and port for at least one connection must be provisioned.
- At least one SEAS terminal must be provisioned.
- If the Eagle OAM IP Security Enhancement feature is enabled and turned on, the `login` and `hname` values for at least one connection must be provisioned.

If you wish to provision the EAGLE 5 ISS for the SEAS over IP feature at this time, perform these procedures.

- [Performing the Initial SEAS Configuration](#) on page 575
- [Configuring SEAS Terminals](#) on page 581

After the SEAS over IP feature provisioning has been completed, skip step 4 and go to step 5.

If you do not wish to provision the EAGLE 5 ISS for the SEAS over IP feature at this time, skip steps 4 and 5, and go to step 6.

**Note:** If the SEAS over IP feature was enabled in this step, skip step 4 and go to step 5.

4. Before the SEAS over IP feature can be turned on, the SEAS over IP feature configuration must be correct (see the third note in step 3). Display the SEAS over IP configuration by entering the `rtrv-seas-config` command.

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is not enabled and turned on.

```
rlghncxa03w 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI CONNECTION IPADDRESS PORT TERMINAL

TEAGLESTP001 IPMR1 192.168.25.10 2500 18
 IPMR2 192.168.25.20 2600 27
```

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is enabled and turned on.

```
tekelecstp 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI AUTHMODE

TEAGLESTP001 Password

TERMINAL CONNECTION IPADDR PORT LOGIN HNAME

18 IPMR1 198.168.25.10 2500 root abaco-a
27 IPMR2 198.168.25.20 2600 root abaco-b
```

To turn this feature on in step 5, the items shown in the third note in step 3 must be provisioned. If the SEAS configuration is not correct, perform the [Changing the Existing SEAS Configuration](#) on page 593 procedure to make the necessary corrections to the SEAS over IP configuration. If no SEAS terminals are shown in this step, perform the [Configuring SEAS Terminals](#) on page 581 procedure to configure the SEAS terminals.

- Turn the SEAS over IP feature on with the `chg-ctrl-feat` command specifying the part number for the SEAS over IP feature and the `status=on` parameter. Enter this command.

```
chg-ctrl-feat:partnum=893018801:status=on
```

**CAUTION**

**CAUTION:** When the SEAS over IP feature is turned on, SEAS traffic is sent to the CCS MR using the SEAS terminals. If the OAP-based SEAS configuration has been provisioned, the OAP-based SEAS traffic stops.

When the `chg-ctrl-feat` command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
CHG-CTRL-FEAT: MASP B - COMPLTD
```

- Verify the changes by entering the `rtrv-ctrl-feat` command with the SEAS over IP feature part number. Enter this command.

```
rtrv-ctrl-feat:partnum=893018801
```

The following is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
The following features have been permanently enabled:
```

| Feature Name | Partnum   | Status | Quantity |
|--------------|-----------|--------|----------|
| SEAS over IP | 893018801 | on     | ----     |

The following features have been temporarily enabled:

| Feature Name        | Partnum | Status | Quantity | Trial Period Left |
|---------------------|---------|--------|----------|-------------------|
| Zero entries found. |         |        |          |                   |

The following features have expired temporary keys:

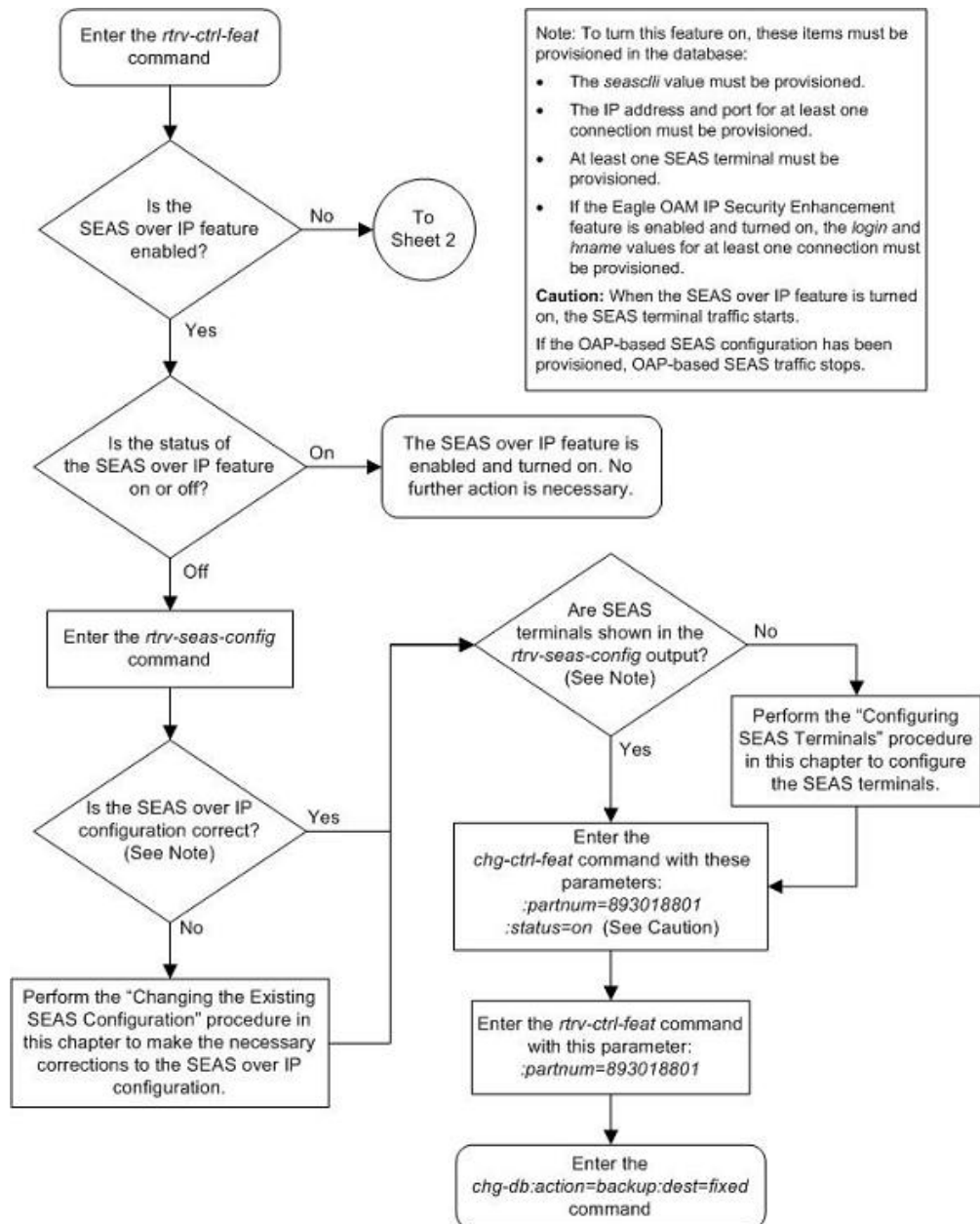
| Feature Name        | Partnum |
|---------------------|---------|
| Zero entries found. |         |

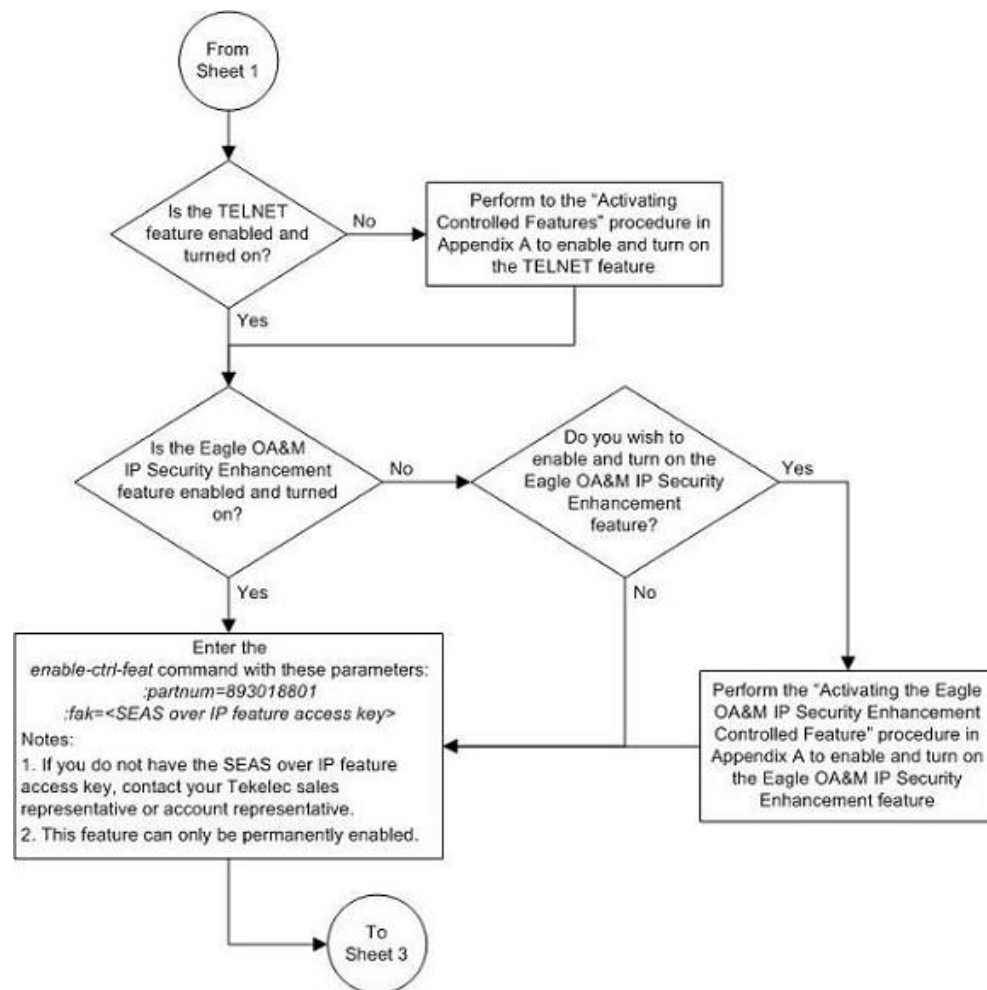
- Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

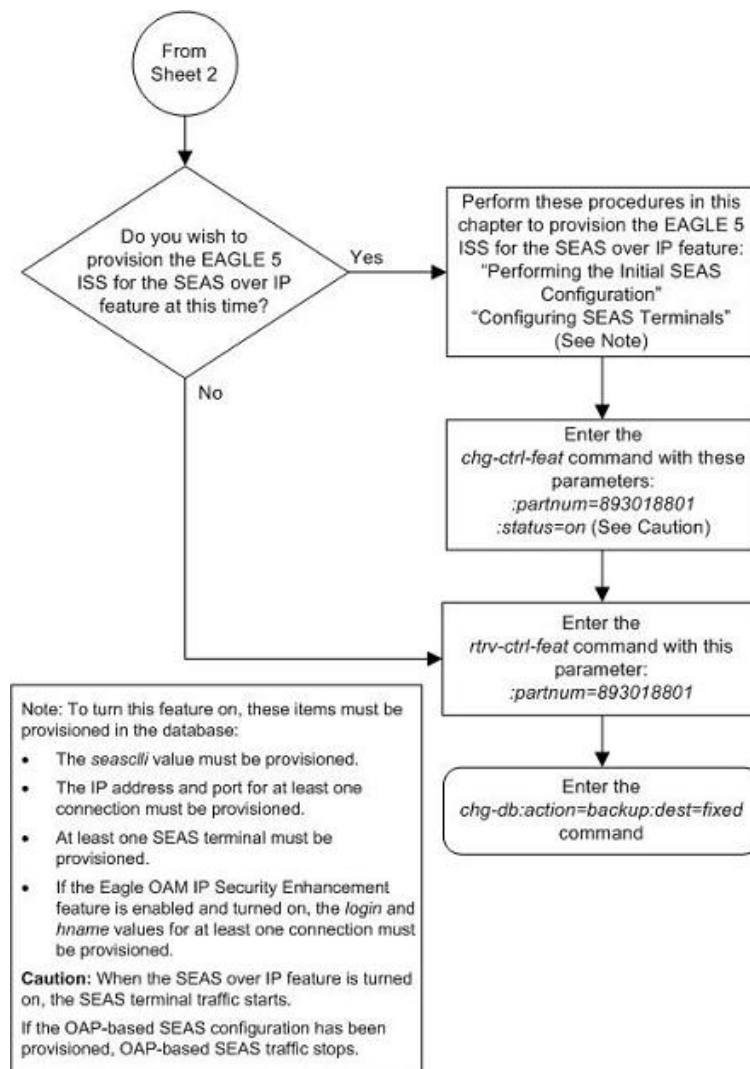
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first

```
.
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 70: Activating the SEAS over IP Feature**







## Performing the Initial SEAS Configuration

This procedure is used to configure the connections to the CCS MR using the `chg-seas-config` command. This procedure is performed only when configuring the connections to the CCS MR for the first time.

The `chg-seas-config` command can be used to change the SEAS configuration after the connections have been configured for the first time. Perform the [Changing the Existing SEAS Configuration](#) on page 593 procedure to make this type of change.

The `chg-seas-config` command uses these parameters.

:conn – The name of the SEAS connection, either IPMR1 or IPMR2

:seasccli – The CLLI part of node name of the EAGLE 5 ISS consisting of one alphabetic character and up to 15 alphanumeric characters. The `seasccli` value is different from the EAGLE

5 ISS `clli` value that is entered with the `chg-sid` command. The `seasccli` value must also be configured on the Telcordia Message Router (CCS MR). Refer to Telcordia Configuration Specification "Telcordia Technologies System Documentation", *BD-SNAM-ADMIN-4 Issue 14*, November 2006.

: `ipaddr` – The IP address of the CCS MR.

: `port` – The port number of the CCS MR that the EAGLE 5 ISS connects to, from 1024 to 5000.

: `hname` – The name of the remote host of the CCS MR, 1 to 15 alphanumeric characters.

: `login` – The login name of the CCS MR, 1 to 15 alphanumeric characters.

: `authmode` – The method of authentication used for the connection. Currently, only password authentication is used for SEAS connections, so this parameter has only one value, `password`. This parameter is optional and does not need to be specified.

The `hname`, `login`, and `authmode` parameters are used only when the Eagle OA&M IP Security feature is enabled and turned on. The values for these parameters are displayed in the `rtrv-seas-config` output only when the Eagle OA&M IP Security feature is enabled and turned on. The status of the Eagle OA&M IP Security feature is shown in the `rtrv-ctrl-feat` output.



**CAUTION:** The IP address and `port` value combination for each SEAS connection must be unique or the `chg-seas-config` command will be rejected.

1. Verify whether or not the SEAS over IP feature is enabled by entering this command.

```
rtrv-ctrl-feat:partnum=893018801
```

This is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
The following features have been permanently enabled:
```

| Feature Name | Partnum   | Status | Quantity |
|--------------|-----------|--------|----------|
| SEAS over IP | 893018801 | off    | ----     |

The following features have been temporarily enabled:

| Feature Name        | Partnum | Status | Quantity | Trial Period Left |
|---------------------|---------|--------|----------|-------------------|
| Zero entries found. |         |        |          |                   |

The following features have expired temporary keys:

| Feature Name        | Partnum |
|---------------------|---------|
| Zero entries found. |         |

If the SEAS over IP feature is enabled, go to step 2.

If the SEAS over IP feature is not enabled, perform the [Activating the SEAS over IP Feature](#) on page 568 procedure in this chapter to enable SEAS over IP feature. After the SEAS over IP feature has been enabled, go to step 2.

2. Display the current SEAS configuration using the `rtrv-seas-config` command.

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is not enabled and turned on.

```
rlghncxa03w 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI CONNECTION IPADDRESS PORT TERMINAL
```

```

----- IPMR1 -----
----- IPMR2 -----

```

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is enabled and turned on.

```

tekelecstp 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI AUTHMODE


```

| TERMINAL | CONNECTION | IPADDR | PORT | LOGIN | HNAME |
|----------|------------|--------|------|-------|-------|
| ---      | IPMR1      | -----  | ---- | ----  | ----- |
| ---      | IPMR2      | -----  | ---- | ----  | ----- |

- Enter the SEASCLLI value by entering the `chg-seas-config` command with the `seasccli` parameter. For this example, enter this command.

```
chg-seas-config:seasccli=TEAGLESTP001
```

**Note:** The SEASCLLI value is different from the CLLI value specified with the `chg-sid` command.

- Verify whether or not the Eagle OA&M IP Security Enhancement feature is enabled and turned on by entering this command.

```
rtrv-ctrl-feat:partnum=893400001
```

This is an example of the possible output.

```

rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
The following features have been permanently enabled:

Feature Name Partnum Status Quantity
EAGLE OA&M IP Security 893400001 on ----

The following features have been temporarily enabled:

Feature Name Partnum Status Quantity Trial Period Left
Zero entries found.

The following features have expired temporary keys:

Feature Name Partnum
Zero entries found.

```

- Provision the first connection to the CCS MR. Enter the `chg-seas-config` command with these parameters:

- `:conn=ipmr1`
- `:ipaddr=`the IP address of the CCS MR
- `:port =` the port number of the CCS MR



CAUTION

**CAUTION:** The IP address and port value combination for each SEAS connection must be unique or the `chg-seas-config` command will be rejected.

If the Eagle OA&M IP Security Enhancement feature is enabled and turned on, these parameters must also be specified.

- :hname = The name of the remote host of the CCS MR.
- :login = The login name of the CCS MR.

If the Eagle OA&M IP Security Enhancement feature is not enabled and turned on, for this example, enter this command.

```
chg-seas-config:conn=ipmr1:ipaddr=198.168.25.10:port=2500
```

If the Eagle OA&M IP Security Enhancement feature is enabled and turned on, for this example, enter this command.

```
chg-seas-config:conn=ipmr1:ipaddr=198.168.25.10:port=2500:hname=abaco-a:login=root
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
CHG-SEAS-CONFIG: MASP A - COMPLTD
```

If the login parameter is specified with the chg-seas-config command, the Enter Password: prompt appears. When the Enter Password: prompt appears, enter the password for the login name. The length of the password is from 1 to 15 alphanumeric characters. The password is not echoed on the screen.

6. Provision the second connection to the CCS MR. Enter the chg-seas-config command with these parameters:

- :conn=ipmr2
- :ipaddr=the IP address of the CCS MR
- :port = the port number of the CCS MR

**CAUTION**

**CAUTION:** The IP address and port value combination for each SEAS connection must be unique or the chg-seas-config command will be rejected.

If the Eagle OA&M IP Security Enhancement feature is enabled and turned on, these parameters must also be specified.

- :hname = The name of the remote host of the CCS MR.
- :login = The login name of the CCS MR.

If the Eagle OA&M IP Security Enhancement feature is not enabled and turned on, for this example, enter this command.

```
chg-seas-config:conn=ipmr2:ipaddr=198.168.25.20:port=2600
```

If the Eagle OA&M IP Security Enhancement feature is enabled and turned on, for this example, enter this command.

```
chg-seas-config:conn=ipmr2:ipaddr=198.168.25.20:port=2600:hname=abaco-b:login=root
```



When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
CHG-SEAS-CONFIG: MASP A - COMPLTD
```

If the login parameter is specified with the chg-seas-config command, the Enter Password: prompt appears. When the Enter Password: prompt appears, enter the password for the login name. The length of the password is from 1 to 15 alphanumeric characters. The password is not echoed on the screen.

7. Verify the SEAS configuration using the rtrv-seas-config command.

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is not enabled and turned on.

```
rlghncxa03w 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI CONNECTION IPADDRESS PORT TERMINAL

TEAGLESTP001 IPMR1 192.168.25.10 2500 18
 IPMR2 192.168.25.20 2600 27
```

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is enabled and turned on.

```
tekelecstp 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI AUTHMODE

TEAGLESTP001 Password

TERMINAL CONNECTION IPADDR PORT LOGIN HNAME

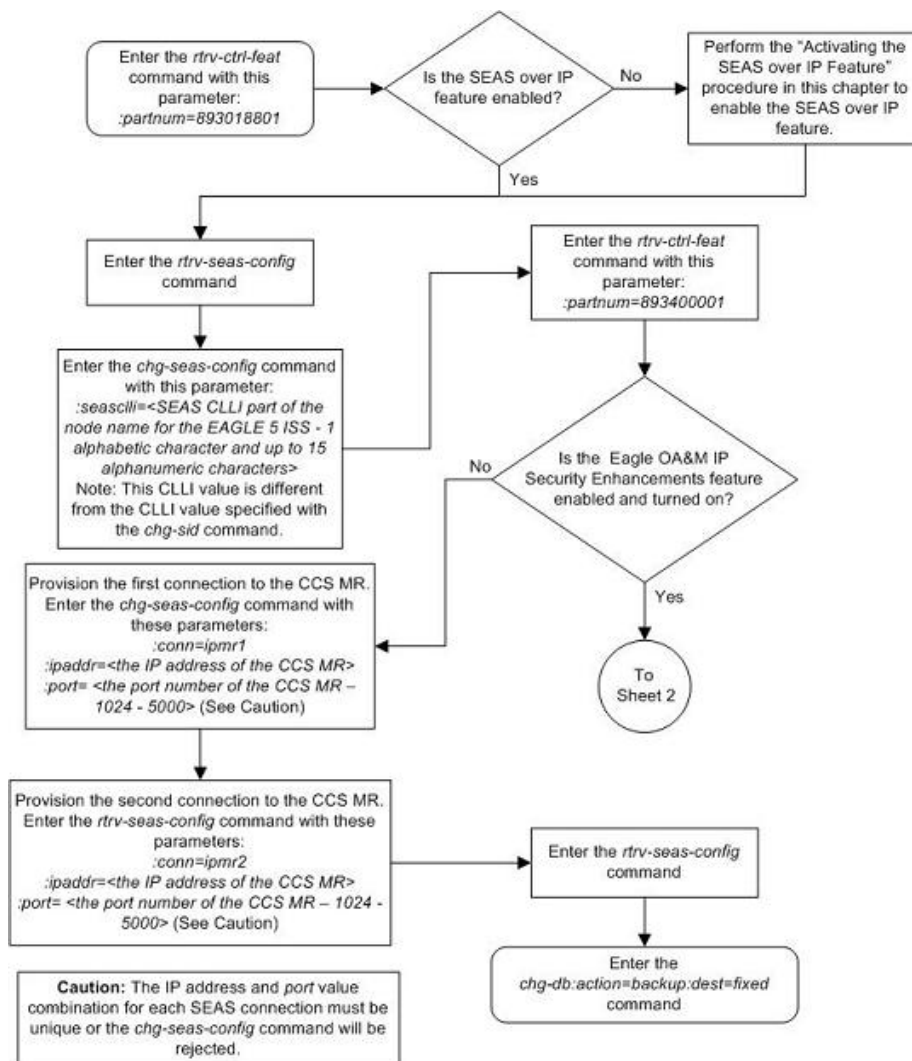
18 IPMR1 198.168.25.10 2500 root abaco-a
27 IPMR2 198.168.25.20 2600 root abaco-b
```

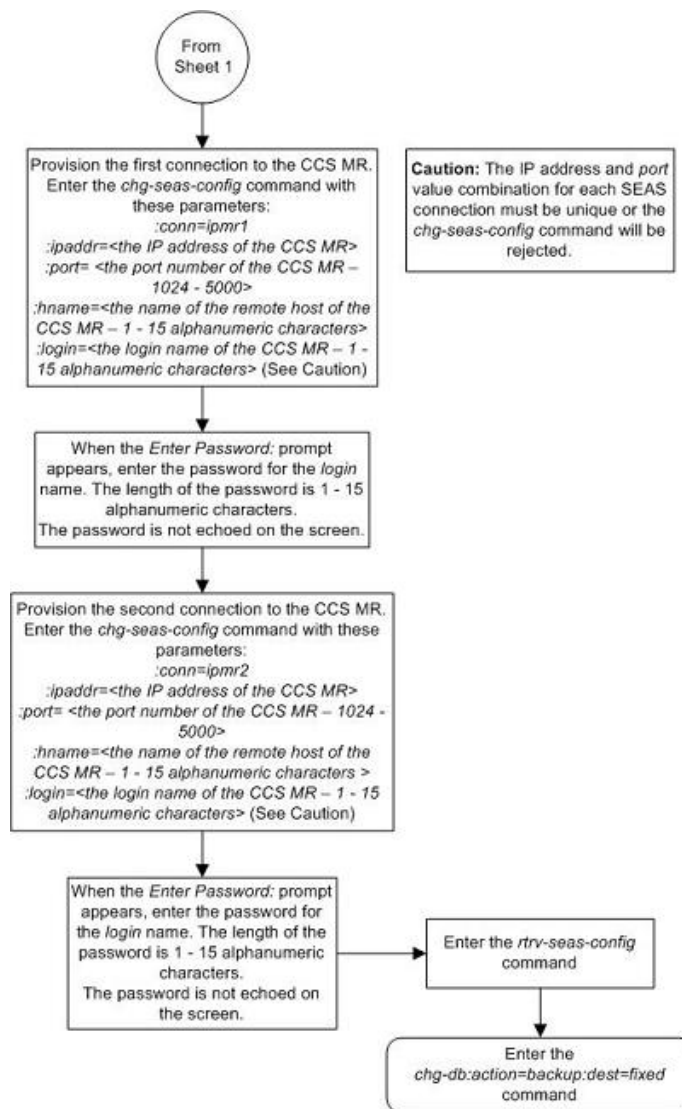
8. Back up the new changes using the chg-db:action=backup:dest=fixed command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 71: Performing the Initial SEAS Configuration**





## Configuring SEAS Terminals

This procedure is used to configure SEAS terminals for the SEAS over IP feature. The SEAS terminal can be configured only on E5-IPSMs. The EAGLE 5 ISS can contain a maximum of two SEAS terminals, but only one SEAS terminal can be configured on an E5-IPSM. When an E5-IPSM is configured in the database, eight telnet terminals are created. To configure the SEAS terminal, one of these telnet terminals is changed to a SEAS terminal using the `chg - trm` command with these parameters.

: trm – The number of the telnet terminal being changed, 17 through 40

: type=seas – The SEAS terminal type.

The `chg-trm` command contains other parameters, but these parameters cannot be used in this procedure. For more information on these parameters, see the [Changing Terminal Characteristics](#) on page 430 procedure in this manual, or the `chg-trm` command description in the *Commands Manual*.

SEAS terminals can be configured only if the SEAS over IP feature is enabled. The status of the SEAS over IP feature is shown in the `rtrv-ctrl-feat` output. If the SEAS over IP feature is not enabled, perform the [Activating the SEAS over IP Feature](#) on page 568 procedure in this chapter to enable the SEAS over IP feature.

When the SEAS terminal is configured, the value for the SEAS output group parameter is set to YES. The values for the other output group parameters and the `tmout`, `dural`, and `mxinv` parameters are not changed.

The other output group parameters can be changed with the specific output group parameter or the `all` parameter. If the `all=no` parameter is specified for a SEAS terminal (`type=seas`), all the output group values are changed to NO except for the SEAS output group. The SEAS output group value remains set to YES and this message is displayed.

SEAS Output Group is SET for SEAS terminal <terminal number>

1. Verify whether or not the SEAS over IP feature is enabled by entering this command.

```
rtrv-ctrl-feat:partnum=893018801
```

This is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
The following features have been permanently enabled:
```

| Feature Name | Partnum   | Status | Quantity |
|--------------|-----------|--------|----------|
| SEAS over IP | 893018801 | off    | ----     |

```
The following features have been temporarily enabled:
```

| Feature Name        | Partnum | Status | Quantity | Trial Period Left |
|---------------------|---------|--------|----------|-------------------|
| Zero entries found. |         |        |          |                   |

```
The following features have expired temporary keys:
```

| Feature Name        | Partnum |
|---------------------|---------|
| Zero entries found. |         |

If the SEAS over IP feature is enabled, go to step 2.

If the SEAS over IP feature is not enabled, perform the [Activating the SEAS over IP Feature](#) on page 568 procedure in this chapter to enable SEAS over IP feature. After the SEAS over IP feature has been enabled, perform the [Performing the Initial SEAS Configuration](#) on page 575 procedure in this chapter. After the [Performing the Initial SEAS Configuration](#) on page 575 procedure has been performed, go to step 2.

2. Display the terminals in the EAGLE 5 ISS using the `rtrv-trm` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 39.0.0
```

| TRM | TYPE    | COMM       | FC   | TMOUT | MXINV | DURAL    |
|-----|---------|------------|------|-------|-------|----------|
| 1   | VT320   | 9600-7-E-1 | SW   | 30    | 5     | 99:59:59 |
| 2   | KSR     | 9600-7-E-1 | HW   | 30    | 5     | INDEF    |
| 3   | PRINTER | 4800-7-E-1 | HW   | 30    | 0     | 00:00:00 |
| 4   | VT320   | 2400-7-E-1 | BOTH | 30    | 5     | 00:30:00 |

|     |                   |                    |                      |            |       |          |        |
|-----|-------------------|--------------------|----------------------|------------|-------|----------|--------|
| 5   | VT320             | 9600-7-0-1         | NONE                 | 30         | 5     | 00:00:30 |        |
| 6   | VT320             | 9600-7-E-2         | SW                   | 30         | 9     | INDEF    |        |
| 7   | PRINTER           | 9600-7-N-2         | HW                   | 30         | 5     | 00:30:00 |        |
| 8   | KSR               | 19200-7-E-2        | BOTH                 | 30         | 5     | 00:30:00 |        |
| 9   | VT320             | 9600-7-E-1         | SW                   | 30         | 7     | 00:30:00 |        |
| 10  | VT320             | 9600-7-E-1         | HW                   | 30         | 5     | 00:30:00 |        |
| 11  | VT320             | 4800-7-E-1         | HW                   | 30         | 5     | 00:30:00 |        |
| 12  | PRINTER           | 9600-7-E-1         | HW                   | 30         | 4     | 00:30:00 |        |
| 13  | VT320             | 9600-7-0-1         | NONE                 | 30         | 5     | 00:30:00 |        |
| 14  | VT320             | 9600-7-E-2         | SW                   | 30         | 8     | 00:30:00 |        |
| 15  | VT320             | 9600-7-N-2         | HW                   | 30         | 5     | 00:30:00 |        |
| 16  | VT320             | 9600-7-E-2         | BOTH                 | 30         | 3     | 00:30:00 |        |
| TRM | TYPE              | LOC                |                      | TMOUT      | MXINV | DURAL    | SECURE |
| 17  | TELNET            | 1201               |                      | 60         | 5     | 00:30:00 | yes    |
| 18  | TELNET            | 1201               |                      | 60         | 5     | 00:30:00 | yes    |
| 19  | TELNET            | 1201               |                      | 60         | 5     | 00:30:00 | yes    |
| 20  | TELNET            | 1201               |                      | 60         | 5     | 00:30:00 | yes    |
| 21  | TELNET            | 1201               |                      | 60         | 5     | 00:30:00 | yes    |
| 22  | TELNET            | 1201               |                      | 60         | 5     | 00:30:00 | yes    |
| 23  | TELNET            | 1201               |                      | 60         | 5     | 00:30:00 | yes    |
| 24  | TELNET            | 1201               |                      | 60         | 5     | 00:30:00 | yes    |
| 25  | TELNET            | 1203               |                      | 60         | 5     | 00:30:00 | yes    |
| 26  | TELNET            | 1203               |                      | 60         | 5     | 00:30:00 | yes    |
| 27  | TELNET            | 1203               |                      | 60         | 5     | 00:30:00 | yes    |
| 28  | TELNET            | 1203               |                      | 60         | 5     | 00:30:00 | yes    |
| 29  | TELNET            | 1203               |                      | 60         | 5     | 00:30:00 | yes    |
| 30  | TELNET            | 1203               |                      | 60         | 5     | 00:30:00 | yes    |
| 31  | TELNET            | 1203               |                      | 60         | 5     | 00:30:00 | yes    |
| 32  | TELNET            | 1203               |                      | 60         | 5     | 00:30:00 | yes    |
| 33  | TELNET            | 1205               |                      | 60         | 5     | 00:30:00 | yes    |
| 34  | TELNET            | 1205               |                      | 60         | 5     | 00:30:00 | yes    |
| 35  | TELNET            | 1205               |                      | 60         | 5     | 00:30:00 | yes    |
| 36  | TELNET            | 1205               |                      | 60         | 5     | 00:30:00 | yes    |
| 37  | TELNET            | 1205               |                      | 60         | 5     | 00:30:00 | yes    |
| 38  | TELNET            | 1205               |                      | 60         | 5     | 00:30:00 | yes    |
| 39  | TELNET            | 1205               |                      | 60         | 5     | 00:30:00 | yes    |
| 40  | TELNET            | 1205               |                      | 60         | 5     | 00:30:00 | yes    |
| TRM | LOGINTMR<br>(sec) | LOGOUTTMR<br>(sec) | PNGTIMEINT<br>(msec) | PNGFAILCNT |       |          |        |
| 17  | none              | none               | none                 | 1          |       |          |        |
| 18  | none              | none               | none                 | 1          |       |          |        |
| 19  | none              | none               | none                 | 1          |       |          |        |
| 20  | none              | none               | none                 | 1          |       |          |        |
| 21  | none              | none               | none                 | 1          |       |          |        |
| 22  | none              | none               | none                 | 1          |       |          |        |
| 23  | none              | none               | none                 | 1          |       |          |        |
| 24  | none              | none               | none                 | 1          |       |          |        |
| 25  | none              | none               | none                 | 1          |       |          |        |
| 26  | none              | none               | none                 | 1          |       |          |        |
| 27  | none              | none               | none                 | 1          |       |          |        |
| 28  | none              | none               | none                 | 1          |       |          |        |
| 28  | none              | none               | none                 | 1          |       |          |        |
| 30  | none              | none               | none                 | 1          |       |          |        |
| 31  | none              | none               | none                 | 1          |       |          |        |
| 32  | none              | none               | none                 | 1          |       |          |        |
| 33  | none              | none               | none                 | 1          |       |          |        |
| 34  | none              | none               | none                 | 1          |       |          |        |
| 35  | none              | none               | none                 | 1          |       |          |        |
| 36  | none              | none               | none                 | 1          |       |          |        |
| 37  | none              | none               | none                 | 1          |       |          |        |
| 38  | none              | none               | none                 | 1          |       |          |        |
| 39  | none              | none               | none                 | 1          |       |          |        |
| 40  | none              | none               | none                 | 1          |       |          |        |

| TRM | TRAF | LINK | SA  | SYS | PU  | DB  | UIMRD |
|-----|------|------|-----|-----|-----|-----|-------|
| 1   | NO   | YES  | NO  | YES | NO  | YES | YES   |
| 2   | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 3   | YES  | YES  | YES | NO  | YES | YES | YES   |
| 4   | YES  | NO   | NO  | NO  | NO  | NO  | NO    |
| 5   | NO   | YES  | NO  | NO  | NO  | NO  | YES   |
| 6   | NO   | NO   | YES | NO  | NO  | NO  | NO    |
| 7   | YES  | YES  | YES | YES | YES | YES | YES   |
| 8   | NO   | NO   | NO  | NO  | YES | NO  | YES   |
| 9   | NO   | YES  | NO  | NO  | NO  | YES | NO    |
| 10  | NO   | NO   | NO  | NO  | NO  | NO  | YES   |
| 11  | YES  | YES  | YES | YES | YES | YES | YES   |
| 12  | YES  | YES  | YES | YES | YES | YES | YES   |
| 13  | NO   | YES  | NO  | NO  | NO  | NO  | YES   |
| 14  | NO   | NO   | YES | NO  | NO  | NO  | NO    |
| 15  | YES  | YES  | YES | NO  | YES | YES | YES   |
| 16  | NO   | NO   | NO  | NO  | YES | NO  | YES   |
| 17  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 18  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 19  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 20  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 21  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 22  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 23  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 24  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 25  | NO   | NO   | NO  | NO  | YES | NO  | YES   |
| 26  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 27  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 28  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 29  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 30  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 31  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 32  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 33  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 34  | NO   | NO   | NO  | NO  | YES | NO  | YES   |
| 35  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 36  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 37  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 38  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 39  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |
| 40  | NO   | NO   | NO  | NO  | NO  | NO  | NO    |

| TRM | APP<br>SERV | APP<br>SS | APP<br>CARD | APP<br>CLK | APP<br>DBG | APP<br>GTT | APP<br>GWS | APP<br>MEAS | APP<br>MON | APP<br>MPS | APP<br>SEAS | APP<br>SLAN |
|-----|-------------|-----------|-------------|------------|------------|------------|------------|-------------|------------|------------|-------------|-------------|
| 1   | YES         | YES       | YES         | YES        | YES        | YES        | YES        | YES         | YES        | YES        | NO          | NO          |
| 2   | YES         | YES       | YES         | YES        | YES        | YES        | YES        | YES         | YES        | YES        | NO          | NO          |
| 3   | YES         | YES       | YES         | YES        | YES        | YES        | YES        | YES         | YES        | YES        | NO          | NO          |
| 4   | YES         | YES       | YES         | YES        | YES        | NO         | YES        | YES         | YES        | YES        | NO          | NO          |
| 5   | YES         | YES       | YES         | YES        | YES        | YES        | YES        | YES         | YES        | YES        | NO          | NO          |
| 6   | YES         | YES       | YES         | YES        | YES        | YES        | YES        | YES         | YES        | YES        | NO          | NO          |
| 7   | NO          | YES       | YES         | YES        | YES        | YES        | YES        | YES         | YES        | YES        | NO          | NO          |
| 8   | YES         | YES       | YES         | YES        | YES        | YES        | YES        | YES         | YES        | YES        | YES         | YES         |
| 9   | YES         | YES       | YES         | YES        | YES        | YES        | YES        | YES         | YES        | YES        | YES         | YES         |
| 10  | NO          | NO        | NO          | NO         | NO         | NO         | NO         | NO          | NO         | NO         | NO          | NO          |
| 11  | NO          | NO        | NO          | NO         | NO         | NO         | NO         | NO          | NO         | NO         | NO          | NO          |
| 12  | NO          | NO        | NO          | NO         | NO         | NO         | NO         | NO          | NO         | NO         | NO          | NO          |
| 13  | NO          | NO        | NO          | NO         | NO         | NO         | NO         | NO          | NO         | NO         | NO          | NO          |
| 14  | NO          | NO        | NO          | NO         | NO         | NO         | NO         | NO          | NO         | NO         | NO          | NO          |
| 15  | NO          | NO        | NO          | NO         | NO         | NO         | NO         | NO          | NO         | NO         | NO          | NO          |
| 16  | NO          | NO        | NO          | NO         | NO         | NO         | NO         | NO          | NO         | NO         | NO          | NO          |
| 17  | NO          | NO        | NO          | NO         | NO         | NO         | NO         | NO          | NO         | NO         | NO          | NO          |
| 18  | NO          | NO        | NO          | NO         | NO         | NO         | NO         | NO          | NO         | NO         | NO          | NO          |
| 19  | NO          | NO        | NO          | NO         | NO         | NO         | NO         | NO          | NO         | NO         | NO          | NO          |
| 20  | NO          | NO        | NO          | NO         | NO         | NO         | NO         | NO          | NO         | NO         | NO          | NO          |

|    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 21 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 22 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 23 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 24 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 25 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 26 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 27 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 28 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 29 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 30 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 31 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 32 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 33 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 34 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 35 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 36 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 37 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 38 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 39 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| 40 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |

If no telnet terminals are shown in the `rtrv-trm` output, or only one telnet terminal is shown in the `rtrv-trm` output, perform the [Adding an IPSM](#) on page 523 procedure and add E5-IPSM cards to the database. A minimum of two E5-IPSMs are required. After the E5-IPSMs have been added to the database, skip step 3 and go to step 4.

If two or three telnet terminals are shown in the `rtrv-trm` output, go to step 3.

- Verify that the cards containing the telnet terminals shown in the `rtrv-trm` output in step 2 are E5-IPSMs. Enter the `rept-stat-card` command specifying the card location shown in the `rtrv-trm` output in step 2. For this example, enter these commands.

```
rept-stat-card: loc=1201
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD VERSION TYPE GPL PST SST AST
1201 126-003-000 IPSM IPSHC IS-NR Active -----
 ALARM STATUS = No Alarms.
 IMTPCI GPL version = 126-002-000
 BLVXW6 GPL version = 126-002-000
 BLDIAG6 GPL version = 126-002-000
 BLBEPM GPL version = 126-002-000
 BLCPLD GPL version = 126-002-000
 IMT BUS A = Conn
 IMT BUS B = Conn
 CURRENT TEMPERATURE = 32C (90F)
 PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
 Command Completed.
```

```
rept-stat-card: loc=1203
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD VERSION TYPE GPL PST SST AST
1203 126-003-000 IPSM IPS IS-NR Active -----
 ALARM STATUS = No Alarms.
 IMTPCI GPL version = 126-002-000
 BLVXW6 GPL version = 126-002-000
 BLDIAG6 GPL version = 126-002-000
 BLBEPM GPL version = 126-002-000
 BLCPLD GPL version = 126-002-000
 IMT BUS A = Conn
```

```

IMT BUS B = Conn
CURRENT TEMPERATURE = 32C (90F)
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
Command Completed.

```

```
rept-stat-card:loc=1205
```

This is an example of the possible output.

```

rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD VERSION TYPE GPL PST SST AST
1205 126-003-000 IPSM IPS IS-NR Active -----
ALARM STATUS = No Alarms.
IMTPCI GPL version = 126-002-000
BLVXW6 GPL version = 126-002-000
BLDIAG6 GPL version = 126-002-000
BLBEPM GPL version = 126-002-000
BLCPLD GPL version = 126-002-000
IMT BUS A = Conn
IMT BUS B = Conn
CURRENT TEMPERATURE = 32C (90F)
PEAK TEMPERATURE: = 39C (103F) [06-05-02 13:40]
Command Completed.

```

If the GPL value shown in the `rept-stat-card` output is `IPSHC`, the card is an E5-IPSM. If the GPL value shown in the `rept-stat-card` output is `IPS`, the card is an IPSM.

If there are a minimum of two E5-IPSMs shown in the `rept-stat-card` outputs, go to step 4.

If there is only one E5-IPSM or no E5-IPSMs shown in the `rept-stat-card` outputs, E5-IPSMs must be added to the database so that there are a minimum of two E5-IPSMs in the database. Remove enough IPSMs from the database so that when the E5-IPSMs are added, the EAGLE 5 ISS will contain a minimum of two E5-IPSMs. Perform the [Removing an IPSM](#) on page 538 procedure to remove the IPSMs. After the IPSMs have been removed from the database, remove the IPSM from the shelf.

When the IPSMs have been removed, perform the "Adding an IPSM" procedure in Chapter 4 of this manual to add the E5-IPSMs.

4. Select two telnet terminals. Each telnet terminal must be assigned to different E5-IPSMs. Display the status of this terminal by entering the `rept-stat-trm` command with the number of the selected telnet terminal. For this example, enter these commands.

```
rept-stat-trm:trm=18
```

This is an example of the possible output.

```

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
18 IS-NR Active -----
Command Completed.

```

```
rept-stat-trm:trm=27
```

This is an example of the possible output

```

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
27 IS-NR Active -----

```



Command Completed.

- If the state of both telnet terminals displayed in step 4 is OOS-MT-DSBLD, skip step 5 and go to step 6.
  - If the state of both telnet terminals displayed in step 4 is not OOS-MT-DSBLD, go to step 5.
5. To change the terminal type to a SEAS terminal type, the telnet terminal must be placed out of service using the `rmv-trm` command. Enter the `rmv-trm` command with the number of the terminal whose state is not OOS-MT\_DSBLD. Perform this step only for the terminals shown in step 4 whose state is not OOS-MT\_DSBLD.

```
rmv-trm:trm=18
```

```
rmv-trm:trm=27
```

When these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Inhibit message sent to terminal

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Command Completed.
```

6. Verify that the terminal that was inhibited in step 5 is in the OOS-MT-DSBLD state by entering the `rept-stat-trm` command with the number of the terminal specified in step 5.

For this command, enter these commands.

```
rept-stat-trm:trm=18
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
18 OOS-MT-DSBLD MANUAL -----
Command Completed.
```

```
rept-stat-trm:trm=27
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
27 OOS-MT-DSBLD MANUAL -----
Command Completed.
```

7. Change the terminal type of the terminals shown in step 6 to the SEAS terminal type using the `chg-trm` command with the number of the terminals shown in step 6.

For this example enter these commands.

```
chg-trm:trm=18:type=seas
```

```
chg-trm:trm=27:type=seas
```

When these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
CHG-TRM: MASP A - COMPLTD
```

8. Verify the changes made in step 7 by using the `rtrv-trm` command with the terminal number specified in step 7.

For this example, enter these commands.

```
rtrv-trm:trm=18
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 39.0.0
TRM TYPE LOC TMOUT MXINV DURAL SECURE
18 SEAS 1201 30 5 00:01:00 yes

TRM LOGINTMR LOGOUTTMR PNGTIMEINT PNGFAILCNT
 (sec) (sec) (msec)
18 none none none 1

TRM TRAF LINK SA SYS PU DB UIMRD
18 NO NO NO NO NO NO NO

 APP APP
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
18 NO NO NO NO NO NO NO NO NO NO YES NO
```

```
rtrv-trm:trm=27
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 39.0.0
TRM TYPE LOC TMOUT MXINV DURAL SECURE
27 SEAS 1203 30 5 00:01:00 yes

TRM LOGINTMR LOGOUTTMR PNGTIMEINT PNGFAILCNT
 (sec) (sec) (msec)
27 none none none 1

TRM TRAF LINK SA SYS PU DB UIMRD
27 NO NO NO NO NO NO NO

 APP APP
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
27 NO NO NO NO NO NO NO NO NO NO YES NO
```

9. Display the SEAS configuration using the `rtrv-seas-config` command.

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is not enabled and turned on.

```
rlghncxa03w 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI CONNECTION IPADDRESS PORT TERMINAL

TEAGLESTP001 IPMR1 192.168.25.10 2500 --
 IPMR2 192.168.25.20 2600 --
```

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is enabled and turned on.

```
rlghncxa03w 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI AUTHMODE

TEAGLESTP001 Password

TERMINAL CONNECTION IPADDR PORT LOGIN HNAME

```

|    |       |               |      |      |         |
|----|-------|---------------|------|------|---------|
| -- | IPMR1 | 198.168.25.10 | 2500 | root | abaco-a |
| -- | IPMR2 | 198.168.25.20 | 2600 | root | abaco-b |

10. Verify the connection to the CCS MR by entering the `pass:cmd="ping"` command specifying the card location of the SEAS terminal (shown in step 8) and the IP address assigned to the connection (shown in step 9). Perform this step for both connection to the CCS MR. For this example, enter these commands

```
pass:loc=1201:cmd="ping 198.168.25.10"
```

The following is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
PASS: Command sent to card

rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
PING command in progress

rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
PING 198.168.25.10: 56 data bytes
64 bytes from tekral.nc.tekelec.com (198.168.25.10): icmp_seq=0. time=5. ms
64 bytes from tekral.nc.tekelec.com (198.168.25.10): icmp_seq=1. time=9. ms
64 bytes from tekral.nc.tekelec.com (198.168.25.10): icmp_seq=2. time=14. ms
----tekral PING Statistics----
3 packets transmitted, 3 packets received, 0% packet loss
round-trip (ms) min/avg/max = 5/9/14

PING command complete
```

```
pass:loc=1203:cmd="ping 198.168.25.20"
```

The following is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
PASS: Command sent to card

rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
PING command in progress

rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
PING 198.168.25.20: 56 data bytes
64 bytes from tekral.nc.tekelec.com (198.168.25.20): icmp_seq=0. time=5. ms
64 bytes from tekral.nc.tekelec.com (198.168.25.20): icmp_seq=1. time=9. ms
64 bytes from tekral.nc.tekelec.com (198.168.25.20): icmp_seq=2. time=14. ms
----tekral PING Statistics----
3 packets transmitted, 3 packets received, 0% packet loss
round-trip (ms) min/avg/max = 5/9/14

PING command complete
```

11. Put the SEAS terminals into service using the `alw-trm` command with the number of the SEAS terminals shown in step 8.

```
alw-trm:trm=18
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 04-01-07 11:11:28 EST EAGLE 31.3.0
Allow message sent to terminal
```

```
rlghncxa03w 04-01-07 11:11:28 EST EAGLE 31.3.0
1062.0046 TERMINAL 18 Terminal Enabled
```

```
alw-trm:trm=27
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 04-01-07 11:11:28 EST EAGLE 31.3.0
Allow message sent to terminal

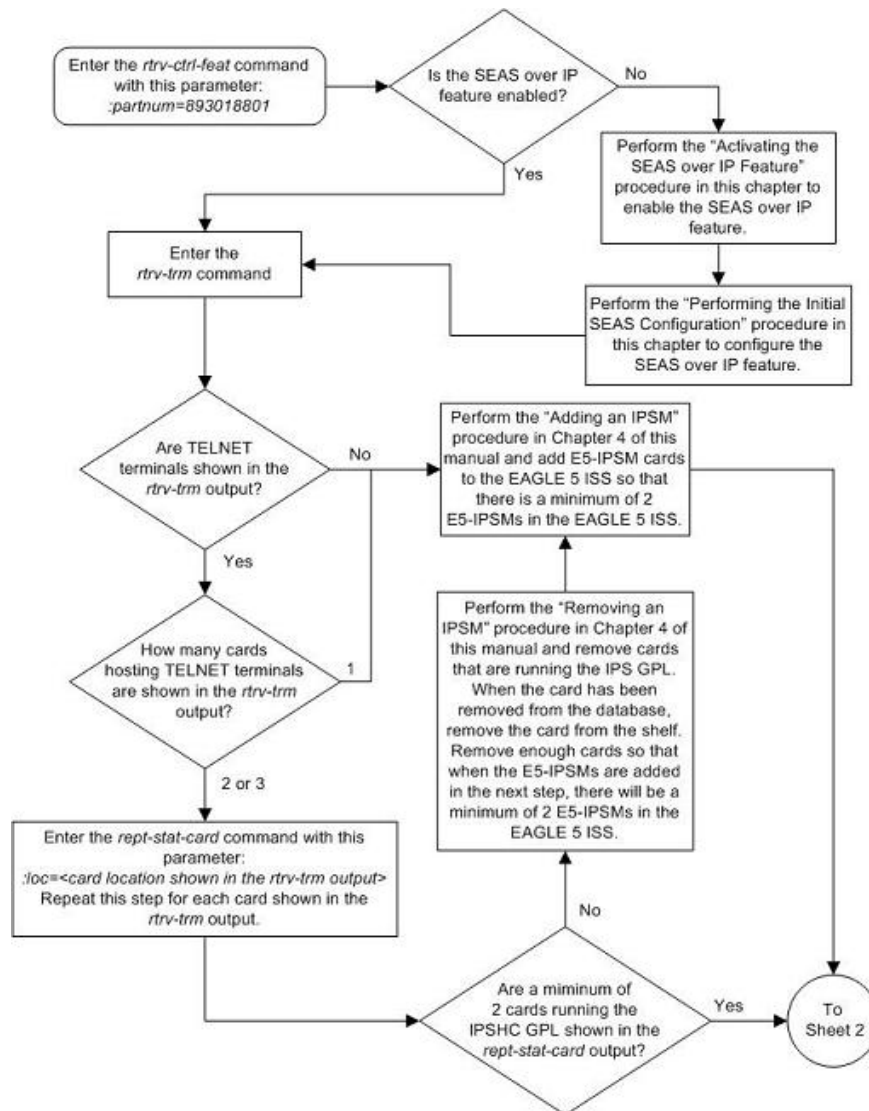
rlghncxa03w 04-01-07 11:11:28 EST EAGLE 31.3.0
1062.0046 TERMINAL 27 Terminal Enabled
```

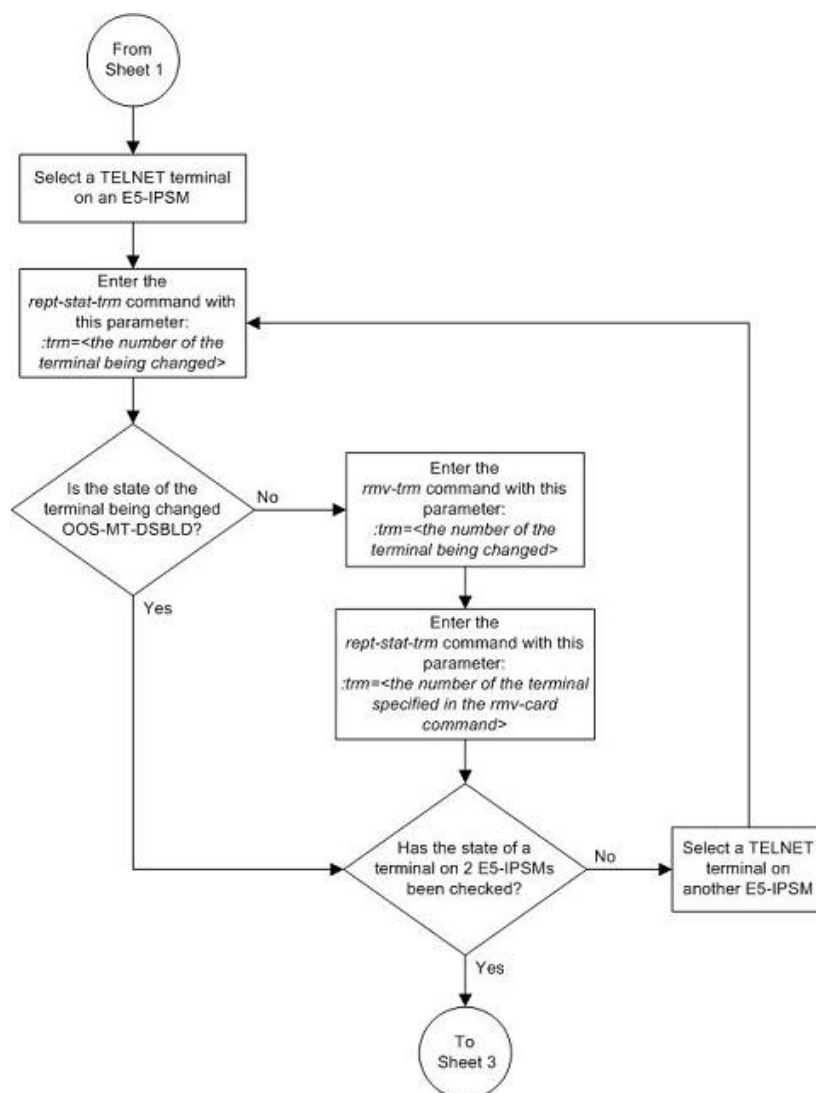
12. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

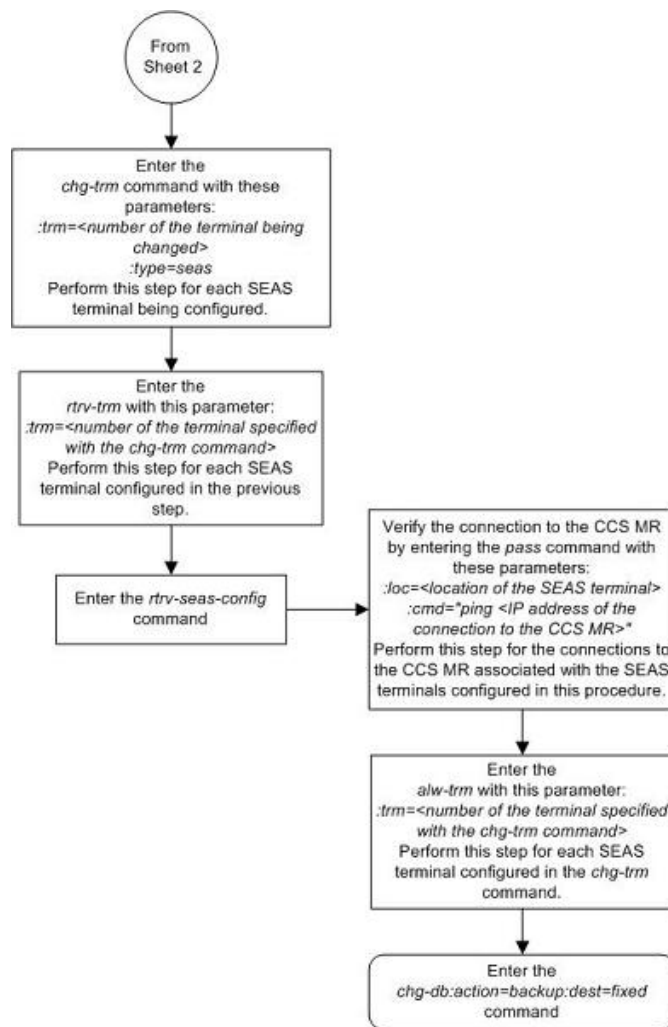
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 72: Configuring SEAS Terminals**







## Changing the Existing SEAS Configuration

This procedure is used to change the existing SEAS configuration using the `chg-seas-config` command.

The `chg-seas-config` command uses these parameters.

`:conn` – The name of the SEAS connection, either IPMR1 or IPMR2

`:seasccli` – The CLI part of node name of the EAGLE 5 ISS consisting of one alphabetic character and up to 15 alphanumeric characters. The `seasccli` value is different from the EAGLE 5 ISS `cli` value that is entered with the `chg-sid` command. The `seasccli` value must also be configured on the Telcordia Message Router (CCS MR). Refer to Telecordia Configuration Specification "Telcordia Technologies System Documentation", *BD-SNAM-ADMIN-4 Issue 14*, November 2006.

`:ipaddr` – The IP address of the CCS MR.

:**port** – The port number of the CCS MR that the EAGLE 5 ISS connects to, from 1024 to 5000.

:**hname** – The name of the remote host of the CCS MR, 1 to 15 alphanumeric characters.

:**login** – The login name of the CCS MR, 1 to 15 alphanumeric characters.

:**authmode** – The method of authentication used for the connection. Currently, only password authentication is used for SEAS connections, so this parameter has only one value, **password**. This parameter is optional and does not need to be specified.

The **hname**, **login**, and **authmode** parameters are used only when the Eagle OA&M IP Security feature is enabled and turned on. The values for these parameters are displayed in the **rtrv-seas-config** output only when the Eagle OA&M IP Security feature is enabled and turned on. The status of the Eagle OA&M IP Security feature is shown in the **rtrv-ctrl-feat** output.

If the **seasccli** value is being changed, all the SEAS terminals must be taken out of service. If the connection information for one connection is being changed, only the terminal associated with this connection must be taken out of service.



#### CAUTION

**CAUTION:** The IP address and **port** value combination for each SEAS connection must be unique or the **chg-seas-config** command will be rejected.

1. Display the current SEAS configuration using the **rtrv-seas-config** command.

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is not enabled and turned on.

```
rlghncxa03w 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI CONNECTION IPADDRESS PORT TERMINAL

TEAGLESTP001 IPMR1 192.168.25.10 2500 18
 IPMR2 192.168.25.20 2600 27
```

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is enabled and turned on.

```
tekelecstp 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI AUTHMODE

TEAGLESTP001 Password

TERMINAL CONNECTION IPADDR PORT LOGIN HNAME

18 IPMR1 198.168.25.10 2500 root abaco-a
27 IPMR2 198.168.25.20 2600 root abaco-b
```

2. Display the status of the SEAS terminal associated with the connection that is being changed. Enter the **rept-stat-trm** command with the terminal number shown in step 1.

If the **seasccli** value is being changed, both SEAS terminals must be taken out of service. Perform this step for both SEAS terminals.

For this example, enter these commands.

```
rept-stat-trm:trm=18
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
```



```
18 IS-NR Active -----
```

```
Command Completed.
```

```
rept-stat-trm:trm=27
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
27 IS-NR Active -----
```

```
Command Completed.
```

- Place the SEAS terminals displayed in step 2 out of service using the `rmv - trm` command. Enter the `rmv - trm` command with the number of the terminal whose state is not OOS-MT\_DSBLD. Perform this step only for the terminals shown in step 2 whose state is not OOS-MT\_DSBLD.

**Note:** If the SEAS terminal specified in this step is the last SEAS terminal that is in service, the `force=yes` parameter must be specified with the `rmv - trm` command.

```
rmv-trm:trm=18
```

```
rmv-trm:trm=27:force=yes
```

When these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Inhibit message sent to terminal

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Command Completed.
```

**Note:** If the SEASCLLI value is not being changed, skip step 4 and go to step 5.

- Change the SEASCLLI value by entering the `chg - seas - config` command with the `seasccli` parameter. For this example, enter this command.

```
chg-seas-config:seasccli=TEAGLESTP002
```

**Note:** The SEASCLLI value is different from the CLLI value specified with the `chg - sid` command.

**Note:** If only the SEASCLLI value is being changed in this procedure, skip step 5 and go to step 6.

- Change the connection information for a connection to the CCS MR. Enter the `chg - seas - config` command with these parameters:

- `:conn=<the name of the connection being changed, ipmr1 or ipmr2>`
- `:ipaddr=the IP address of the CCS MR`
- `:port = the port number of the CCS MR`



#### CAUTION

**CAUTION:** The IP address and port value combination for each SEAS connection must be unique or the `chg - seas - config` command will be rejected.

If the Eagle OA&M IP Security Enhancement feature is enabled and turned on, these parameters can also be specified.

- `:hname =` The name of the remote host of the CCS MR.

- :login = The login name of the CCS MR.

If the LOGIN column is shown in the `rtrv-seas-config` output in step 1, the Eagle OA&M IP Security Enhancement feature is enabled and turned on.

**Note:** If you wish to specify the `login` and `hname` parameters for the connection being changed, and the Eagle OA&M IP Security Enhancement feature is not enabled and turned on, perform the [Activating the Eagle OA&M IP Security Enhancement Controlled Feature](#) on page 614 procedure to enable and turn on the Eagle OA&M IP Security Enhancement feature. Enable and turn on the Eagle OA&M IP Security Enhancement feature before performing the `chg-seas-config` command.

If the Eagle OA&M IP Security Enhancement feature is not enabled and turned on, for this example, enter this command.

```
chg-seas-config:conn=ipmr1:ipaddr=198.168.25.30:port=3000
```

If the Eagle OA&M IP Security Enhancement feature is enabled and turned on, for this example, enter this command.

```
chg-seas-config:conn=ipmr1:ipaddr=198.168.25.30:port=3000:hname=remote2:login=root
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
CHG-SEAS-CONFIG: MASP A - COMPLTD
```

If the `login` parameter was specified with the `chg-seas-config` command, the Enter Password: prompt appears. When the Enter Password: prompt appears, enter the password for the login name. The length of the password is from 1 to 15 characters. The password is not echoed on the screen.

## 6. Verify the SEAS configuration using the `rtrv-seas-config` command.

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is not enabled and turned on.

```
rlghncxa03w 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI CONNECTION IPADDRESS PORT TERMINAL

TEAGLESTP002 IPMR1 192.168.25.30 3000 18
 IPMR2 192.168.25.20 2600 27
```

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is enabled and turned on.

```
tekelecstp 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI AUTHMODE

TEAGLESTP002 Password
TERMINAL CONNECTION IPADDR PORT LOGIN HNAME

18 IPMR1 198.168.25.30 3000 root abaco-a
27 IPMR2 198.168.25.20 2600 root abaco-b
```

**Note:** If only the SEASCLLI value was changed, skip steps 7 and 8, and go to step 9.

7. Display the SEAS terminal associated with the connection that was changed in step 6 using the `rtrv-trm` with the number of the SEAS terminal associated with the connection that was changed.

For this example, enter this command.

```
rtrv-trm:trm=18
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 36.0.0
TRM TYPE LOC TMOUT MXINV DURAL SECURE
18 SEAS 1201 30 5 00:01:00 yes

TRM TRAF LINK SA SYS PU DB UIMRD
18 NO NO NO NO NO NO NO

 APP APP
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
18 NO NO NO NO NO NO NO NO NO NO NO YES NO
```

8. Verify the connection to the CCSMR by entering the `pass:cmd="ping"` command specifying the card location of the SEAS terminal (shown in step 7) and the IP address assigned to the connection (shown in step 6).

```
pass:loc=1201:cmd="ping 198.168.25.30"
```

The following is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
PASS: Command sent to card

rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
PING command in progress

rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
PING 198.168.25.30: 56 data bytes
64 bytes from tekral.nc.tekelec.com (198.168.25.30): icmp_seq=0. time=5. ms
64 bytes from tekral.nc.tekelec.com (198.168.25.30): icmp_seq=1. time=9. ms
64 bytes from tekral.nc.tekelec.com (198.168.25.30): icmp_seq=2. time=14. ms
----tekral PING Statistics----
3 packets transmitted, 3 packets received, 0% packet loss
round-trip (ms) min/avg/max = 5/9/14

PING command complete
```

If you wish to change the other connection, repeat this procedure from step 2.

If all the changes to the SEAS configuration have been made, go to step 9.

9. Put the SEAS terminals into service using the `alw-trm` command with the number of the SEAS terminals shown in step 6. This step should be performed for all the SEAS terminals that were taken out of service in step 3.

```
alw-trm:trm=18
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 04-01-07 11:11:28 EST EAGLE 31.3.0
Allow message sent to terminal
```

```
rlghncxa03w 04-01-07 11:11:28 EST EAGLE 31.3.0
1062.0046 TERMINAL 18 Terminal Enabled
```

```
alw-trm:trm=27
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 04-01-07 11:11:28 EST EAGLE 31.3.0
Allow message sent to terminal

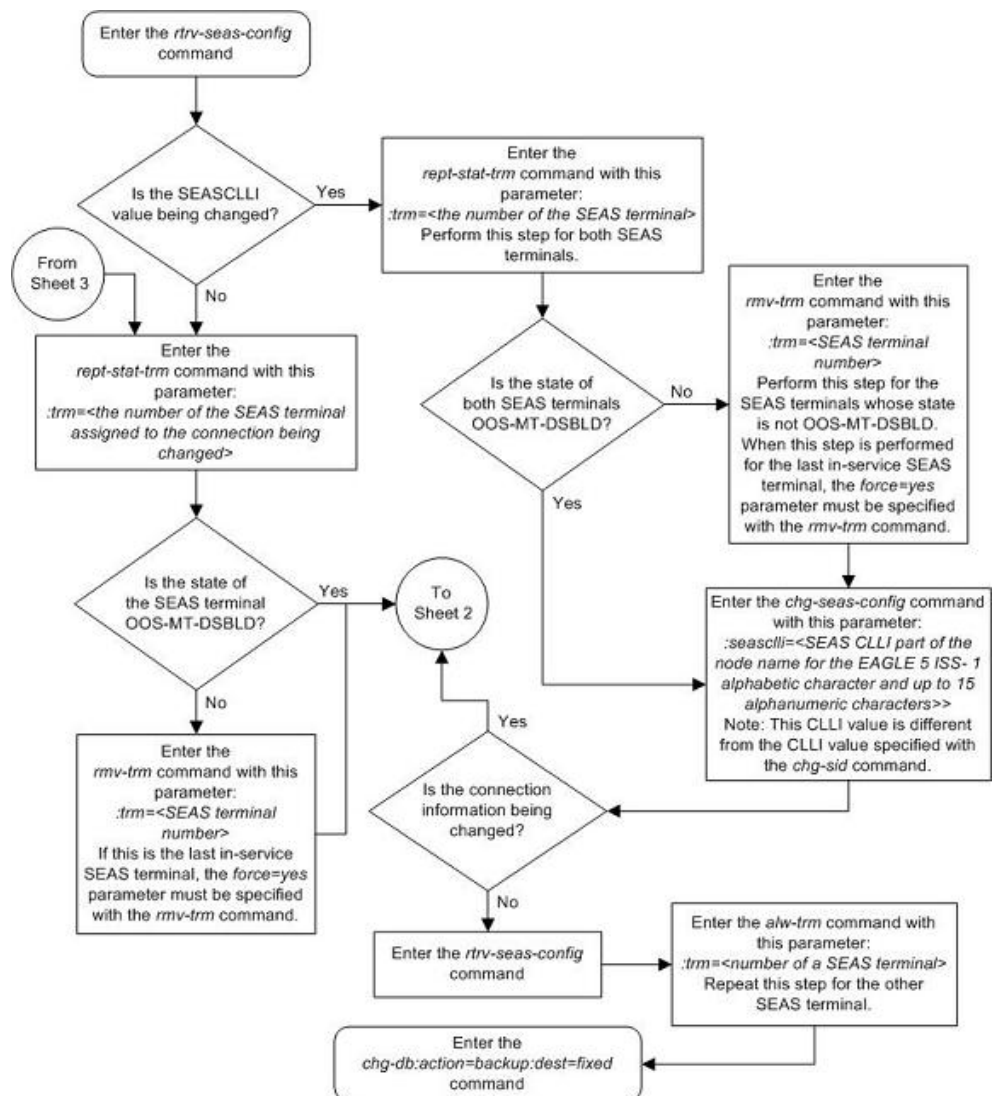
rlghncxa03w 04-01-07 11:11:28 EST EAGLE 31.3.0
1062.0046 TERMINAL 27 Terminal Enabled
```

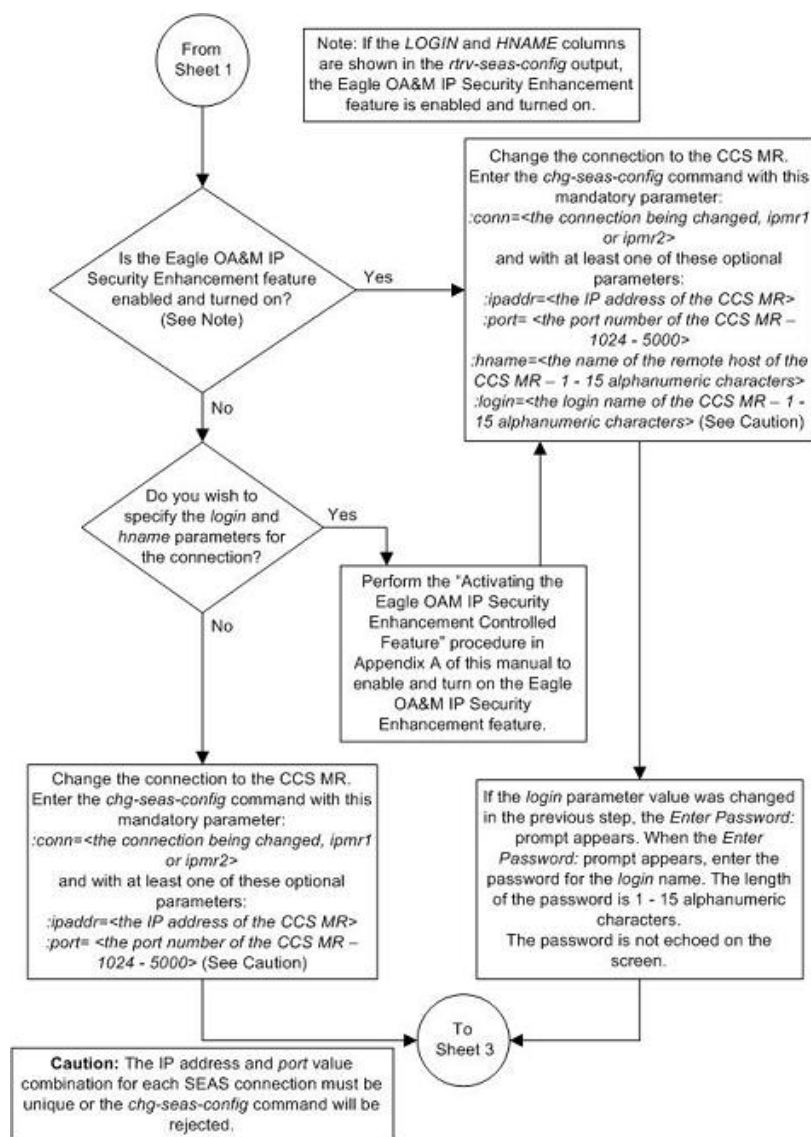
10. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

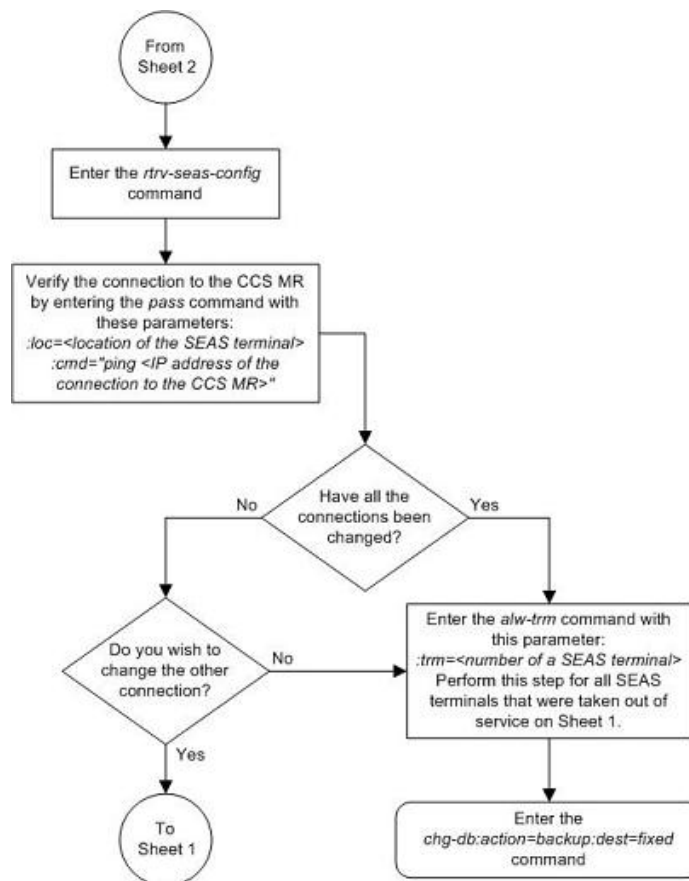
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 73: Changing the Existing SEAS Configuration**







## Turning the SEAS Over IP Feature Off

This procedure is used to turn off the SEAS over IP feature using the *chg-ctrl-feat* command.

The *chg-ctrl-feat* command uses the following parameters:

:partnum - The part number of the SEAS over IP feature, 893018801.

:status=off – used to turn off the SEAS over IP feature.

The status of the SEAS over IP feature must be on and is shown with the *rtv-ctrl-feat* command.



**CAUTION:** If the SEAS over IP feature is turned off, and the OAP-based SEAS configuration has been provisioned correctly, the SEAS terminal traffic stops and OAP-based SEAS traffic starts. If the SEAS over IP feature is turned off, and the OAP-based SEAS configuration has not been provisioned, or has not been provisioned correctly, all SEAS traffic stops.

1. Display the status of the SEAS over IP feature by entering the *rtv-ctrl-feat:partnum=893018801* command. The following is an example of the possible output.

The following is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
The following features have been permanently enabled:

Feature Name Partnum Status Quantity
SEAS over IP 893018801 on ----

The following features have been temporarily enabled:
Feature Name Partnum Status Quantity Trial Period Left
Zero entries found.

The following features have expired temporary keys:

Feature Name Partnum
Zero entries found.
```

If the status of the SEAS over IP feature is off, or if the SEAS over IP feature is not enabled, this procedure cannot be performed.

2. Turn off the SEAS over IP feature by entering the `chg-ctrl-feat` command with the `status=off` parameter. Enter this command.

```
chg-ctrl-feat:partnum=893018801:status=off
```

When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0
CHG-CTRL-FEAT: MASP A - COMPLTD
```

3. Verify that the SEAS over IP feature has been turned off by using the `rtrv-ctrl-feat:partnum=893018801` command. The following is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
The following features have been permanently enabled:

Feature Name Partnum Status Quantity
SEAS over IP 893018801 off ----

The following features have been temporarily enabled:
Feature Name Partnum Status Quantity Trial Period Left
Zero entries found.

The following features have expired temporary keys:

Feature Name Partnum
Zero entries found.
```

**Note:** Once the SEAS over IP feature is turned off, the SEAS terminals can be changed to TELNET terminals. If you do not wish to change the SEAS terminals to TELNET terminals, skip steps 4 through 6, and go to step 7.

4. Display the SEAS configuration by entering the `rtrv-seas-config` command.

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is not enabled and turned on.

```
rlghncxa03w 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI CONNECTION IPADDRESS PORT TERMINAL

```



|              |       |               |      |    |
|--------------|-------|---------------|------|----|
| TEAGLESTP001 | IPMR1 | 192.168.25.10 | 2500 | 18 |
|              | IPMR2 | 192.168.25.20 | 2600 | 27 |

The following is an example of the possible output if the Eagle OA&M IP Security Enhancement feature is enabled and turned on.

```
tekelecstp 07-01-23 18:46:01 EST EAGLE 37.5.0
SEASCLLI AUTHMODE

TEAGLESTP001 Password
```

| TERMINAL | CONNECTION | IPADDR        | PORT | LOGIN | HNAME   |
|----------|------------|---------------|------|-------|---------|
| 18       | IPMR1      | 198.168.25.10 | 2500 | root  | abaco-a |
| 27       | IPMR2      | 198.168.25.20 | 2600 | root  | abaco-b |

- Change the terminal type of the terminals shown in step 4 to the TELNET terminal type using the `chg-trm:trm=18:type=telnet` command with the number of the terminals shown in step 4.

For this example enter these commands.

```
chg-trm:trm=18:type=telnet
```

```
chg-trm:trm=27:type=telnet
```

When these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
CHG-TRM: MASP A - COMPLTD
```

A warning message, "Invalidating the Terminal data in SEASCFG table", is also displayed.

- Verify the changes made in step 5 by using the `rtrv-trm` command with the terminal number specified in step 5.

For this example, enter these commands.

```
rtrv-trm:trm=18
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 36.0.0
TRM TYPE LOC TMOUT MXINV DURAL SECURE
18 TELNET 1201 30 5 00:01:00 yes

TRM TRAF LINK SA SYS PU DB UIMRD
18 NO NO NO NO NO NO NO

 APP APP
TRM SERV SS CARD CLK DBG GTT GWS MEAS MON MPS SEAS SLAN
18 NO NO NO NO NO NO NO NO NO NO NO YES NO
```

```
rtrv-trm:trm=27
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 36.0.0
TRM TYPE LOC TMOUT MXINV DURAL SECURE
27 TELNET 1203 30 5 00:01:00 yes

TRM TRAF LINK SA SYS PU DB UIMRD
27 NO NO NO NO NO NO NO
```

|     | APP  | APP |      |     |     |     |     |      |     |     |      |      |  |  |
|-----|------|-----|------|-----|-----|-----|-----|------|-----|-----|------|------|--|--|
| TRM | SERV | SS  | CARD | CLK | DBG | GTT | GWS | MEAS | MON | MPS | SEAS | SLAN |  |  |
| 27  | NO   | NO  | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | YES  | NO   |  |  |

7. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

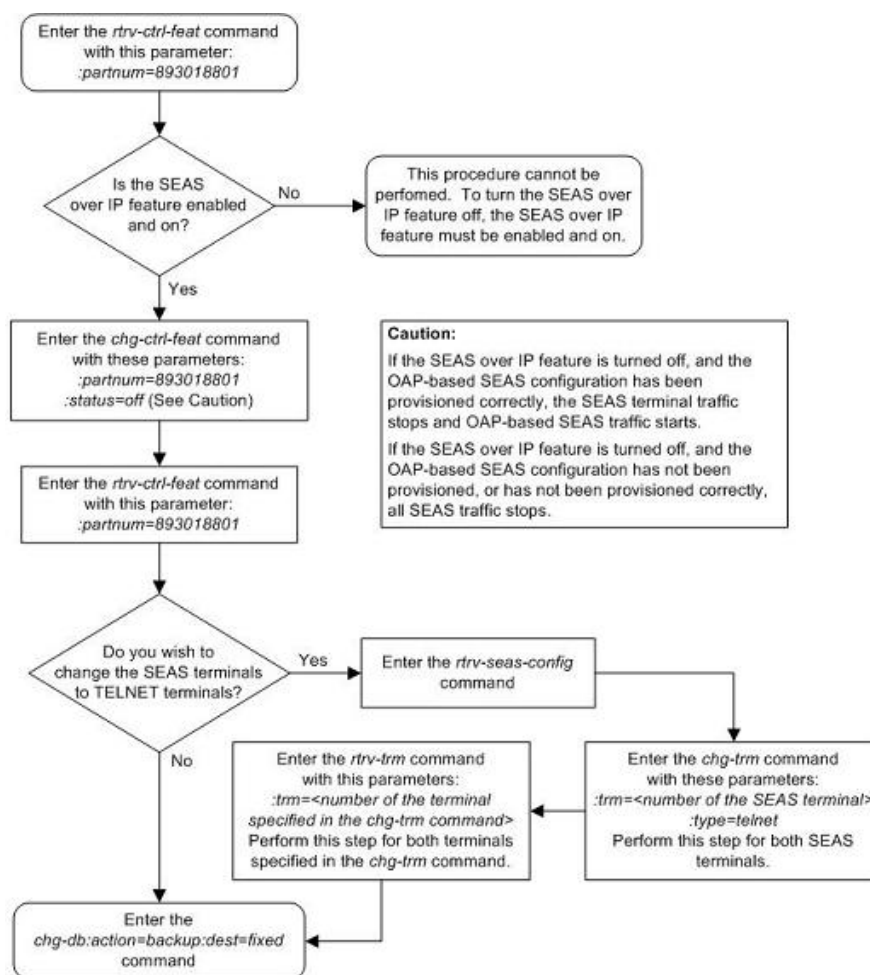
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```

BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.

```

Figure 74: Turning the SEAS Over IP Feature Off



# Appendix

# A

## Controlled Feature Activation Procedures

---

### Topics:

- [\*Introduction.....606\*](#)
- [\*Activating Controlled Features.....606\*](#)
- [\*Activating the Eagle OA&M IP Security Enhancement Controlled Feature.....614\*](#)
- [\*Activating the 15 Minute Measurements Controlled Feature.....627\*](#)
- [\*Clearing a Temporary FAK Alarm.....636\*](#)
- [\*Deactivating Controlled Features.....638\*](#)

Appendix A, Controlled Feature Activation Procedures, describes the procedures necessary to activate and deactivate features (features that require a feature access key to be activated) contained in this manual.

## Introduction

Controlled features are features that are activated using a feature access key. These features can either be on or off, or features that operate at a particular performance level. Only the controlled features that are used in this manual are covered in this appendix.

The feature access key allows the user to enable and activate a controlled feature in the EAGLE 5 ISS by entering either a permanent feature access key or a temporary feature access key. By requiring a feature access key to enable and activate a controlled feature, unauthorized enabling and activation of a controlled feature can be prevented. The feature access key is supplied by Tekelec.

Features enabled with a permanent feature access key remain enabled for as long as the EAGLE 5 ISS remains in service. Once features are permanently enabled, they cannot be disabled.

Features enabled with a temporary feature access key are enabled for only 30 days. On the twenty-third day, seven days before the temporary key expires, a major alarm (UAM 0367) is generated to inform the user that the one or more temporary feature access keys will expire soon.

```
0367.0181 ** SYSTEM Temp Key(s) expiring soon.
```

If a temporary feature access key expires, the controlled feature is disabled and a critical alarm (UAM 0368) is generated.

```
0368.0181 *C SYSTEM Temp Key(s) have expired.
```

Any attempts to enable the controlled feature with the temporary feature access key are rejected. The controlled feature can be enabled only by entering the permanent feature access key for the controlled feature.

To clear the critical alarm (UAM 0368), the user can either enter the `chg-ctrl-feat` command with the `alarm=clear` parameter, or permanently enable the controlled feature by entering the permanent feature access key for the controlled feature.

If the critical alarm is cleared with the `chg-ctrl-feat` command, the controlled feature is disabled and cannot be enabled with the temporary feature access key. The feature can be enabled only by entering the permanent feature access key for the controlled feature.

## Activating Controlled Features

This procedure is used to enable and activate these controlled features, Command Class Management, IP User Interface, and Network Security Enhancements, using the feature's part number and a feature access key for each feature.

The feature access key is based on the feature's part number and the serial number of the EAGLE 5 ISS, making the feature access key site-specific.

The `enable-ctrl-feat` command enables the controlled feature by inputting the controlled feature's access key and the controlled feature's part number with these parameters:

: fak – The feature access key generated by the feature access key generator. The feature access key contains 13 alphanumeric characters and is not case sensitive.

: partnum – The Tekelec-issued part number associated with the controlled feature. The part number is a 9-digit number, not including dashes. The first three digits must be 893 (that is, 893xxxxxx, where x is a numeric value).

If the controlled feature is being enabled with a temporary feature access key, the feature must not be in the *in-use*, *expired*, or *unavailable* state.

The `enable-ctrl-feat` command requires that the database contain a valid serial number for the EAGLE 5 ISS, and that this serial number is locked. This can be verified with the `rtrv-serial-num` command. The EAGLE 5 ISS is shipped with a serial number in the database, but the serial number is not locked. The serial number can be changed, if necessary, and locked once the EAGLE 5 ISS is on-site, with the `ent-serial-num` command. The `ent-serial-num` command uses these parameters.

: serial – The serial number assigned to the EAGLE 5 ISS. The serial number is not case sensitive.

: lock – Specifies whether or not the serial number is locked. This parameter has only one value, *yes*, which locks the serial number. Once the serial number is locked, it cannot be changed.

**Note:** To enter and lock the EAGLE 5 ISS's serial number, the `ent-serial-num` command must be entered twice, once to add the correct serial number to the database with the `serial` parameter, then again with the `serial` and the `lock=yes` parameters to lock the serial number. You should verify that the serial number in the database is correct before locking the serial number. The serial number can be found on a label affixed to the control shelf (shelf 1100).

Once the controlled feature has been enabled, the controlled feature must be activated with the `chg-ctrl-feat` command. The `chg-ctrl-feat` command uses these parameters:

: partnum – The Tekelec-issued part number associated with the controlled feature. The part number is a 9-digit number, not including dashes. The first three digits must be 893 (that is, 893xxxxxx, where x is a numeric value).

: status=on – used to activate the controlled features that customer has purchased and enabled.

The status of the controlled features in the EAGLE 5 ISS is shown with the `rtrv-ctrl-feat` command.

The part numbers for the Command Class Management, IP User Interface, and Network Security Enhancements features are:

- Command Class Management – 893005801
- Telnet (IP User Interface) – 893005701
- Network Security Enhancements – 893009101

1. Display the status of the controlled features by entering the `rtrv-ctrl-feat` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name Partnum Status Quantity
Command Class Management 893005801 off ----
LNP Short Message Service 893006601 on ----
```

```

Intermed GTT Load Sharing 893006901 off ----
XGTT Table Expansion 893006101 off ----
XMAP Table Expansion 893007710 on 3000
Large System # Links 893005910 on 2000
Routesets 893006401 on 6000

```

The following features have been temporarily enabled:

| Feature Name        | Partnum | Status | Quantity | Trial Period Left |
|---------------------|---------|--------|----------|-------------------|
| Zero entries found. |         |        |          |                   |

The following features have expired temporary keys:

| Feature Name        | Partnum |
|---------------------|---------|
| Zero entries found. |         |

If the `rtrv-ctrl-feat` output shows that the controlled feature is permanently enabled, and its status is `on`, no further action is necessary.

If the controlled feature is permanently enabled, and its status is `off`, skip steps 2 through 4, and go to step 5.

If the controlled feature is temporarily enabled, and you wish to permanently enable this feature, or the temporary feature access key for that feature has expired, skip steps 2 and 3, and go to step 4.

If the controlled feature is to remain temporarily enabled, and its status is `off`, skip steps 2 through 4, and go to step 5. If the feature's status is `on`, no further action is necessary.

If the controlled feature is to remain temporarily enabled, and its status is `on`, no further action is necessary.

**Note:** If the `rtrv-ctrl-feat` output in step 1 shows any controlled features, skip steps 2 and 3, and go to step 4. If the `rtrv-ctrl-feat` output shows only the HC-MIMSLK Capacity feature with a quantity of 64, steps 2 and 3 must be performed.

2. Display the serial number in the database with the `rtrv-serial-num` command.

This is an example of the possible output.

```

rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
System serial number = ntxxxxxxxxxxxxx

```

System serial number is not locked.

```

rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
Command Completed

```

**Note:** If the serial number is correct and locked, skip steps 3, 4, and 5, and go to step 6. If the serial number is correct but not locked, skip steps 3 and 4, and go to step 5. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to [Customer Care Center](#) on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

3. Enter the correct serial number into the database using the `ent-serial-num` command with the `serial` parameter.

For this example, enter this command.

```
ent-serial-num:serial=<EAGLE 5 ISS's correct serial number>
```

When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM: MASP A - COMPLTD
```

4. Verify that the serial number entered into step 3 was entered correctly using the `rtrv-serial-num` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

If the serial number was not entered correctly, repeat steps 3 and 4 and re-enter the correct serial number.

5. Lock the serial number in the database by entering the `ent-serial-num` command with the serial number shown in step 2, if the serial number shown in step 2 is correct, or with the serial number shown in step 4, if the serial number was changed in step 3, and with the `lock=yes` parameter.

For this example, enter this command.

```
ent-serial-num:serial=<EAGLE 5 ISS's serial number>:lock=yes
```

When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM: MASP A - COMPLTD
```

6. Enable the controlled feature with either a permanent key or temporary key by entering the `enable-ctrl-feat` command.

For this example, enter these commands.

```
enable-ctrl-feat:partnum=893005801:fak=xxxxxxxxxxxxx
enable-ctrl-feat:partnum=893005701:fak=xxxxxxxxxxxxx
enable-ctrl-feat:partnum=893009101:fak=xxxxxxxxxxxxx
```

**Note:**

The values for the feature access key (the `fak` parameter) are provided by Tekelec. The feature access key determines if the controlled feature is permanently or temporarily enabled. If you do not have the controlled feature part number or the feature access key for the feature you wish to enable, contact your Tekelec Sales Representative or Account Representative.

When the `enable-ctrl-feat` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
ENABLE-CTRL-FEAT: MASP B - COMPLTD
```

**Note:** If a temporarily enabled feature was permanently enabled in step 4, and the status of the temporarily enabled feature was on, skip step 5 and go to step 6.

7. The controlled features enabled in step 4 must be activated using the `chg-ctrl-feat` command, specifying the controlled feature part number used in step 4 and the `status=on` parameter.

For this example, enter these commands.

```
chg-ctrl-feat:partnum=893005801:status=on
```

```
chg-ctrl-feat:partnum=893005701:status=on
```

```
chg-ctrl-feat:partnum=893009101:status=on
```

When the **chg-ctrl-feat** command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
CHG-CTRL-FEAT: MASP B - COMPLTD
```

8. Verify the changes by entering the `rtrv-ctrl-feat` command with the part number specified in step 5.

```
rtrv-ctrl-feat:partnum=893005801
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
Feature Name Partnum Status Quantity
Command Class Management 893005801 on ----
```

```
rtrv-ctrl-feat:partnum=893005701
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
Feature Name Partnum Status Quantity
Telnet 893005701 on ----
```

```
rtrv-ctrl-feat:partnum=893009101
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
Feature Name Partnum Status Quantity
Network Security Enhance 893009101 on ----
```

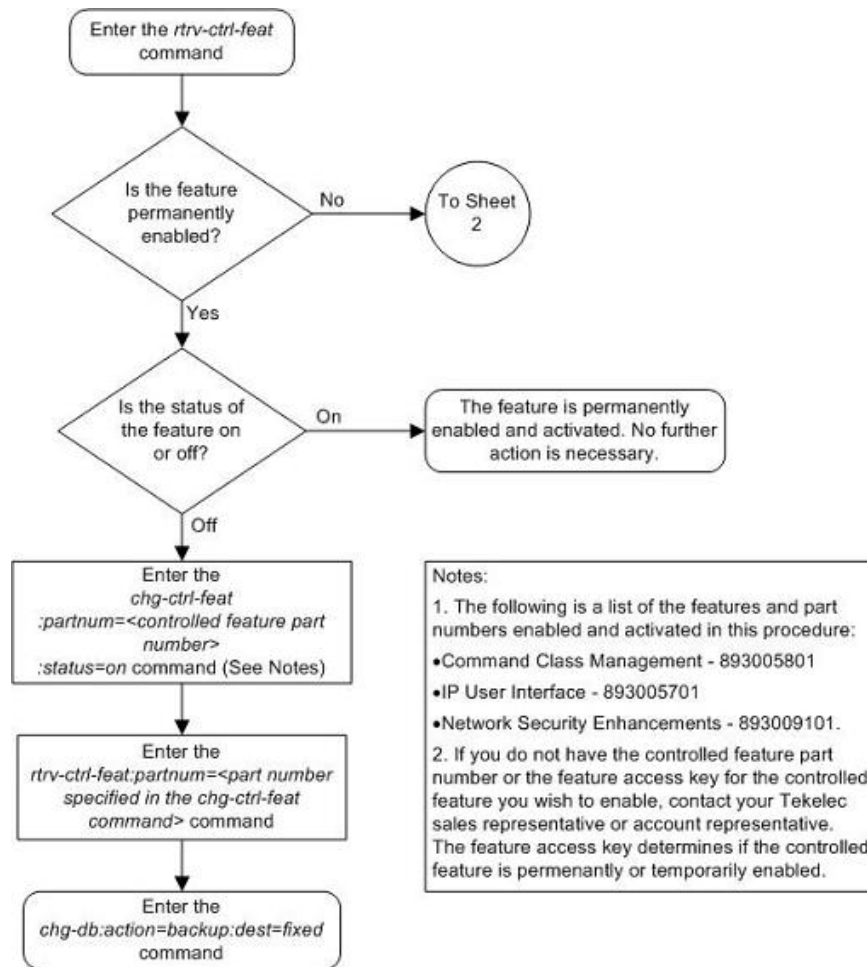
9. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

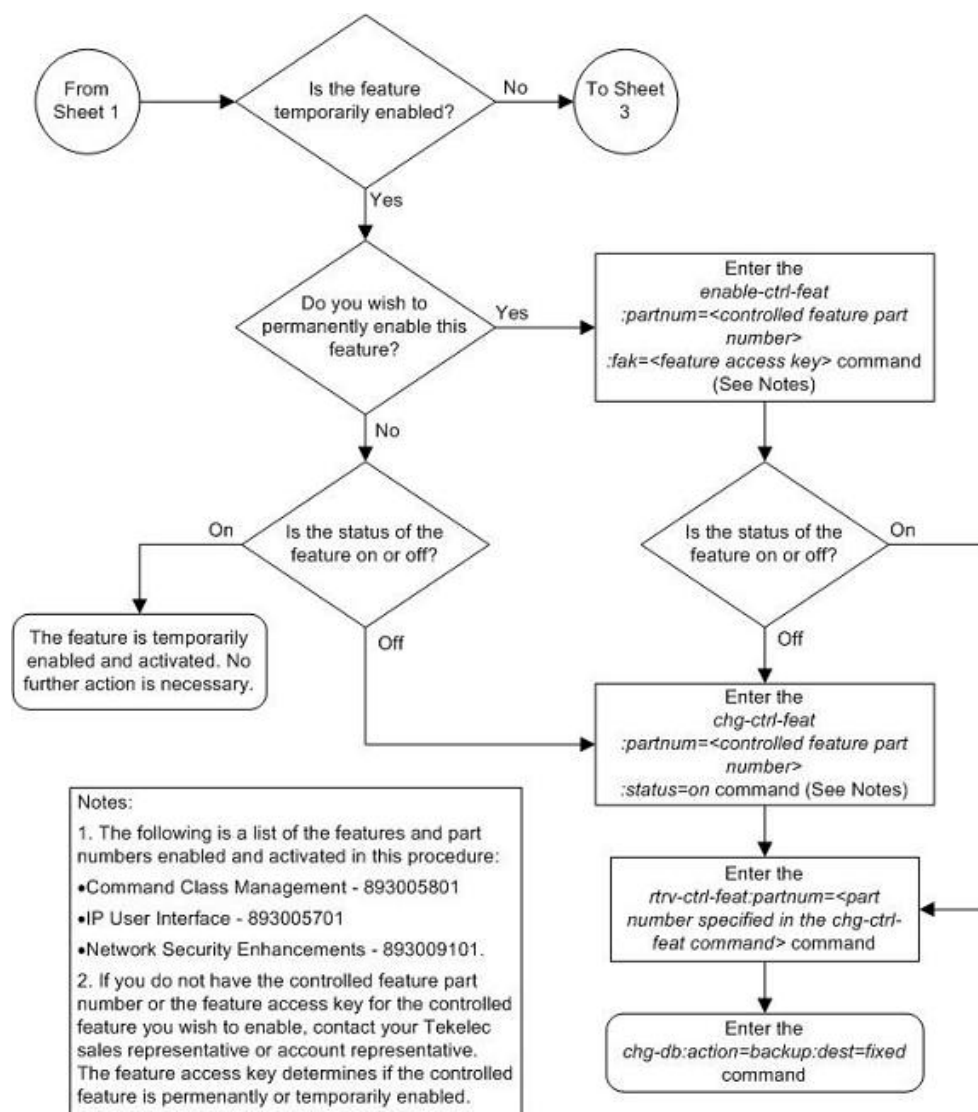
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

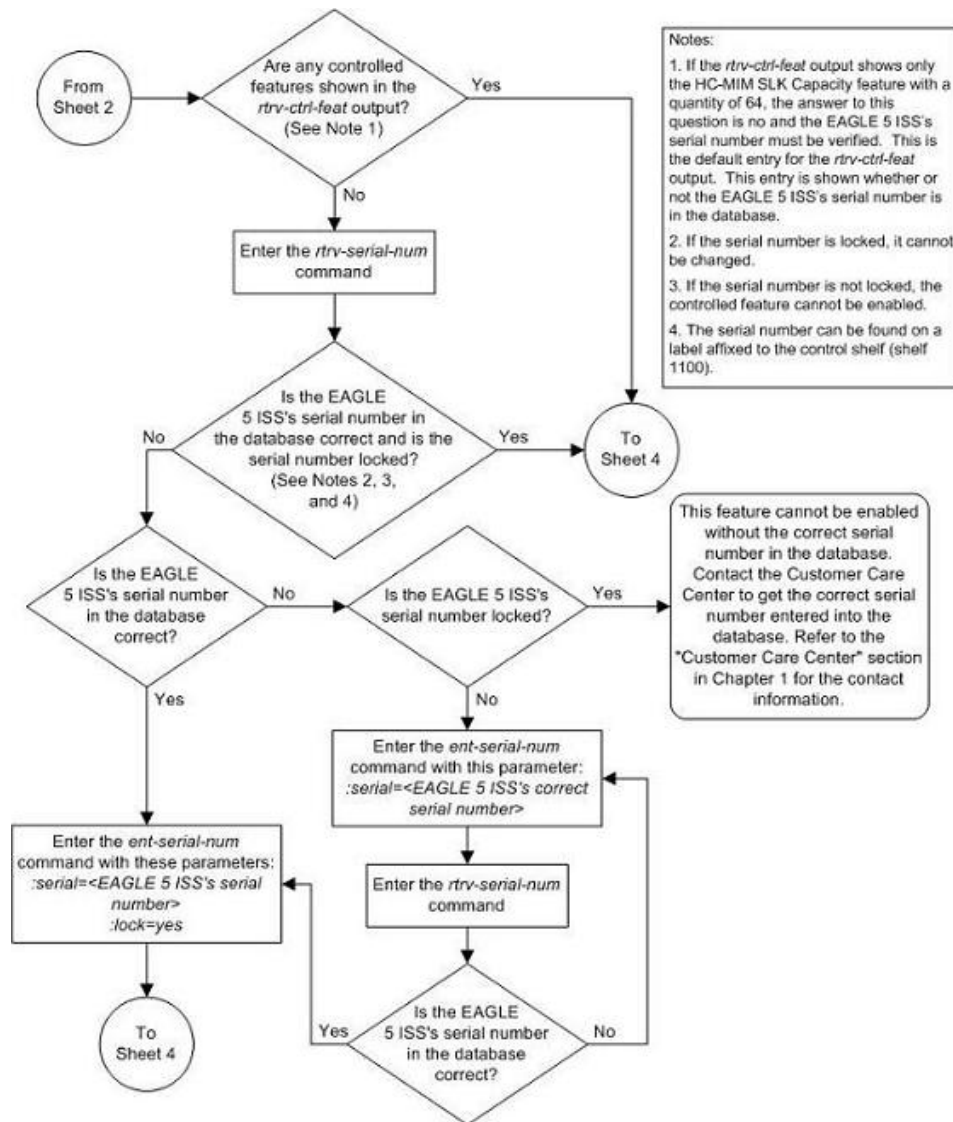
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

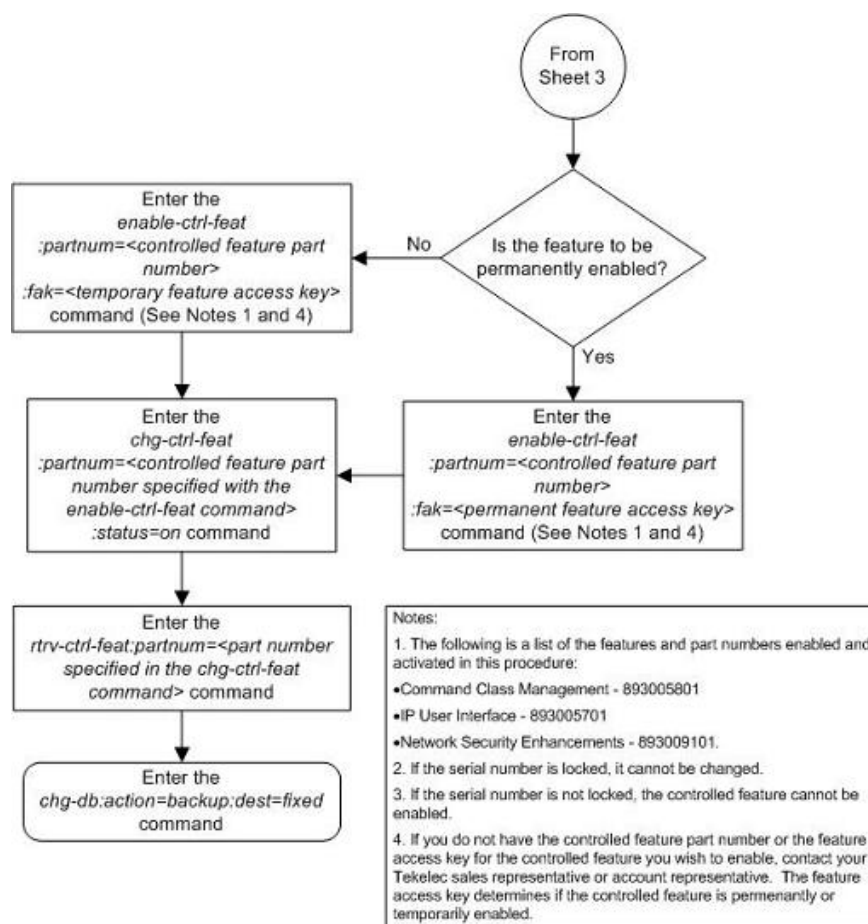
**Figure 75: Activating Controlled Features**











## Activating the Eagle OA&M IP Security Enhancement Controlled Feature

This procedure is used to enable and activate the Eagle OAM IP Security Enhancement Controlled Feature, using the feature's part number and a feature access key. This feature provides secure IP connections used by the IP User Interface (Telnet) or FTP Retrieve and Replace features.

With the IP User Interface feature, a secure shell connection is established between the EAGLE 5 ISS and the telnet terminals allowing passwords to be sent over the connection. This allows the EAGLE 5 ISS administrator to add new users to the EAGLE 5 ISS (with the `ent -user` command) and to change the passwords of existing users (with the `pid` parameter of the `chg -user` command) from a telnet terminal.

If the Eagle OA&M IP Security Enhancements is enabled and activated, the FTRA must be configured to support secure connections to the EAGLE 5 ISS. Go to the *FTP-Based Table Retrieve Application (FTRA) User Guide*, for more information on using secure connections with the FTRA.

The Measurements Platform must support secure FTP servers. Go to the [Adding an FTP Server](#) on page 511 procedure for more information on configuring secure FTP servers for the Measurements Platform.

**CAUTION:**

If Eagle OA&M IP Security Enhancements feature is activated with a temporary feature access key and that key expires, secure shell connections will become non-secure. Passwords can be transmitted on a non-secure connection, but cannot be assigned or changed. The `ent-user` command and `pid` parameter of the `chg-user` command cannot be used. File transfers using secure FTP cannot be performed unless non-secure FTP servers are available. It is recommended that the FTRA and the Measurements Platform is configured with secure and non-secure FTP servers.

To enable and activate this feature, the `enable-ctrl-feat`, `ent-serial-num`, and `chg-ctrl-feat` commands are used. For more information on these commands, go to the [Activating Controlled Features](#) on page 606 procedure, or the *Commands Manual*.

1. Display the status of the controlled features by entering the `rtrv-ctrl-feat` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name Partnum Status Quantity
Command Class Management 893005801 off ----
LNP Short Message Service 893006601 on ----
Intermed GTT Load Sharing 893006901 off ----
XGTT Table Expansion 893006101 off ----
XMAP Table Expansion 893007710 on 3000
Large System # Links 893005910 on 2000
Routesets 893006401 on 6000

The following features have been temporarily enabled:

Feature Name Partnum Status Quantity Trial Period Left
Zero entries found.

The following features have expired temporary keys:

Feature Name Partnum
Zero entries found.
```

If the `rtrv-ctrl-feat` output shows that the controlled feature is permanently enabled, and its status is `on`, no further action is necessary.

If the controlled feature is permanently enabled, and its status is `off`, skip steps 2 through 6, and go to step 7.

If the controlled feature is temporarily enabled, and you wish to permanently enable this feature, or the temporary feature access key for that feature has expired, skip steps 2 through 5, and go to step 6.

If the controlled feature is to remain temporarily enabled, and its status is `off`, skip steps 2 through 6, and go to step 7. If the feature's status is `on`, no further action is necessary. If the controlled feature is to remain temporarily enabled, and its status is `on`, no further action is necessary.

**Note:** If the `rtrv-ctrl-feat` output in step 1 shows any controlled features, skip steps 2 through 5, and go to step 6. If the `rtrv-ctrl-feat` output shows only the HC-MIMSLK Capacity feature with a quantity of 64, steps 2 through 5 must be performed.

2. Display the serial number in the database with the `rtrv-serial-num` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
System serial number = ntxxxxxxxxxxxxx

System serial number is not locked.

rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

**Note:**

If the serial number is correct and locked, skip steps 3, 4, and 5, and go to step 6. If the serial number is correct but not locked, skip steps 3 and 4, and go to step 5. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to [Customer Care Center](#) on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

3. Enter the correct serial number into the database using the `ent-serial-num` command with the `serial` parameter.

For this example, enter this command.

```
ent-serial-num:serial=<EAGLE 5 ISS's correct serial number>
```

When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM: MASP A - COMPLTD
```

4. Verify that the serial number entered into step 3 was entered correctly using the `rtrv-serial-num` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

If the serial number was not entered correctly, repeat steps 3 and 4 and re-enter the correct serial number.

5. Lock the serial number in the database by entering the `ent-serial-num` command with the serial number shown in step 2, if the serial number shown in step 2 is correct, or with the serial number shown in step 4, if the serial number was changed in step 3, and with the `lock=yes` parameter.

For this example, enter this command.

```
ent-serial-num:serial=<EAGLE 5 ISS's serial number>:lock=yes
```

When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM: MASP A - COMPLTD
```

6. Enable the controlled feature with either a permanent key or temporary key by entering the `enable-ctrl-feat` command.

For this example, enter this command.

```
enable-ctrl-feat:partnum=893400001:fak=<feature access key>
```

**Note:** The values for the feature access key (the `fak` parameter) are provided by Tekelec. If you do not have the feature access key for the SEAS over IP feature, contact your Tekelec Sales Representative or Account Representative.

When the `enable-ctrl-feat` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
ENABLE-CTRL-FEAT: MASP B - COMPLTD
```

**Note:** If the feature was temporarily enabled before being permanently enabled in step 6, and the status of the temporarily enabled feature was `on`, skip steps 7 through 12, and go to step 13.

7. Before the status of the Eagle OAM IP Security Enhancements controlled feature can be changed to `on`, all ISPMs, if present, must be taken out of service.

Before the ISPMs can be taken out of service, all telnet terminals associated with the ISPMs must be taken out of service. Enter the `rtrv-trm` command to display the terminals in the database. The following is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 39.0.0
```

| TRM | TYPE    | COMM        | FC   | TMOUT | MXINV | DURAL    |        |
|-----|---------|-------------|------|-------|-------|----------|--------|
| 1   | VT320   | 9600-7-E-1  | SW   | 30    | 5     | 99:59:59 |        |
| 2   | KSR     | 9600-7-E-1  | HW   | 30    | 5     | INDEF    |        |
| 3   | PRINTER | 4800-7-E-1  | HW   | 30    | 0     | 00:00:00 |        |
| 4   | VT320   | 2400-7-E-1  | BOTH | 30    | 5     | 00:30:00 |        |
| 5   | VT320   | 9600-7-0-1  | NONE | 30    | 5     | 00:00:30 |        |
| 6   | VT320   | 9600-7-E-2  | SW   | 30    | 9     | INDEF    |        |
| 7   | PRINTER | 9600-7-N-2  | HW   | 30    | 5     | 00:30:00 |        |
| 8   | KSR     | 19200-7-E-2 | BOTH | 30    | 5     | 00:30:00 |        |
| 9   | VT320   | 9600-7-E-1  | SW   | 30    | 7     | 00:30:00 |        |
| 10  | VT320   | 9600-7-E-1  | HW   | 30    | 5     | 00:30:00 |        |
| 11  | VT320   | 4800-7-E-1  | HW   | 30    | 5     | 00:30:00 |        |
| 12  | PRINTER | 9600-7-E-1  | HW   | 30    | 4     | 00:30:00 |        |
| 13  | VT320   | 9600-7-0-1  | NONE | 30    | 5     | 00:30:00 |        |
| 14  | VT320   | 9600-7-E-2  | SW   | 30    | 8     | 00:30:00 |        |
| 15  | VT320   | 9600-7-N-2  | HW   | 30    | 5     | 00:30:00 |        |
| 16  | VT320   | 9600-7-E-2  | BOTH | 30    | 3     | 00:30:00 |        |
|     |         |             |      |       |       |          |        |
| TRM | TYPE    | LOC         |      | TMOUT | MXINV | DURAL    | SECURE |
| 17  | TELNET  | 2107        |      | 60    | 5     | 00:30:00 |        |
| 18  | TELNET  | 2107        |      | 60    | 5     | 00:30:00 |        |
| 19  | TELNET  | 2107        |      | 60    | 5     | 00:30:00 |        |
| 20  | TELNET  | 2107        |      | 60    | 5     | 00:30:00 |        |
| 21  | TELNET  | 2107        |      | 60    | 5     | 00:30:00 |        |
| 22  | TELNET  | 2107        |      | 60    | 5     | 00:30:00 |        |
| 23  | TELNET  | 2107        |      | 60    | 5     | 00:30:00 |        |
| 24  | TELNET  | 2107        |      | 60    | 5     | 00:30:00 |        |

|    |        |      |    |   |          |
|----|--------|------|----|---|----------|
| 25 | TELNET | 2108 | 60 | 5 | 00:30:00 |
| 26 | TELNET | 2108 | 60 | 5 | 00:30:00 |
| 27 | TELNET | 2108 | 60 | 5 | 00:30:00 |
| 28 | TELNET | 2108 | 60 | 5 | 00:30:00 |
| 29 | TELNET | 2108 | 60 | 5 | 00:30:00 |
| 30 | TELNET | 2108 | 60 | 5 | 00:30:00 |
| 31 | TELNET | 2108 | 60 | 5 | 00:30:00 |
| 32 | TELNET | 2108 | 60 | 5 | 00:30:00 |
| 33 | TELNET | 2111 | 60 | 5 | 00:30:00 |
| 34 | TELNET | 2111 | 60 | 5 | 00:30:00 |
| 35 | TELNET | 2111 | 60 | 5 | 00:30:00 |
| 36 | TELNET | 2111 | 60 | 5 | 00:30:00 |
| 37 | TELNET | 2111 | 60 | 5 | 00:30:00 |
| 38 | TELNET | 2111 | 60 | 5 | 00:30:00 |
| 39 | TELNET | 2111 | 60 | 5 | 00:30:00 |
| 40 | TELNET | 2111 | 60 | 5 | 00:30:00 |

| TRM | LOGINTMR<br>(sec) | LOGOUTTMR<br>(sec) | PNGTIMEINT<br>(msec) | PNGFAILCNT |
|-----|-------------------|--------------------|----------------------|------------|
| 17  | none              | none               | none                 | 1          |
| 18  | none              | none               | none                 | 1          |
| 19  | none              | none               | none                 | 1          |
| 20  | none              | none               | none                 | 1          |
| 21  | none              | none               | none                 | 1          |
| 22  | none              | none               | none                 | 1          |
| 23  | none              | none               | none                 | 1          |
| 24  | none              | none               | none                 | 1          |
| 25  | none              | none               | none                 | 1          |
| 26  | none              | none               | none                 | 1          |
| 27  | none              | none               | none                 | 1          |
| 28  | none              | none               | none                 | 1          |
| 28  | none              | none               | none                 | 1          |
| 30  | none              | none               | none                 | 1          |
| 31  | none              | none               | none                 | 1          |
| 32  | none              | none               | none                 | 1          |
| 33  | none              | none               | none                 | 1          |
| 34  | none              | none               | none                 | 1          |
| 35  | none              | none               | none                 | 1          |
| 36  | none              | none               | none                 | 1          |
| 37  | none              | none               | none                 | 1          |
| 38  | none              | none               | none                 | 1          |
| 39  | none              | none               | none                 | 1          |
| 40  | none              | none               | none                 | 1          |

| TRM | TRAF | LINK | SA | SYS | PU | DB  | UIMRD |
|-----|------|------|----|-----|----|-----|-------|
| 1   | NO   | YES  | NO | YES | NO | YES | YES   |
| 2   | NO   | NO   | NO | NO  | NO | NO  | NO    |
| .   |      |      |    |     |    |     |       |
| .   |      |      |    |     |    |     |       |
| 39  | NO   | NO   | NO | NO  | NO | NO  | NO    |
| 40  | NO   | NO   | NO | NO  | NO | NO  | NO    |

| TRM | APP<br>SERV | APP<br>SS | CARD | CLK | DBG | GTT | GWS | MEAS | MON | MPS | SEAS | SLAN |
|-----|-------------|-----------|------|-----|-----|-----|-----|------|-----|-----|------|------|
| 1   | YES         | YES       | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| 2   | YES         | YES       | YES  | YES | YES | YES | YES | YES  | YES | YES | NO   | NO   |
| .   |             |           |      |     |     |     |     |      |     |     |      |      |
| .   |             |           |      |     |     |     |     |      |     |     |      |      |
| 39  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |
| 40  | NO          | NO        | NO   | NO  | NO  | NO  | NO  | NO   | NO  | NO  | NO   | NO   |

**Note:** If the `rtrv-trm` output in step 7 shows no telnet terminals, skip steps 8 through 11, and go to step 12.



8. Display the status of the IPSMs by entering the `rept-stat-card` command with the card location of each IPSM shown in the output of step 7.

```
rept-stat-card:loc=2107
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:43:42 GMT EAGLE5 36.0.0
CARD VERSION TYPE GPL PST SST AST
2107 114-001-000 IPSM IPS IS-NR Active -----

 ALARM STATUS = No Alarms.
 BPDCM GPL = 002-122-000
 IMT BUS A = Conn
 IMT BUS B = Conn
Command Completed.
```

```
rept-stat-card:loc=2108
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:43:42 GMT EAGLE5 36.0.0
CARD VERSION TYPE GPL PST SST AST
2108 114-001-000 IPSM IPS IS-NR Active -----

 ALARM STATUS = No Alarms.
 BPDCM GPL = 002-122-000
 IMT BUS A = Conn
 IMT BUS B = Conn
Command Completed.
```

```
rept-stat-card:loc=2111
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:43:42 GMT EAGLE5 36.0.0
CARD VERSION TYPE GPL PST SST AST
2111 114-001-000 IPSM IPS IS-NR Active -----

 ALARM STATUS = No Alarms.
 BPDCM GPL = 002-122-000
 IMT BUS A = Conn
 IMT BUS B = Conn
Command Completed.
```

If all the IPSMs are out of service, shown by the entry 00S-MT-DSBLD in the PST column, skip steps 9 and 10, and go to step 11.

9. Display the status of the terminals by entering the `rept-stat-trm` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
TRM PST SST AST
1 IS-NR Active -----
2 IS-NR Active -----
3 IS-NR Active -----
4 IS-NR Active -----
5 IS-NR Active -----
6 IS-NR Active -----
7 IS-NR Active -----
8 IS-NR Active -----
9 IS-NR Active -----
```

|    |       |        |       |
|----|-------|--------|-------|
| 10 | IS-NR | Active | ----- |
| 11 | IS-NR | Active | ----- |
| 12 | IS-NR | Active | ----- |
| 13 | IS-NR | Active | ----- |
| 14 | IS-NR | Active | ----- |
| 15 | IS-NR | Active | ----- |
| 16 | IS-NR | Active | ----- |
| 17 | IS-NR | Active | ----- |
| 18 | IS-NR | Active | ----- |
| 19 | IS-NR | Active | ----- |
| 20 | IS-NR | Active | ----- |
| 21 | IS-NR | Active | ----- |
| 22 | IS-NR | Active | ----- |
| 23 | IS-NR | Active | ----- |
| 24 | IS-NR | Active | ----- |
| 25 | IS-NR | Active | ----- |
| 26 | IS-NR | Active | ----- |
| 27 | IS-NR | Active | ----- |
| 28 | IS-NR | Active | ----- |
| 29 | IS-NR | Active | ----- |
| 30 | IS-NR | Active | ----- |
| 31 | IS-NR | Active | ----- |
| 32 | IS-NR | Active | ----- |
| 33 | IS-NR | Active | ----- |
| 34 | IS-NR | Active | ----- |
| 35 | IS-NR | Active | ----- |
| 36 | IS-NR | Active | ----- |
| 37 | IS-NR | Active | ----- |
| 38 | IS-NR | Active | ----- |
| 39 | IS-NR | Active | ----- |
| 40 | IS-NR | Active | ----- |

Command Completed.

**Note:**

If all the terminals associated with the IPSMs being taken out of service are out of service, shown by the entry 00S-MT-DSBLD in the PST column, skip step 10 and go to step 11.

10. Place the terminals associated with the IPSMs being taken out of service using the `rmv - trm` command with the terminal number shown in step 7.

For this example, enter these commands.

```
rmv-trm:trm=17
```

```
rmv-trm:trm=18
```

```
rmv-trm:trm=19
```

```
rmv-trm:trm=20
```

```
rmv-trm:trm=21
```

```
rmv-trm:trm=22
```

```
rmv-trm:trm=23
```

```
rmv-trm:trm=24
```

```
rmv-trm:trm=25
```

```
rmv-trm:trm=26
```

```
rmv-trm:trm=27
```

```
rmv-trm:trm=28
rmv-trm:trm=29
rmv-trm:trm=30
rmv-trm:trm=31
rmv-trm:trm=32
rmv-trm:trm=33
rmv-trm:trm=34
rmv-trm:trm=35
rmv-trm:trm=36
rmv-trm:trm=37
rmv-trm:trm=38
rmv-trm:trm=39
rmv-trm:trm=40
```



**CAUTION:**

Placing these terminals out of service will disable any Telnet sessions running on these terminals.

If the status of any terminals associated with the IPSM being removed shown in the PST field in step 9 is OOS-MT-DSBLD (out-of-service maintenance disabled), the terminal is already out of service and the `rmv-trm` command does not need to be executed for that terminal.

When these commands have successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Inhibit message sent to terminal

rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Command Completed.
```

11. Place the IPSMs out of service using the `rmv-card` command, specifying the card location of the IPSM.

For this example, enter this command.

```
rmv-card:loc=2107
rmv-card:loc=2108
rmv-card:loc=2111
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
Card has been inhibited.
```

12. The controlled feature enabled in step 6 must be activated using the `chg-ctrl-feat` command, specifying the controlled feature part number used in step 6 and the `status=on` parameter.

For this example, enter this command.

```
chg-ctrl-feat:partnum=893400001:status=on
```

When the `chg-ctrl-feat` command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
CHG-CTRL-FEAT: MASP B - COMPLTD
```

13. Verify the changes by entering the `rtrv-ctrl-feat` command with the part number specified in step 12.

```
rtrv-ctrl-feat:partnum=893400001
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
Feature Name Partnum Status Quantity
EAGLE OAM IP Security 893400001 on ----
```

**Note:**

If steps 7 through 11 were not performed, skip steps 14 and 15, and go to step 16.

14. Place the terminals that were taken out of service in step 10 back into service by entering the `rst-trm` command with the terminal numbers specified in step 10.

For this example, enter these commands.

```
rst-trm:trm=17
rst-trm:trm=18
rst-trm:trm=19
rst-trm:trm=20
rst-trm:trm=21
rst-trm:trm=22
rst-trm:trm=23
rst-trm:trm=24
rst-trm:trm=25
rst-trm:trm=26
rst-trm:trm=27
rst-trm:trm=28
rst-trm:trm=29
rst-trm:trm=30
rst-trm:trm=31
rst-trm:trm=32
rst-trm:trm=33
rst-trm:trm=34
```

```
rst-trm:trm=35
```

```
rst-trm:trm=36
```

```
rst-trm:trm=37
```

```
rst-trm:trm=38
```

```
rst-trm:trm=39
```

```
rst-trm:trm=40
```

15. Place the ISPMs back into service by entering the `rst-card` command with the card locations specified in step 11.

For this example, enter this command.

```
rst-card:loc=2107
```

```
rst-card:loc=2108
```

```
rst-card:loc=2111
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
Card has been allowed.
```

When the IPSMs are placed into service with the `rst-card` command, UIM 1494, SSH Host Keys Loaded, is displayed. UIM 1494 contains the public host key fingerprint which is used to establish a secure connection with an SSH client. If the secure connection is to be made with the FTRA, the public host key fingerprint displayed in UIM 1494 must be added to the `hosts.xml` file in the FTRA. Record the public host key fingerprint information displayed in UIM 1494 if a secure connection to the FTRA will be made. For more information about editing the `hosts.xml` file on the FTRA, see the *FTP-Based Table Retrieve Application (FTRA) User Guide*.

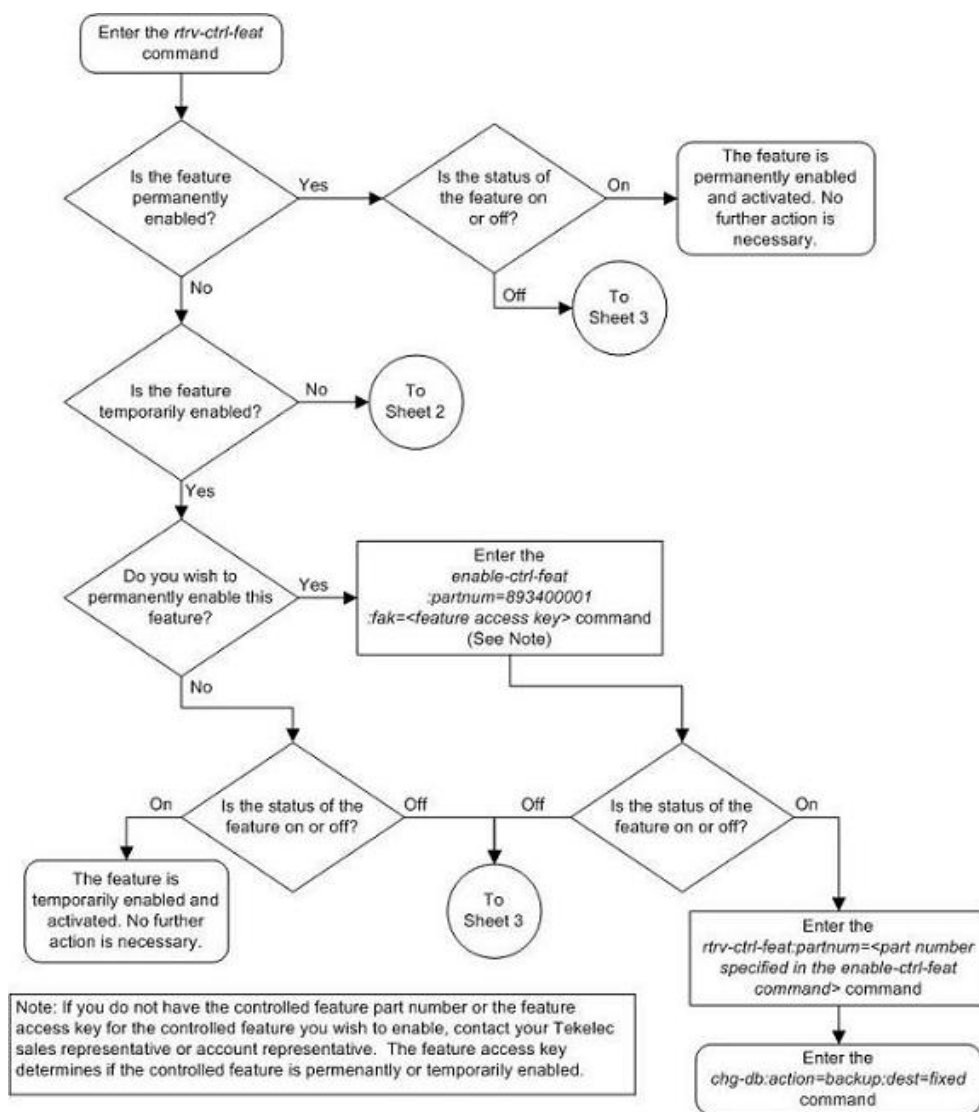
16. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

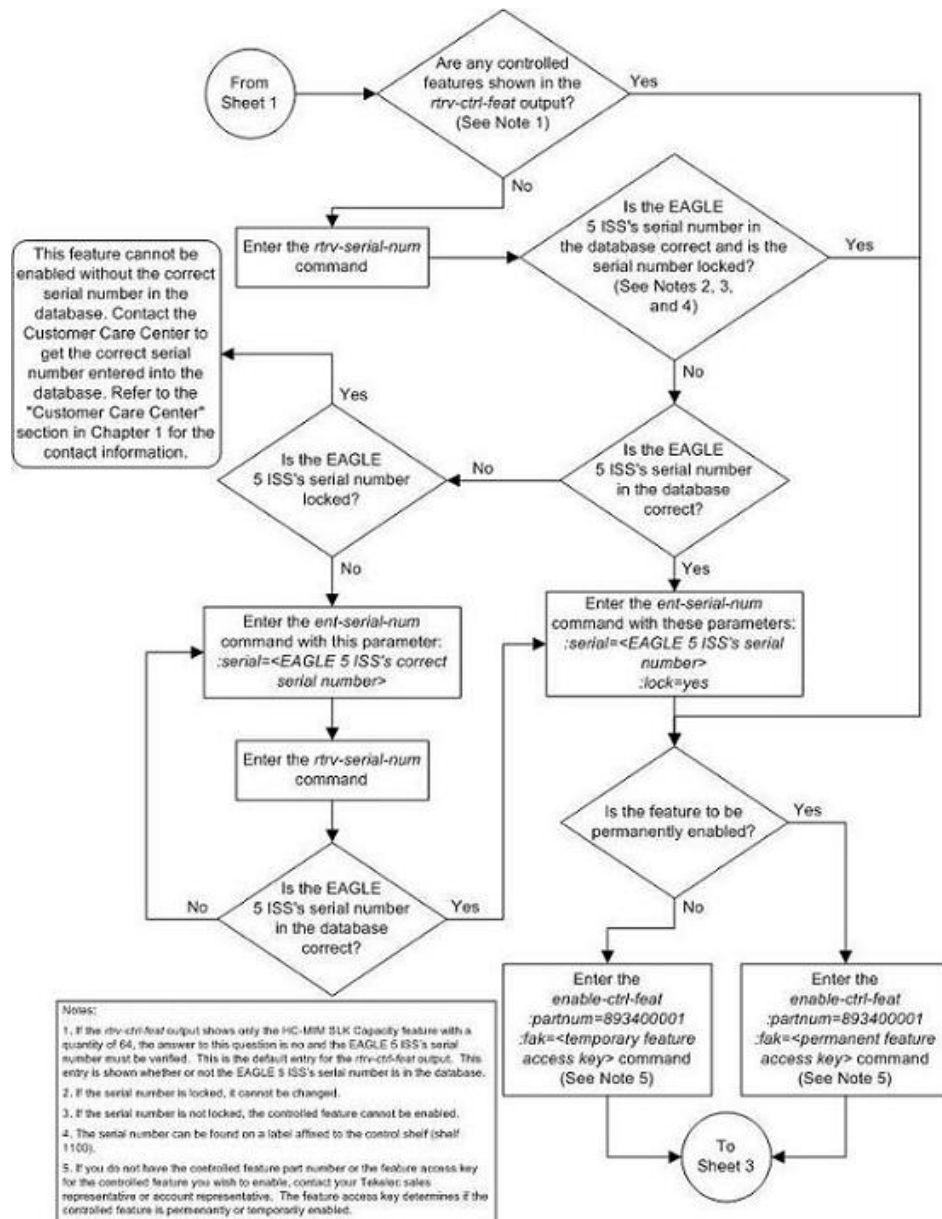
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first

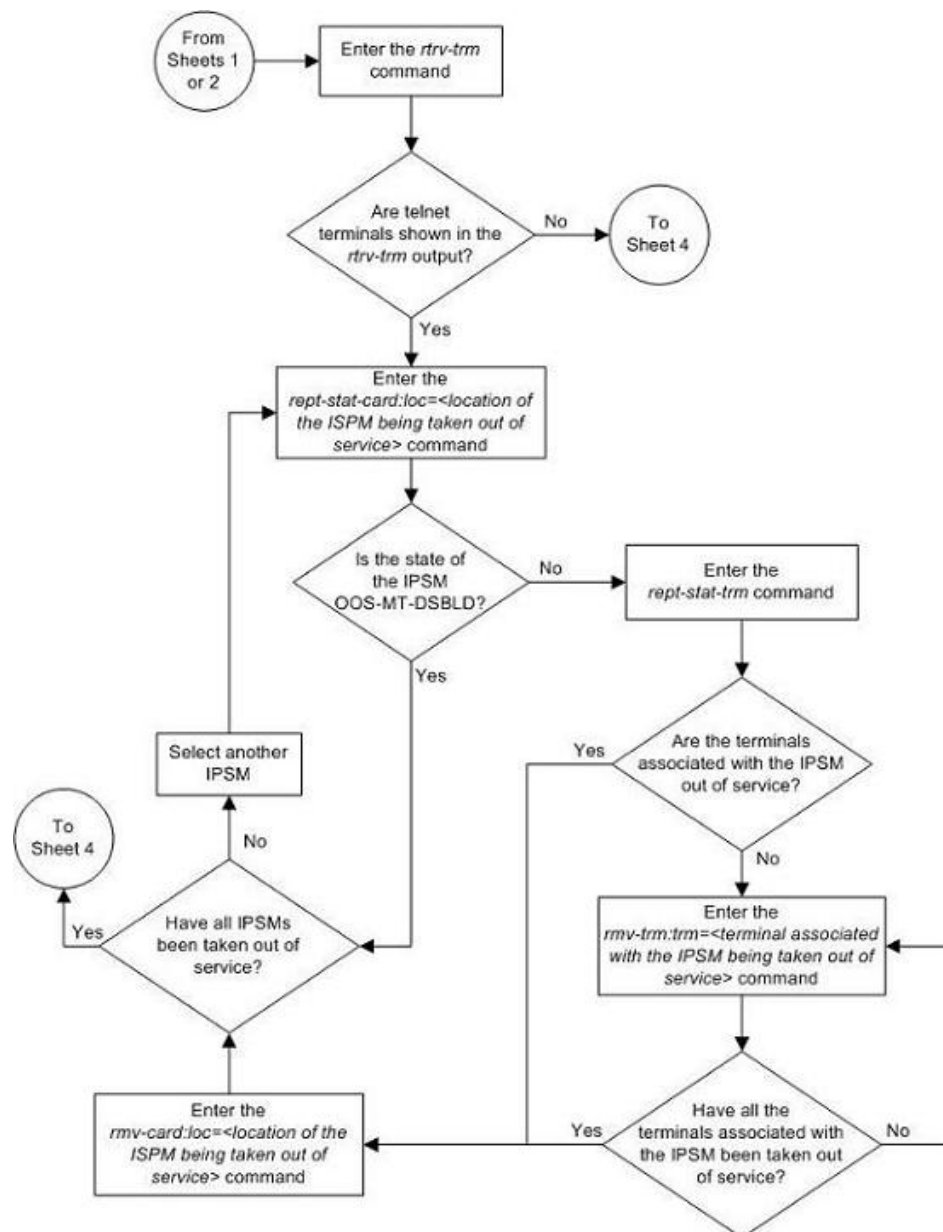
```
.

BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

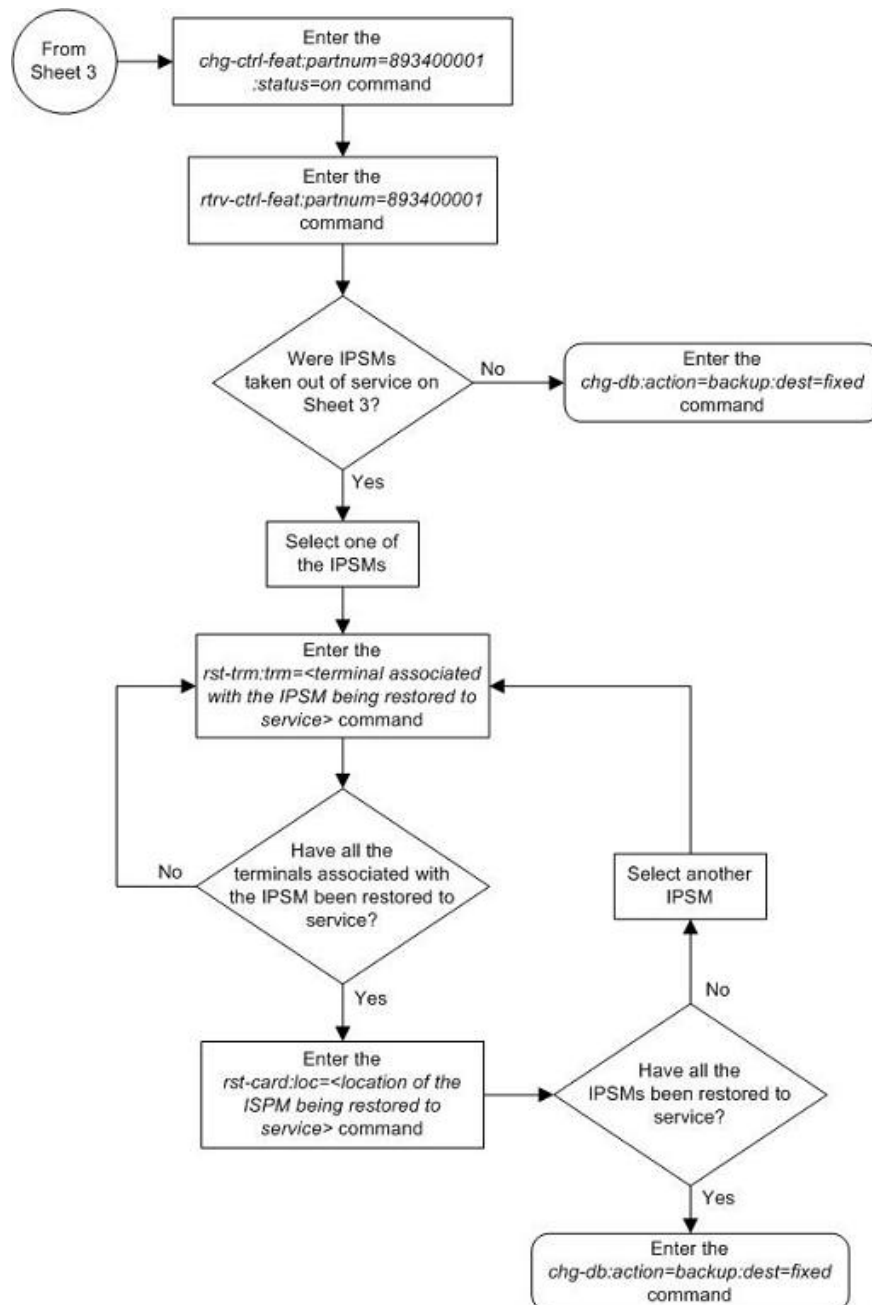
**Figure 76: Activating the Eagle OAM IP Security Enhancement Controlled Feature**











## Activating the 15 Minute Measurements Controlled Feature

This procedure is used to enable and activate the 15 Minute Measurements controlled feature, using the feature's part number and a feature access key. This feature allows EAGLE 5 ISS measurements to be collected every 15 minutes.

To enable and activate the 15 Minute Measurements controlled feature, the following requirements must be met:

- The Measurements Platform feature must be on.
- The EAGLE 5 ISS must be configured to use the Measurements Platform.
- MCPMs must be provisioned in the database, and the state of all these MCPMs must be IS-NR.

After the 15 Minute Measurements controlled feature is enabled and activated, the 15 minute measurement collection option in the measurement options table must be turned on.

To enable and activate this feature, the `enable-ctrl-feat`, `ent-serial-num`, and `chg-ctrl-feat` commands are used. For more information on these commands, go to the [Activating Controlled Features](#) on page 606 procedure, or the *Commands Manual*.

**Note:**

This feature can only be permanently enabled with the `enable-ctrl-feat` command. Once this feature is activated with the `chg-ctrl-feat` command, it cannot be deactivated with the `chg-ctrl-feat:status=off` command.

1. Display the status of the 15 Minute Measurements controlled features by entering the `rtrv-ctrl-feat` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
```

| Feature Name              | Partnum   | Status | Quantity |
|---------------------------|-----------|--------|----------|
| Command Class Management  | 893005801 | off    | ----     |
| LNP Short Message Service | 893006601 | on     | ----     |
| Intermed GTT Load Sharing | 893006901 | off    | ----     |
| XGTT Table Expansion      | 893006101 | off    | ----     |
| XMAP Table Expansion      | 893007710 | on     | 3000     |
| Large System # Links      | 893005910 | on     | 2000     |
| Routesets                 | 893006401 | on     | 6000     |
| 15 Minute Measurements    | 893012101 | off    | ----     |

```
The following features have been temporarily enabled:
```

| Feature Name        | Partnum | Status | Quantity | Trial Period Left |
|---------------------|---------|--------|----------|-------------------|
| Zero entries found. |         |        |          |                   |

```
The following features have expired temporary keys:
```

| Feature Name        | Partnum |
|---------------------|---------|
| Zero entries found. |         |

If the `rtrv-ctrl-feat` output shows that the 15 Minute Measurements controlled feature is permanently enabled, and its status is `on`, no further action is necessary.

If the 15 Minute Measurements controlled feature is permanently enabled, and its status is `off`, skip steps 2 through 6, and go to step 7.

**Note:** If the `rtrv-ctrl-feat` output in step 1 shows any controlled features, skip steps 2 through 5, and go to step 6. If the `rtrv-ctrl-feat` output shows only the HC-MIMSLK Capacity feature with a quantity of 64, steps 2 through 5 must be performed.

2. Display the serial number in the database with the `rtrv-serial-num` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
System serial number = ntxxxxxxxxxxxxxx

System serial number is not locked.

rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

**Note:** If the serial number is correct and locked, skip steps 3, 4, and 5, and go to step 6. If the serial number is correct but not locked, skip steps 3 and 4, and go to step 5. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to [Customer Care Center](#) on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

3. Enter the correct serial number into the database using the `ent - serial - num` command with the `serial` parameter.

For this example, enter this command.

```
ent - serial - num:serial=<EAGLE 5 ISS's correct serial number>
```

When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM: MASP A - COMPLTD
```

4. Verify that the serial number entered into step 3 was entered correctly using the `rtrv - serial - num` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

If the serial number was not entered correctly, repeat steps 3 and 4 and re-enter the correct serial number.

5. Lock the serial number in the database by entering the `ent - serial - num` command with the serial number shown in step 2, if the serial number shown in step 2 is correct, or with the serial number shown in step 4, if the serial number was changed in step 3, and with the `lock=yes` parameter.

For this example, enter this command.

```
ent - serial - num:serial=<EAGLE 5 ISS's serial number>:lock=yes
```

When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM: MASP A - COMPLTD
```

6. Enable the 15 Minute Measurements controlled feature by entering the `enable-ctrl-feat` command.

For this example, enter this command.

```
enable-ctrl-feat:partnum=893012101:fak=<feature access key>
```

**Note:**

The values for the feature access key (the `fak` parameter) are provided by Tekelec. If you do not have the controlled feature part number or the feature access key for the feature you wish to enable, contact your Tekelec Sales Representative or Account Representative.

When the `enable-ctrl-feat` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
ENABLE-CTRL-FEAT: MASP B - COMPLTD
```

7. Verify whether or not the Measurements Platform feature is on by entering the `rtrv-feat` command.

If the Measurements Platform feature is on, the entry `MEASPLAT = on` is shown in the `rtrv-feat` command output:

**Note:**

The `rtrv-feat` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-feat` command, see the `rtrv-feat` command description in the *Commands Manual*.

If the Measurements Platform feature is not on, perform the [Adding an MCPM](#) on page 495 procedure to add the required MCPMs and to turn the Measurements Platform feature on. After the Measurements Platform is turned on, perform the [Configuring the Measurements Platform Feature](#) on page 502 procedure to configure the Measurements Platform feature. Skip steps 8 and 9, and go to step 10.

If the Measurements Platform is on, go to step 8.

8. Verify whether or not the Measurements Platform option is enabled (`PLATFORMENABLE = on`) using the `rtrv-measopts` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
EAGLE MEASUREMENT OPTIONS LIST

PLATFORMENABLE = on
COLLECT15MIN = off
CLLIBASEDNAME = on

SYSTOTSTP =on
```

**Note:**

The `rtrv-measopts` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-measopts` command, see the `rtrv-measopts` command description in the *Commands Manual*.

If the Measurements Platform option is not enabled, perform the [Configuring the Measurements Platform Feature](#) on page 502 procedure to verify, and correct if necessary, the configuration of

the Measurements Platform feature and to enable the Measurements Platform option. Skip step 9 and go to step 10.

If the Measurements Platform option is enabled, go to step 9.

9. Display the status of the MCPMs in the database with the `rept-stat-meas` command.

This is an example of the possible output.

```
rlghncxa03w 09-02-01 16:43:42 GMT EAGLE5 40.0.0

MEAS SS PST SST AST
 IS-NR Active -----
 ALARM STATUS = No Alarms

CARD VERSION TYPE PST SST AST
2107 P 101-009-000 EDSM IS-NR Active -----
 IP Link A
2108 101-009-000 EDSM IS-NR Active -----
 IP Link A
2111 101-009-000 EDSM IS-NR Active -----
 IP Link A

CARD 2107 ALARM STATUS = No Alarms
CARD 2108 ALARM STATUS = No Alarms
CARD 2111 ALARM STATUS = No Alarms
```

If the state of all the MCPMs is IS-NR, shown in the PST column, go to step 10.

If the state of any of the MCPMs is not IS-NR, perform the [Configuring the Measurements Platform Feature](#) on page 502 procedure to verify, and correct if necessary, the configuration of the Measurements Platform feature and to bring the MCPMs back into service. Go to step 10.

10. Activate the 15 Minute Measurements controlled feature using the `chg-ctrl-feat` command, specifying the 15 Minute Measurements controlled feature part number and the `status=on` parameter.

For this example, enter this command.

```
chg-ctrl-feat:partnum=893012101:status=on
```

**Note:**

Once the 15 Minute Measurements feature is activated in this step, it cannot be deactivated with the `chg-ctrl-feat:status=off` command.

When the **chg-ctrl-feat** command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
CHG-CTRL-FEAT: MASP B - COMPLTD
```

11. Verify the changes by entering the `rtrv-ctrl-feat` command with the part number specified in step 10.

```
rtrv-ctrl-feat:partnum=893012101
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
```

| Feature Name           | Partnum   | Status | Quantity |
|------------------------|-----------|--------|----------|
| 15 Minute Measurements | 893012101 | on     | ----     |

12. Turn the 15 Minute Measurement collection option on by entering this command.

```
chg-measopts:collect15min=on
```

When the `chg-measopts` command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0
CHG-MEAS-OPTS: MASP A - COMPLTD
```

13. Verify that the 15 Minute Measurement collection option is on by entering the `rtrv-measopts` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
EAGLE MEASUREMENT OPTIONS LIST

PLATFORMENABLE = on
COLLECT15MIN = on
CLLIBASEDNAME = on

SYSTOTSTP =on
```

**Note:**

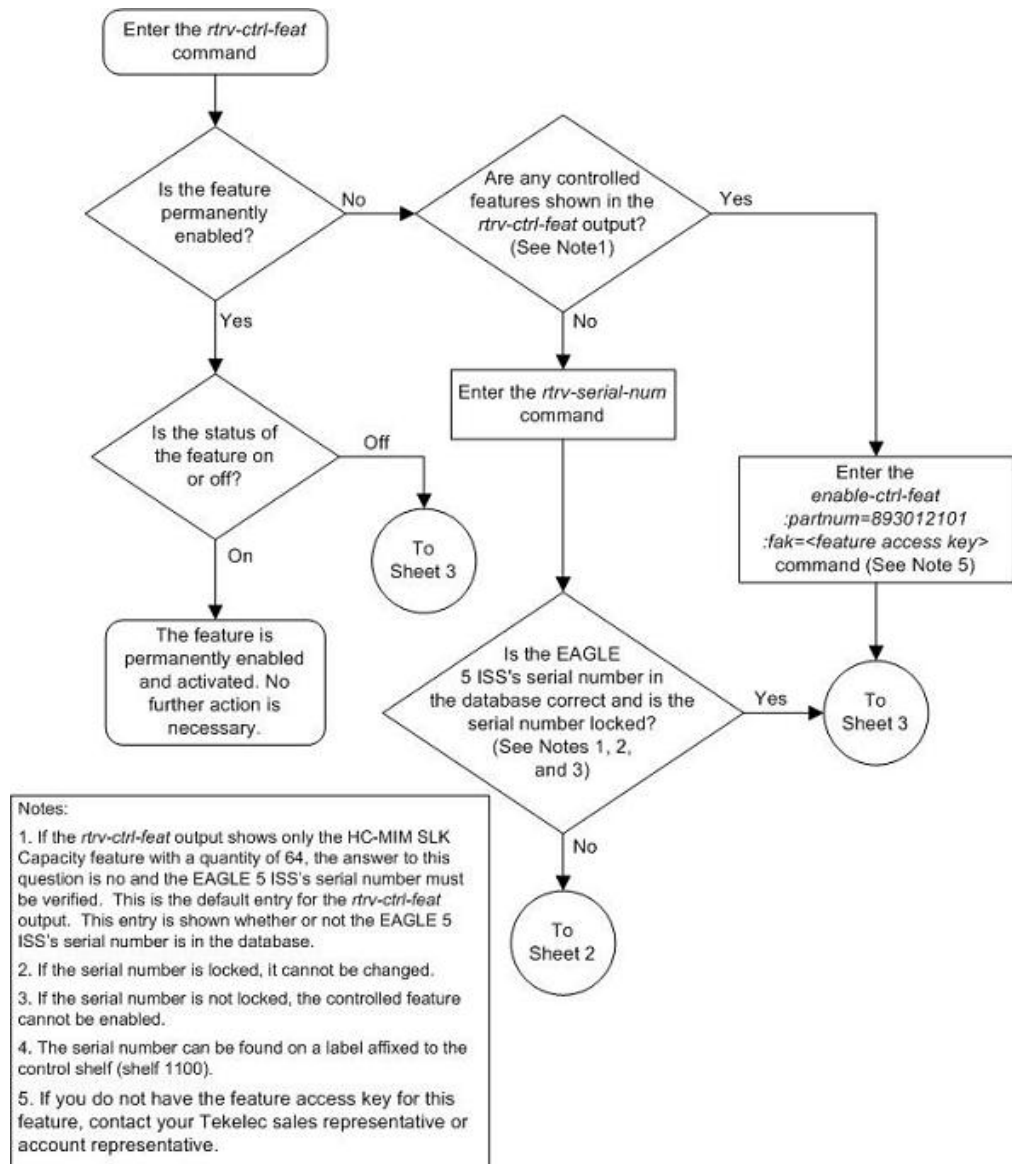
The `rtrv-measopts` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-measopts` command, see the `rtrv-measopts` command description in the *Commands Manual*.

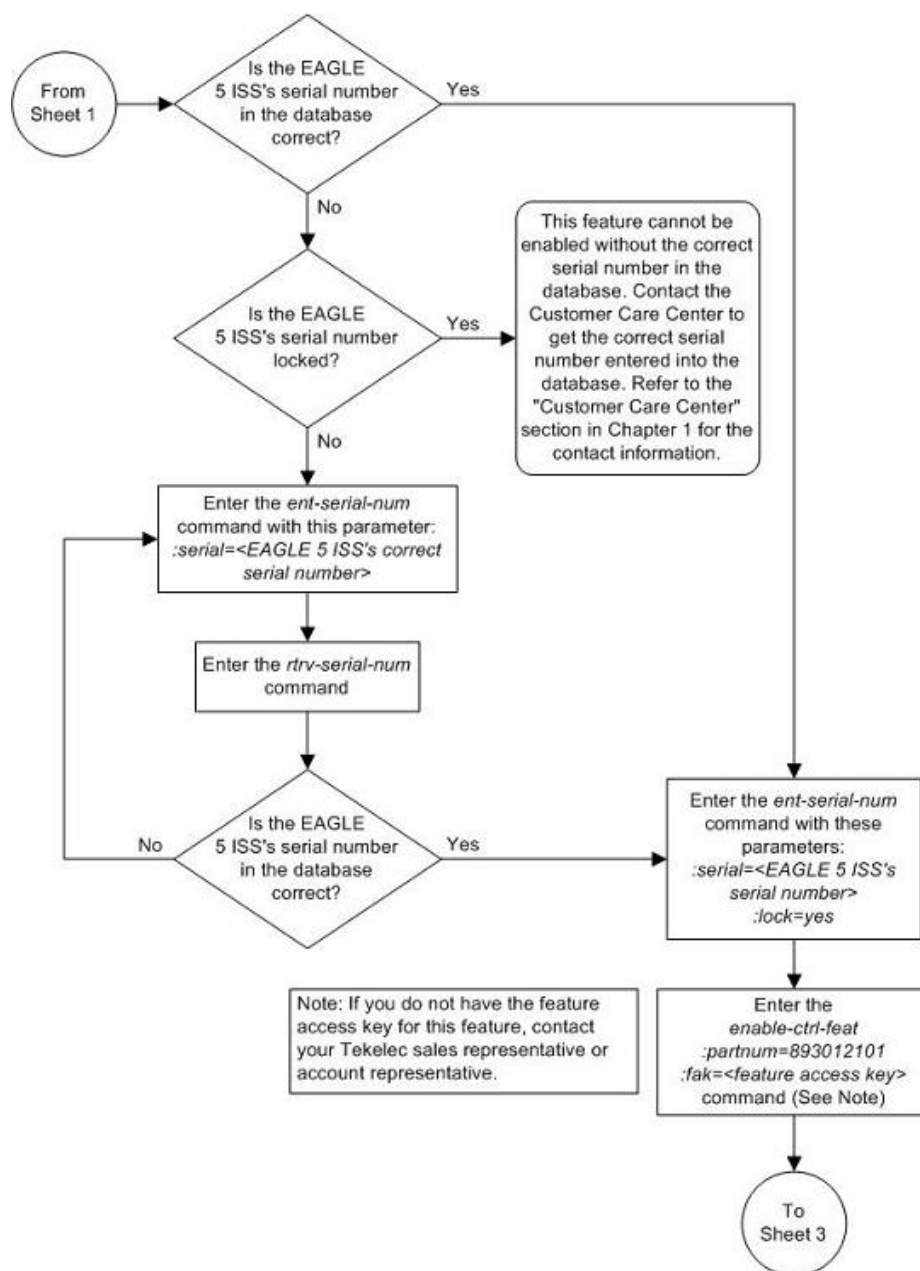
14. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

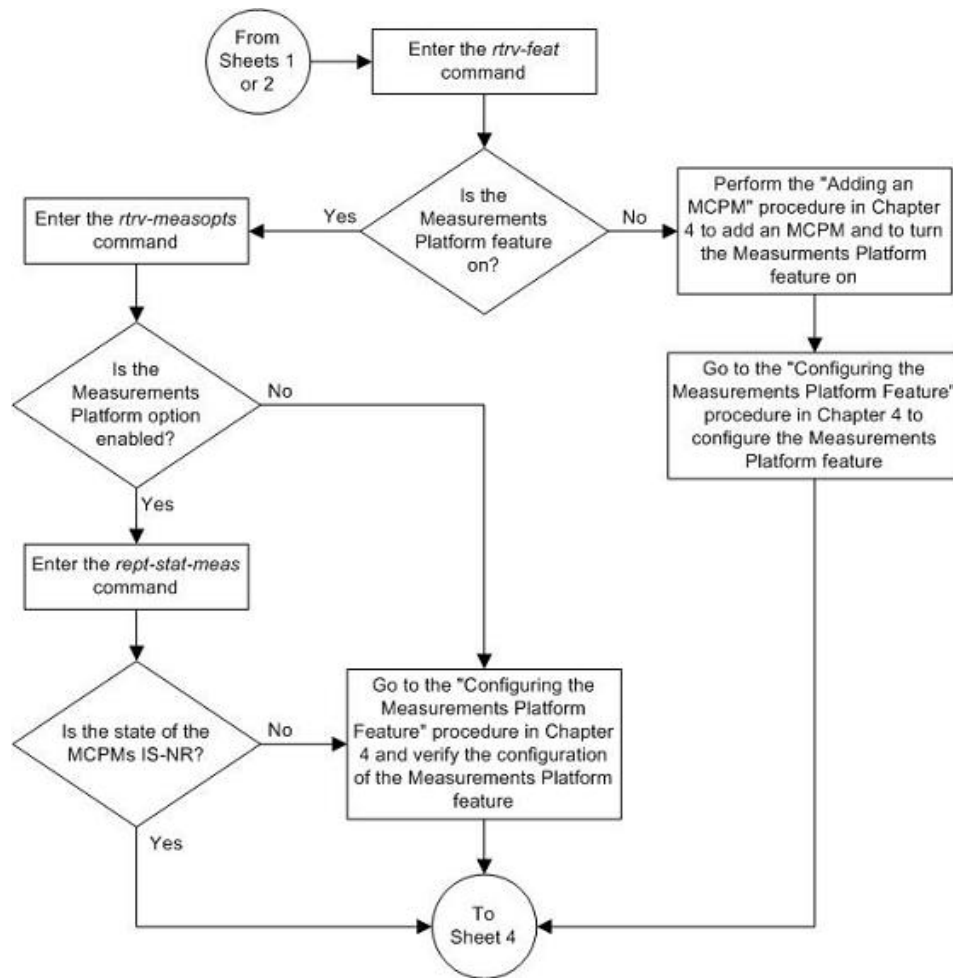
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

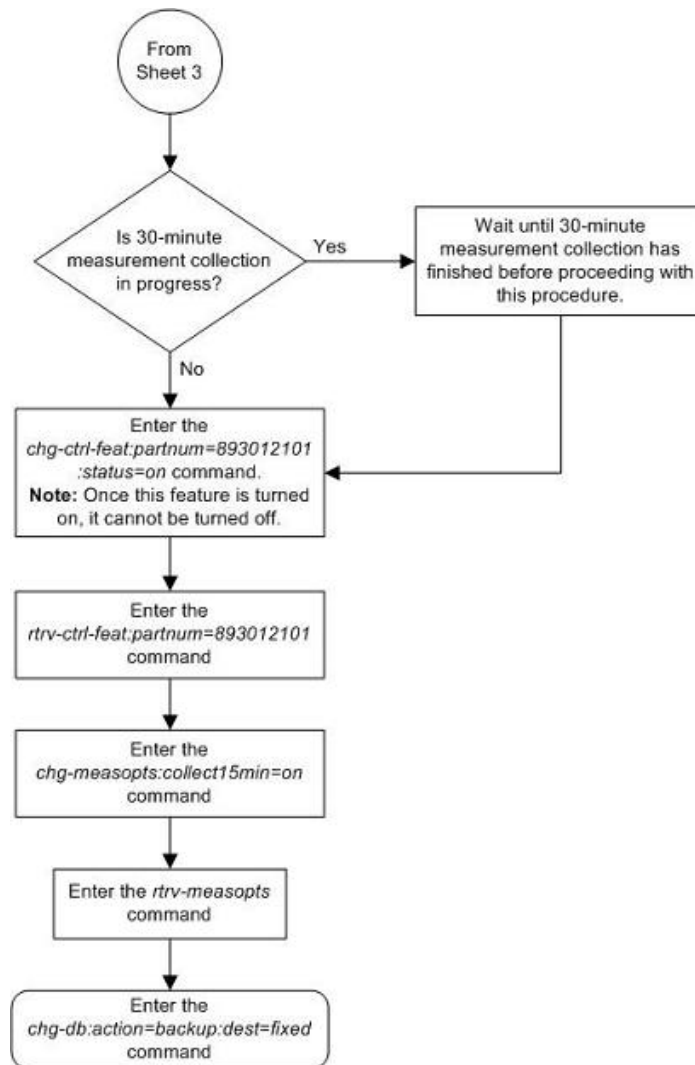
**Figure 77: Activating the 15 Minute Measurements Controlled Feature**











## Clearing a Temporary FAK Alarm

This procedure is used to clear the critical alarm, UAM 0368, generated when a temporary feature access key has expired, using the `chg-ctrl-feat` command.

The `chg-ctrl-feat` command uses the following parameters:

`:partnum` - The part number of the controlled feature that was temporarily enabled and is causing the alarm.

`:alarm=clear` - Clears UAM 0368, Temp Key(s) have expired.

The controlled feature must have been temporarily enabled and is now in danger of expiration or in an *expired* state.

1. Display the controlled feature that has the expired feature access key by entering the `rtrv-ctrl-feat:expired=yes` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:17:37 GMT EAGLE5 36.0.0
The following features have expired temporary keys:
Feature Name Part Num
Command Class Management 893005801
```

2. Clear the EAGLE 5 ISS alarm in the database by entering the `chg-ctrl-feat` command.

For example, enter this command.

```
chg-ctrl-feat:partnum=893005801:alarm=clear
```

When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0
CHG-CTRL-FEAT: MASP A - COMPLTD
```

3. Verify that the alarm has cleared in the database by using the `rtrv-ctrl-feat:expired=yes` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0
0367.0181 * SYSTEM Temp Key(s) expiration alarm cleared.
```

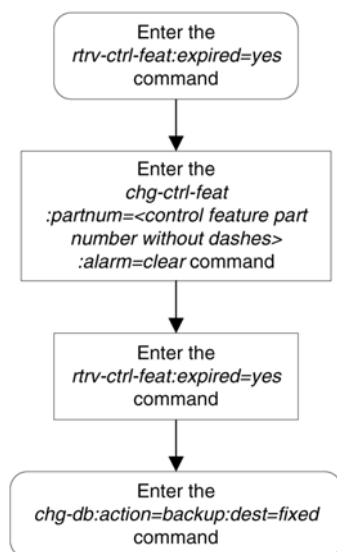
4. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first

.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 78: Clearing a Temporary FAK Alarm**



## Deactivating Controlled Features

This procedure is used to deactivate these controlled features, Command Class Management, IP User Interface, and Network Security Enhancements using the `chg-ctrl-feat` command.

The `chg-ctrl-feat` command uses the following parameters:

`:partnum` - The part number of the controlled feature being deactivated.

- Command Class Management – 893005801
- Telnet (IP User Interface) – 893005701
- Network Security Enhancements – 893009101

`:status=off` – used to deactivate the controlled feature.

The status of the controlled feature being deactivated must be `on` and is shown with the `rtrv-ctrl-feat` command.



**CAUTION**

**CAUTION:** If the SEAS over IP feature is turned off, and the OAP-based SEAS configuration has been provisioned correctly, the SEAS terminal traffic stops and OAP-based SEAS traffic starts. If the SEAS over IP feature is turned off, and the OAP-based SEAS configuration has not been provisioned, or has not been provisioned correctly, all SEAS traffic stops.



**CAUTION**

**CAUTION:** If the IP User Interface (TELNET) controlled feature is deactivated, all Telnet sessions supported by this feature will be disabled. No changes can be made to the configuration of the Telnet terminals (terminals 17 through 40). Deactivating this feature will also deactivate FTP Retrieve and Replace feature. If the SEAS over IP feature is turned on, the TELNET feature cannot be turned off.

1. Display the controlled features whose status is `on` by entering the `rtrv-ctrl-feat:status=on` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:17:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
```

| Feature Name              | Partnum   | Status | Quantity |
|---------------------------|-----------|--------|----------|
| Command Class Management  | 893005801 | on     | ----     |
| LNP Short Message Service | 893006601 | on     | ----     |
| Intermed GTT Load Sharing | 893006901 | on     | ----     |
| XMAP Table Expansion      | 893007710 | on     | 3000     |
| Large System # Links      | 893005910 | on     | 2000     |
| Routesets                 | 893006401 | on     | 6000     |
| Telnet                    | 893005701 | on     | ----     |
| Network Security Enhance  | 893009101 | on     | ----     |

The following features have been temporarily enabled:

| Feature Name        | Partnum | Status | Quantity | Trial Period Left |
|---------------------|---------|--------|----------|-------------------|
| Zero entries found. |         |        |          |                   |

The following features have expired temporary keys:

| Feature Name        | Partnum |
|---------------------|---------|
| Zero entries found. |         |

The TELNET feature cannot be turned off if the SEAS over IP feature is turned on. If the TELNET (IP User Interface) is not being turned off, go to step 2.

If the TELNET feature is being turned off, and the SEAS over IP feature is not turned on (shown in the `rtrv-ctrl-feat` output in this step by the entry `SEAS over IP`), go to step 2.

If the TELNET feature is being turned off, and the SEAS over IP feature is turned on, perform the [Turning the SEAS Over IP Feature Off](#) on page 601 procedure to turn the SEAS over IP feature off. After the SEAS over IP feature has been turned off, go to step 2.

- Deactivate the controlled feature by entering the `chg-ctrl-feat` command with the `status=off` parameter.

For example, enter this command.

```
chg-ctrl-feat:partnum=893005801:status=off
```

```
chg-ctrl-feat:partnum=893005701:status=off
```

```
chg-ctrl-feat:partnum=893009101:status=off
```

When each of these commands has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0
CHG-CTRL-FEAT: MASP A - COMPLTD
```

- Verify that the controlled feature has been deactivated by using the `rtrv-ctrl-feat:partnum=<controlled feature part number>` command.

For this example, enter these commands.

```
rtrv-ctrl-feat:partnum=893005801
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0
```

The following features have been permanently enabled:

| Feature Name             | Partnum   | Status | Quantity |
|--------------------------|-----------|--------|----------|
| Command Class Management | 893005801 | off    | ----     |

The following features have been temporarily enabled:

| Feature Name        | Partnum | Status | Quantity | Trial Period Left |
|---------------------|---------|--------|----------|-------------------|
| Zero entries found. |         |        |          |                   |

The following features have expired temporary keys:

| Feature Name        | Partnum |
|---------------------|---------|
| Zero entries found. |         |

`rtrv-ctrl-feat:partnum=893005701`

The following is an example of the possible output.

rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0  
The following features have been permanently enabled:

| Feature Name | Partnum   | Status | Quantity |
|--------------|-----------|--------|----------|
| Telnet       | 893005701 | off    | ----     |

The following features have been temporarily enabled:

| Feature Name        | Partnum | Status | Quantity | Trial Period Left |
|---------------------|---------|--------|----------|-------------------|
| Zero entries found. |         |        |          |                   |

The following features have expired temporary keys:

| Feature Name        | Partnum |
|---------------------|---------|
| Zero entries found. |         |

`rtrv-ctrl-feat:partnum=893009101`

The following is an example of the possible output.

rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0  
The following features have been permanently enabled:

| Feature Name             | Partnum   | Status | Quantity |
|--------------------------|-----------|--------|----------|
| Network Security Enhance | 893009101 | off    | ----     |

The following features have been temporarily enabled:

| Feature Name        | Partnum | Status | Quantity | Trial Period Left |
|---------------------|---------|--------|----------|-------------------|
| Zero entries found. |         |        |          |                   |

The following features have expired temporary keys:

| Feature Name        | Partnum |
|---------------------|---------|
| Zero entries found. |         |

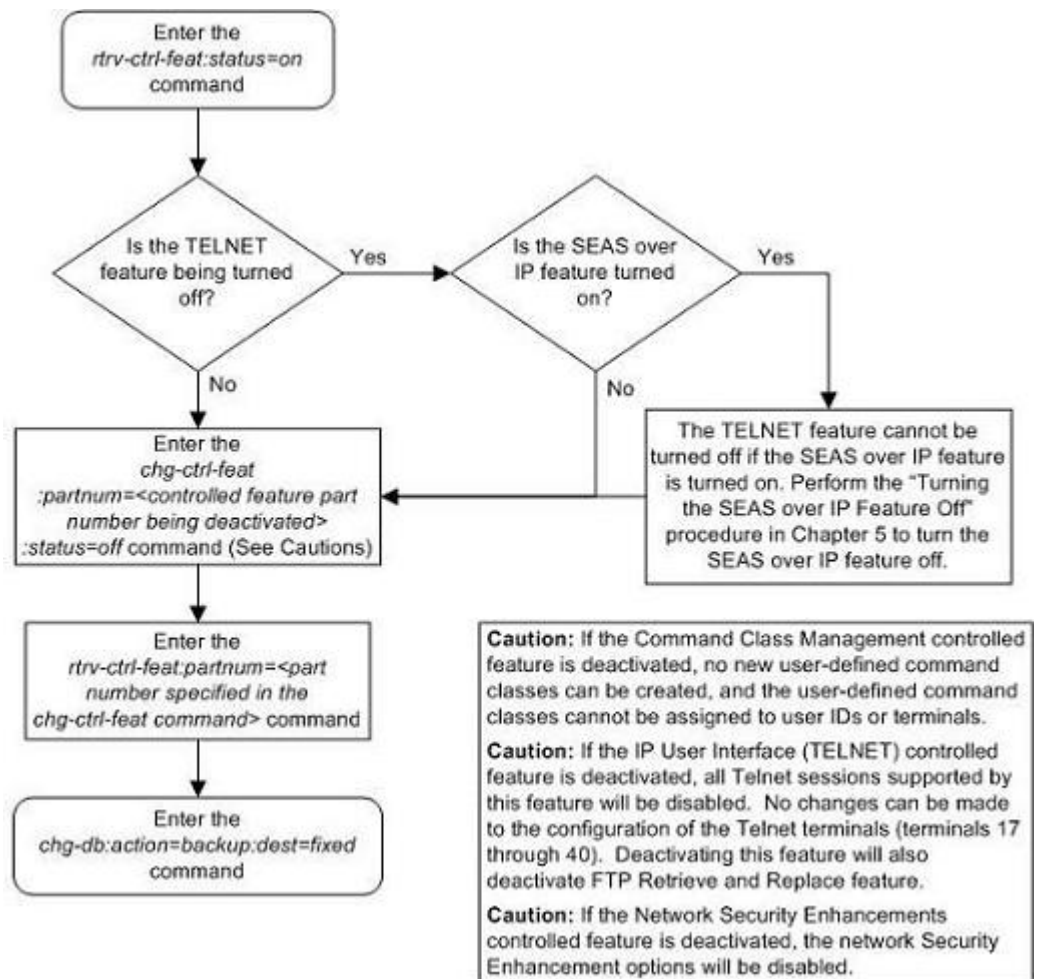
4. Backup the new changes using the `chg-db:action=backup:dest=fixedcommand`.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
```

BACKUP (FIXED) : MASP A - Backup starts on standby MASP.  
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.

Figure 79: Deactivating Controlled Features







# Appendix B

## Setting Up a Secure Telnet Connection to the EAGLE 5 ISS using PuTTY

---

### Topics:

- [\*Setting Up a Secure Telnet Connection to the EAGLE 5 ISS using PuTTY.....644\*](#)

Appendix B, Setting Up a Secure Telnet Connection to the EAGLE 5 ISS using PuTTY contains the procedure for setting a secure telnet connection to the EAGLE 5 ISS using PuTTY.

## Setting Up a Secure Telnet Connection to the EAGLE 5 ISS using PuTTY

This appendix describes the steps to set up a secure telnet connection to the EAGLE 5 ISS using the PuTTY client program.

The PuTTY client program must be installed on the machine that will be connecting to the EAGLE 5 ISS before this procedure can be performed. The PuTTY client program can be obtained at this website.

<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>

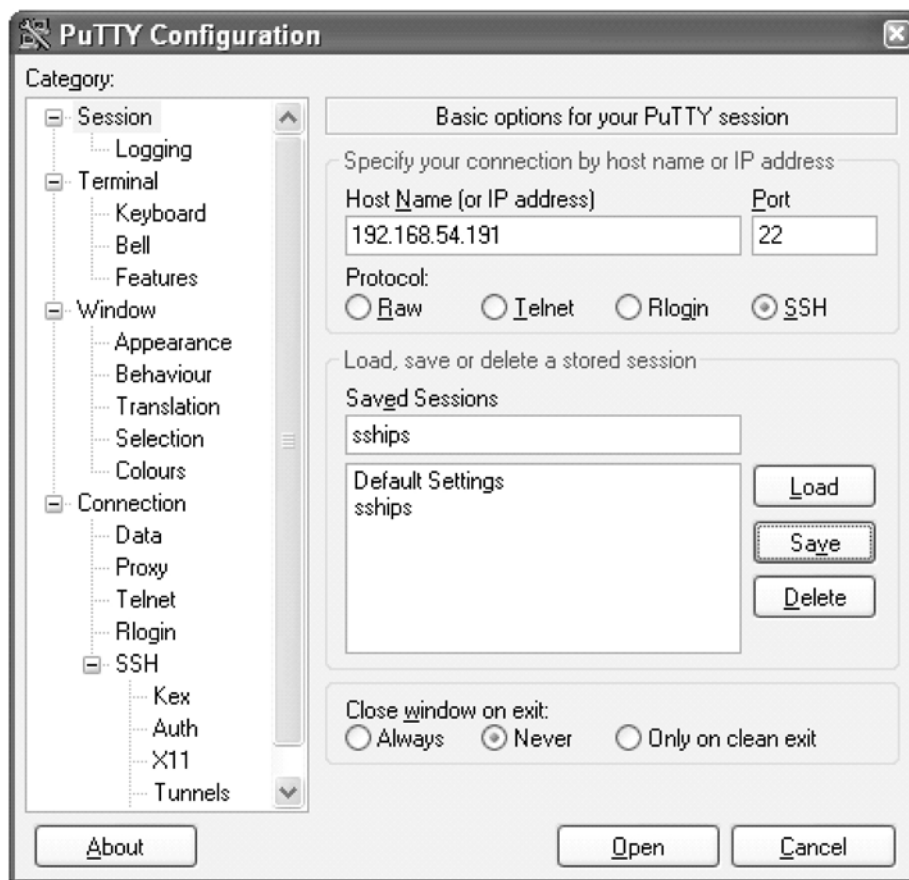
### Note:

The examples shown in this procedure are based on version 0.58 of the PuTTY client program.

1. Start the PuTTY client program by double clicking the PuTTY icon on the desktop.

The **PuTTY Configuration Window** is displayed. See *Figure 80: PuTTY Configuration Window - Initial Session Setup* on page 644.

**Figure 80: PuTTY Configuration Window - Initial Session Setup**



2. Select **Session** in the **Category** list window in the **PuTTY Configuration** window.

3. Enter the IP address of the IPSM in the EAGLE 5 ISS that is provisioned as a secure SSHD server in the **Host Name (or IP Address)** box.

Enter 22 in the **Port** box.

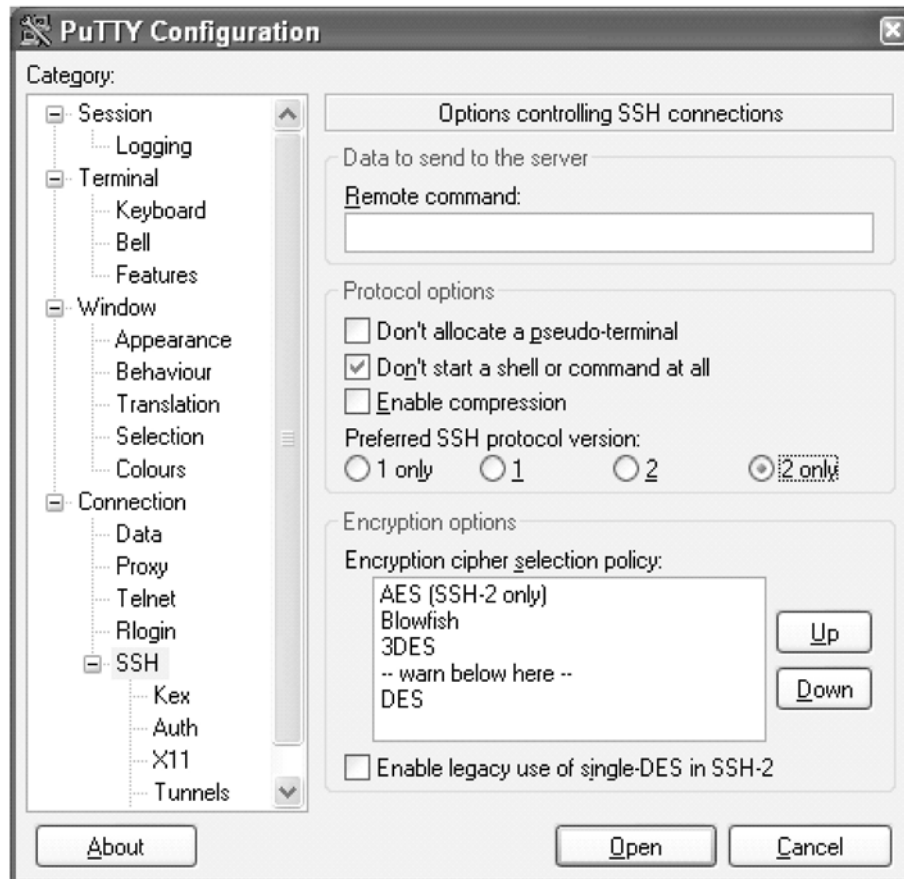
4. Click the **SSH** radio button for the **Protocol** selection.
5. Enter a name for this session in the **Saved Sessions** box, for example, `sshps`.
6. Click the **Never** radio button for the **Close window on exit** option.
7. Click the **Save** button to save this session.

For this example, clicking the **Save** button saves the `sshps` session.

8. Select **Connection > SSH** in the **Category** list window in the **PuTTY Configuration** window.

See [Figure 81: PuTTY Configuration Window - SSH Connection Setup](#) on page 645.

**Figure 81: PuTTY Configuration Window - SSH Connection Setup**



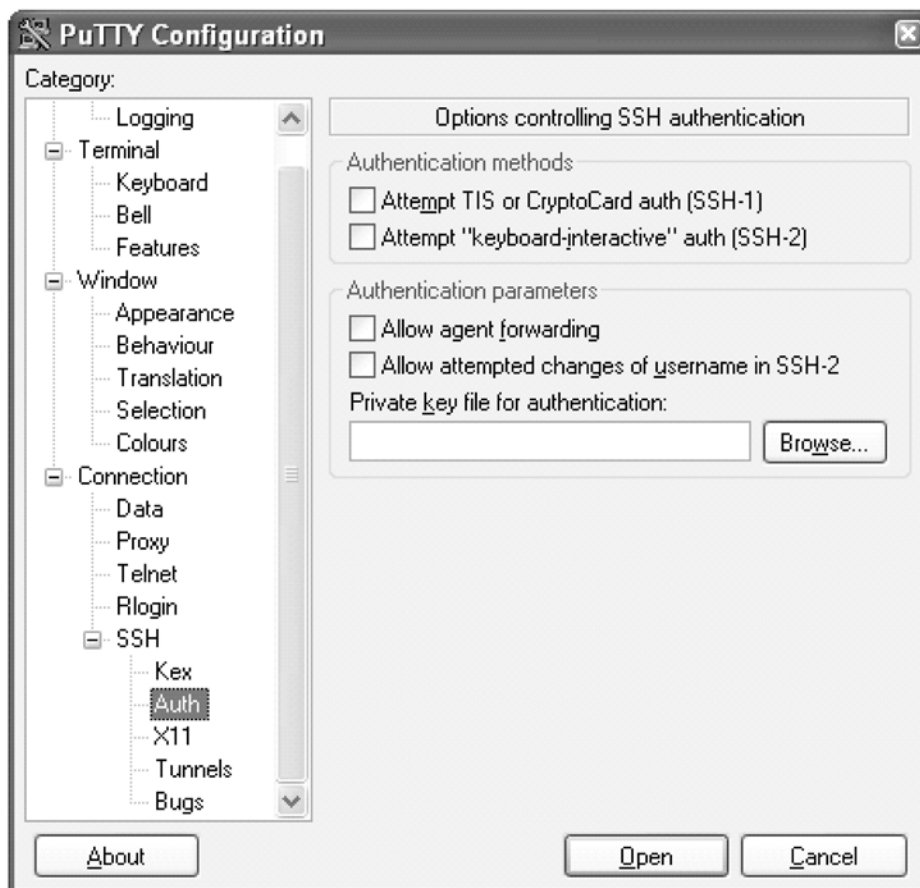
9. Click the **2 only** radio button in the **Preferred SSH protocol version:** section of the **PuTTY Configuration** window.

Click the **Don't start a shell or command at all** checkbox in the Protocol options section of the **PuTTY Configuration** window. See [Figure 81: PuTTY Configuration Window - SSH Connection Setup](#) on page 645.

10. Select **Connection > SSH > Auth.**

Verify that the checkboxes are not checked. Verify that the **Private key file for authentication** text box is empty. See [Figure 82: PuTTY Configuration Window - SSH Auth Setup](#) on page 646.

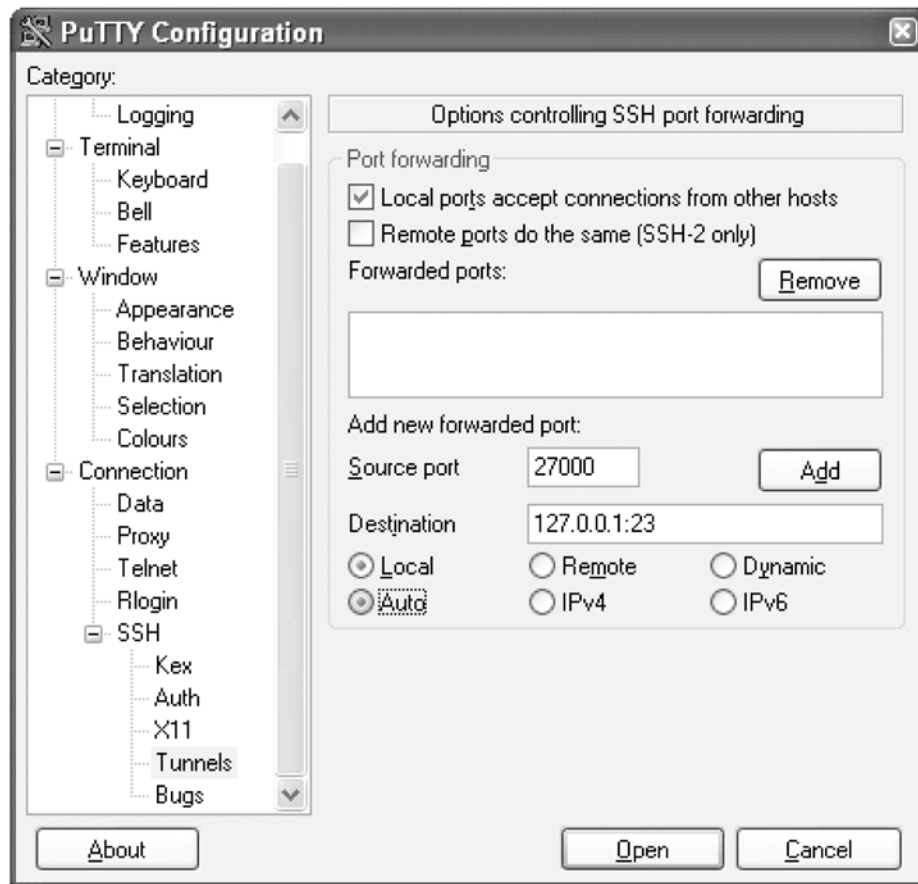
**Figure 82: PuTTY Configuration Window - SSH Auth Setup**



11. Select **Connection > SSH > Tunnels**.

Click the **Local ports accept connections from other hosts** check box in the **Port Forwarding** section of the **PuTTY Configuration** window ([Figure 83: PuTTY Configuration Window - SSH Tunnel/Port Forwarding Setup](#) on page 646), to accept connections from other hosts.

**Figure 83: PuTTY Configuration Window - SSH Tunnel/Port Forwarding Setup**



12. In the **Add new forwarded port** section of the **PuTTY Configuration** window ([Figure 83: PuTTY Configuration Window - SSH Tunnel/Port Forwarding Setup](#) on page 646), click the **Local** radio button.

Enter the forwarding port on the local machine in the **Source port** box. The **Source port** value must be greater than 1024 and must be available.

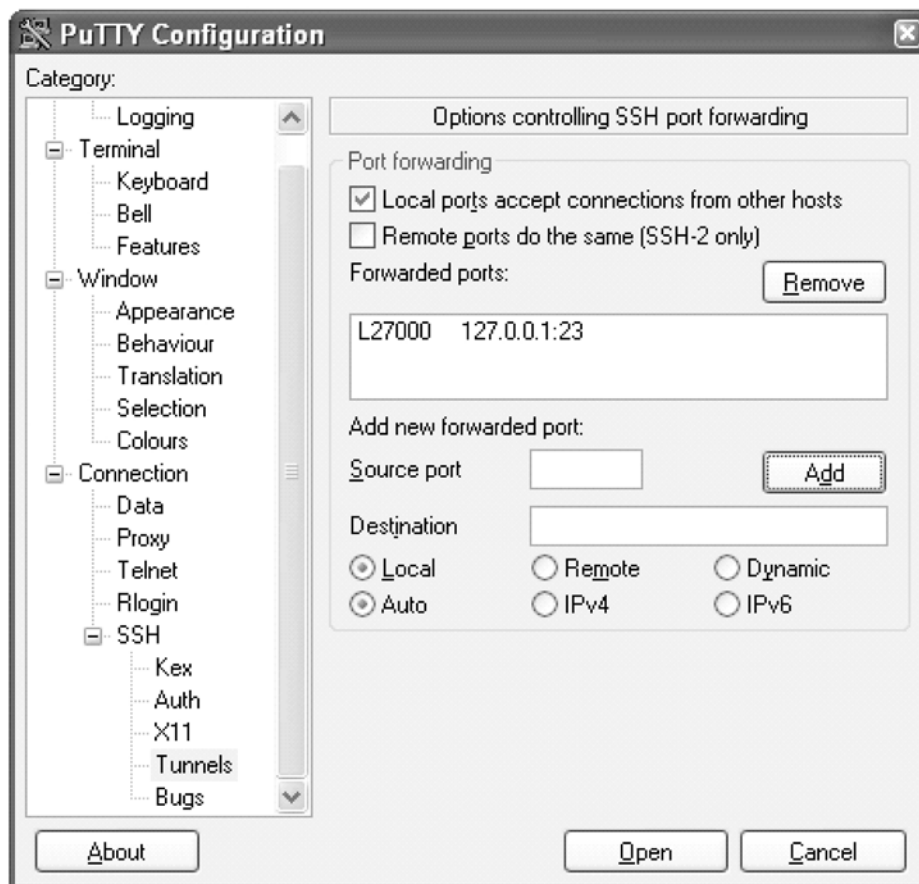
13. The **Destination** box in the **Add new forwarded port** section of the **PuTTY Configuration** window ([Figure 83: PuTTY Configuration Window - SSH Tunnel/Port Forwarding Setup](#) on page 646) contains the IP address and port of the remote machine.

The forwarding port on the local machine communicates with the IP address and port shown in the **Destination** box. Enter the IP address and port of the remote machine in the **Destination** box.

14. Click the **Add** button in the **Add new forwarded port** section of the **PuTTY Configuration** window to complete adding the forwarded port information.

The forwarding port (**Source port** value) and the IP address and port of the remote machine (the **Destination** value) appear in the **Forwarded ports:** box and the **Source port** and **Destination** boxes are empty. See [Figure 84: PuTTY Configuration Window - SSH Tunnel/Port Forwarding Completion](#) on page 647.

**Figure 84: PuTTY Configuration Window - SSH Tunnel/Port Forwarding Completion**



15. Select **Session** in the **Category** list window in the **PuTTY Configuration** window.

See [Figure 80: PuTTY Configuration Window - Initial Session Setup](#) on page 644. Click the **Save** button.

16. Click the **Open** button in the **PuTTY Configuration** window.

The dialog box shown in [Figure 85: Key Acceptance Dialog Box](#) on page 648 appears. Click the **Yes** button.

**Figure 85: Key Acceptance Dialog Box**



The Login window is displayed. See [Figure 86: PuTTY Login Window](#) on page 649.

**Figure 86: PuTTY Login Window**



17. Press the **Enter** key.

Verify that the screen is displayed as shown in [Figure 87: Logged in Window for SSH Session](#) on page 649.

**Figure 87: Logged in Window for SSH Session**



Press the **Enter** key at the prompt to allow an empty login. Minimize this window.

**Note:**

This window must not be closed until all the testing is complete and you decide to shutdown the secure shell connection to the EAGLE 5 ISS.

18. Initiate a telnet connection to the local host at the forwarded port configured in step 14 (see [Figure 84: PuTTY Configuration Window - SSH Tunnel/Port Forwarding Completion](#) on page 647).

At the prompt, enter the `telnet` command with the IP address and Source port value shown in [Figure 84: PuTTY Configuration Window - SSH Tunnel/Port Forwarding Completion](#) on page 647. For this example, enter the `telnet` command with the IP address 127.0.0.1 and the source port value 27000, as shown in [Figure 88: Telnet Connection to Local Host Forwarded Port](#) on page 650. Press the **Enter** key.

**Figure 88: Telnet Connection to Local Host Forwarded Port**



19. The connection to the EAGLE 5 ISS is established and functions as any other telnet terminal connected to the EAGLE 5 ISS.
20. Verify that all the eight telnet connections assigned to this IPSM can be opened and all EAGLE 5 ISS commands that are allowed to be executed from a telnet terminal can be executed from the telnet terminals assigned to the IPSM.

This procedure is finished.



# Appendix

# C

## Setting Up a Secure Telnet Connection to the EAGLE 5 ISS using OpenSSH

---

### Topics:

- [\*Introduction.....652\*](#)
- [\*Install the Windows OpenSSH Software.....652\*](#)
- [\*Establishing a Secure Telnet Connection to the EAGLE 5 ISS using Windows OpenSSH.....653\*](#)
- [\*Install the UNIX/Solaris OpenSSH Software.....654\*](#)
- [\*Establishing a Secure Telnet Connection to the EAGLE 5 ISS using UNIX/Solaris OpenSSH.....654\*](#)

Appendix C, Setting Up a Secure Telnet Connection to the EAGLE 5 ISS using OpenSSH describes the procedures for setting a secure telnet connection to the EAGLE 5 ISS using OpenSSH.

## Introduction

This appendix contains the procedures for establishing a secure telnet connection to the EAGLE 5 ISS using OpenSSH. Perform these procedures.

- If a Windows machine will be used to make the connection, perform these procedures.
  - [Install the Windows OpenSSH Software](#) on page 652 to install the software.
  - [Establishing a Secure Telnet Connection to the EAGLE 5 ISS using Windows OpenSSH](#) on page 653 to establish the connection.
- If a UNIX/Solaris machine will be used to make the connection, perform these procedures.
  - [Install the UNIX/Solaris OpenSSH Software](#) on page 654 to install the software.
  - [Establishing a Secure Telnet Connection to the EAGLE 5 ISS using UNIX/Solaris OpenSSH](#) on page 654 to establish the connection.

Before establishing the secure connection to the EAGLE 5 ISS, the EAGLE 5 ISS needs to be configured with these items.

- IPSMs that are in service and containing IP addresses for each IPSM. The IP router on the IPSM must be configured if the client is using a different subnet.
- The Eagle OA&M Security Enhancement feature must be enabled and turned on.

Enter these commands on the EAGLE 5 ISS to verify the IPSM and feature configuration.

- `rtrv-ip-lnk` - shows the IP addresses assigned to the IPSM, in the IPADDR column
- `rtrv-ip-card` - shows the IP router, in the DEFROUTER field.
- `rept-stat-card` - shows the state of the IPSM, in the PST column
- `pass:loc=<IPSM card Location>;cmd="netstat -a"` - shows the state of the ports 22 and 23 on the IPSM, in the (state) column. If the IPSM is configured correctly, the state of these ports will be LISTEN.
- `rtrv-ctrl-feat` - shows whether or not the Eagle OA&M Security Enhancement feature is enabled and turned on.

Perform the [Adding an IPSM](#) on page 523 procedure to configure the IP addresses of the IPSM, the IP router, and to put the IPSM in service. Perform the [Activating the Eagle OA&M IP Security Enhancement Controlled Feature](#) on page 614 to enable and turn on the Eagle OA&M Security Enhancement feature.

## Install the Windows OpenSSH Software

To install the software on a Windows machine, perform these steps.

1. Go to this site: [http://sourceforge.net/project/showfiles.php?group\\_id103886&package\\_id=111688](http://sourceforge.net/project/showfiles.php?group_id103886&package_id=111688).
2. Select the `setupssh381-20040709.zip` file and download the file.
3. After the file has been downloaded, run the installer and install all the components.

The recommended folder for installing the components is `C:\OpenSSH`.

After installing the software, this warning may be displayed.

**Figure 89: OpenSSH Warning Window**



Click the OK button and perform the [Establishing a Secure Telnet Connection to the EAGLE 5 ISS using Windows OpenSSH](#) on page 653 procedure.

## Establishing a Secure Telnet Connection to the EAGLE 5 ISS using Windows OpenSSH

To establish a secure telnet connection to the EAGLE 5 ISS using OpenSSH, perform these steps.

1. Open two DOS windows.
2. In DOS window 1, go to the `bin` folder in the folder where the OpenSSH software was installed.

For this example, enter this command

```
cd C:\OpenSSH\bin
```

3. In DOS window 1, enter the `ssh` command with these options and values.
  - `-N` - once the authentication is complete, the `ssh` program executes in the background, meaning the prompt should be returned so that the `telnet` command can be entered.
  - `-f`
  - `-L`
  - the local/forwarding port number, for this example, 23000
  - the local loopback address, 127.0.0.1:23. Port 23 is reserved for `ssh`.
  - The IP address of the EAGLE 5 ISS IPSM. For this example, 10:253.104.36.

For this example, enter this command.

```
ssh -N -f -L 23000:127.0.0.1:23 10:253.104.36
```

**Note:**

1. When issuing the `ssh` command, if the IPSM on the EAGLE 5 ISS has undergone a hard reset, the `ssh` key stored in the `local_host` file must be purged.
2. If you are making the connection to the EAGLE 5 ISS for the first time, and you are prompted to accept the `ssh` key, accept the `ssh` key and proceed to [Step 4](#) on page 653
4. In DOS window 2, enter the `telnet` command with the the local loopback address, without the port number, the local/forwarding port number specified in [Step 3](#) on page 653. for this example, enter this command.

```
telnet 127.0.0.1 23000
```

5. When the Eagle prompt is received in DOS window 2, choose an EAGLE 5 ISS terminal and login with your EAGLE 5 ISS username and password.
6. If you wish to establish another secure telnet connection to the EAGLE 5 ISS, perform [Step 3](#) on page 653 with a different local/forwarding port number, then perform [Step 4](#) on page 653 using the local/forwarding port number specified in [Step 3](#) on page 653.
7. To logout of the EAGLE 5 ISS and close the secure telnet connection, perform these actions.
  - At the EAGLE 5 ISS, enter the `logout` command.
  - Press the `Ctrl+]` keys to receive the telnet prompt.
  - Enter `quit`.
  - The prompt in DOS window 2 goes to `C:\`.
  - The `ssh` command in DOS window 1 goes away and the prompt returns to `\C:`.

## Install the UNIX/Solaris OpenSSH Software

To install the software on a UNIX/Solaris machine, perform these steps.

1. Go to this site: <http://mirror.mcs.anl.gov/openssh/portable/>.

The software can also be found at other mirror sites. These sites can be found at this address.

<http://www.openssh.org/portable.html#http>

If you wish to use one of the other mirror sites, select the closest mirror site.

2. Download this file, `openssh-3.7.1p1.tar.gz`, from the site selected in [Step 1](#) on page 654.
3. After the file has been downloaded, run the installer and install all the components.

After the software has been installed, perform the [Establishing a Secure Telnet Connection to the EAGLE 5 ISS using UNIX/Solaris OpenSSH](#) on page 654 procedure.

## Establishing a Secure Telnet Connection to the EAGLE 5 ISS using UNIX/Solaris OpenSSH

To establish a secure telnet connection to the EAGLE 5 ISS using OpenSSH from a UNIX/Solaris machine, perform these steps.

1. Open an Xterm window.
2. In the Xterm window, go to the `bin` folder in the folder where the OpenSSH software was installed.

For this example, enter this command

```
cd <install path>/OpenSSH/bin
```

3. In the Xterm window, enter the `ssh` command with these options and values.

- -N - once the authentication is complete, the ssh program executes in the background, meaning the prompt should be returned so that a second command can be entered following the semicolon.
- -f
- -L
- the local/forwarding port number, for this example, 23000
- the local loopback address, 127.0.0.1:23. Port 23 is reserved for ssh.
- The IP address of the EAGLE 5 ISS IPSM. For this example, 10:253.104.36.
- The `telnet` command with the local loopback address, without the port number, and the local/forwarding port number.

For this example, enter this command.

```
ssh -N -f -L 23000:127.0.0.1:23 10:253.104.36; telnet 127.0.0.1 23000
```

**Note:**

1. On Solaris 9 and later, SunSSH is installed. SunSSH is not compatible with the EAGLE 5 ISS secure Telnet terminals. If you have any questions about which version of ssh is being invoked, enter the Unix command `which ssh` to ensure that OpenSSH is being used instead of the Sun version.
2. When issuing the ssh command, if the IPSM on the EAGLE 5 ISS has undergone a hard reset, the ssh key stored in the `local_host` file must be purged.
3. If you are making the connection to the EAGLE 5 ISS for the first time, and you are prompted to accept the ssh key, accept the ssh key and proceed to [Step 4](#) on page 655.
4. When the Eagle prompt is received in the Xterm window, choose an EAGLE 5 ISS terminal and login with your EAGLE 5 ISS username and password.
5. To logout of the EAGLE 5 ISS and close the secure telnet connection, perform these actions.
  - At the EAGLE 5 ISS, enter the `logout` command.
  - Press the `Ctrl+]` keys to receive the telnet prompt.
  - Enter `quit`.



# Appendix D

## Remote Database Backup and Restore Procedures

---

### Topics:

- [\*Introduction.....658\*](#)
- [\*Making a Backup of the Database to the FTP Server.....659\*](#)
- [\*Restoring the Database from the FTP Server.....664\*](#)
- [\*Configuring the Archive Build ID Option....669\*](#)

Appendix D, Remote Database Backup and Restore Procedures, describes how to perform a backup of the database to the FTP server, and how to restore the database from the FTP server.

## Introduction

This appendix contains the procedures for performing a backup of the database to the FTP server and to restore a database from the FTP server using the `chg-db` command.

To backup the database, the `chg-db` command uses these parameters.

- `action=backup` - perform a backup of the database.
- `dest=server` - the destination of the backup operation, the FTP server.

To restore the database, the `chg-db` command uses these parameters.

- `action=restore` - restore a previously backed up database.
- `src=server` - the source of the database that is being restored, the FTP server.
- `file` - the name of the TAR file on the DB FTP server that contains database that is being restored.

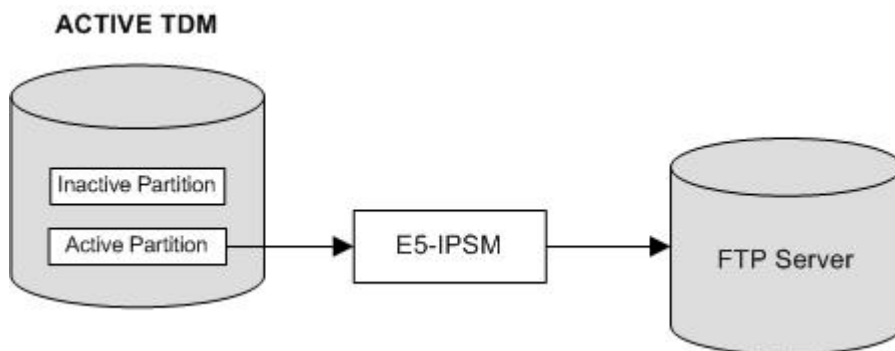
A removable cartridge is not required and cannot be used to backup the database to the FTP server or to restore a database from the FTP server.

To perform a backup of the database to the FTP server or to restore the database from the FTP server, these items must be provisioned in the database.

- An E5-IPSM - perform the procedure [Adding an IPSM](#) on page 523.
- An FTP server for the DB application - perform the procedure [Adding an FTP Server](#) on page 511.

When the database is backed up to the FTP server, the database on the active partition of the active TDM is packed and compressed into a TAR file and sends the file to the FTP server through an E5-IPSM. [Figure 90: Backup of the Database to the FTP Server](#) on page 658 illustrates this action.

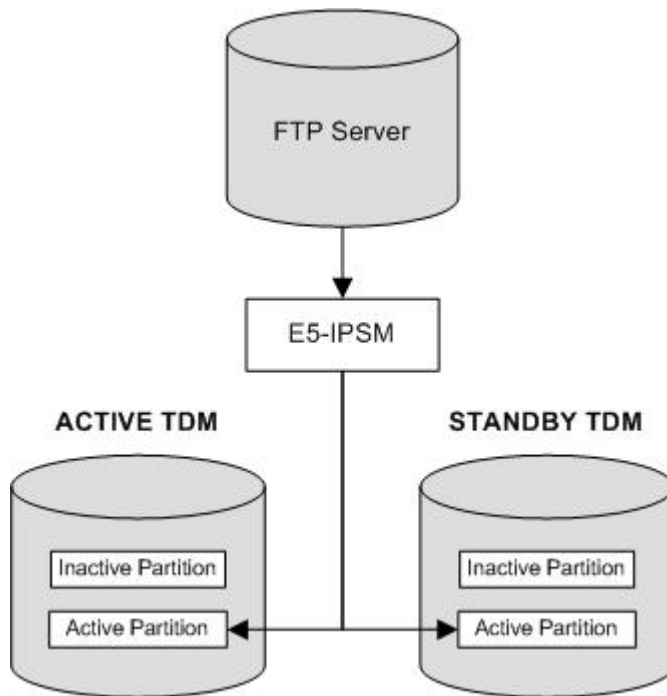
**Figure 90: Backup of the Database to the FTP Server**



When the database is restored from the FTP server, the TAR that contains the database that is being restored is retrieved by EAGLE 5 ISS through an E5-IPSM. The TAR file is unpacked and uncompressed and the database files are placed on the active partition of both TDMs. [Figure 91: Restoring the Database from the FTP Server](#) on page 658 illustrates this action. The EAGLE 5 ISS must be reinitialized to load the restored database to all the cards.

**Figure 91: Restoring the Database from the FTP Server**





To perform a backup of the database to the FTP server, perform the procedure [Making a Backup of the Database to the FTP Server](#) on page 659.

To restore the database from the FTP server, perform the procedure [Restoring the Database from the FTP Server](#) on page 664.

## Making a Backup of the Database to the FTP Server

This procedure is used to make a backup of the database to FTP server using the `chg-db` command with these parameters.

- `:action=backup`
- `:dest=server`

The database in the active partition of the active MASP (FD CRNT) must be coherent. The status of the database is shown in the `rept-stat-db` command. For more information on verifying the database, refer to [Verifying the Database](#) on page 22.

The EAGLE 5 ISS must contain at least one E5-IPSM and an FTP server for the DB application. The `rept-stat-gpl` command with the `appl=ips` parameter displays the E5-IPSMs and IPSMs that are in the database. E5-IPSMs are shown by the entry `IPSHC` in the `GPL` column of the `rept-stat-gpl` output. IPSMs are shown by the entry `IPS` in the `GPL` column of the `rept-stat-gpl` output. The `rtrv-ftp-serv` command shows the FTP servers that are configured. E5-IPSMs can be added by performing the procedure [Adding an IPSM](#) on page 523. FTP servers can be added by performing the procedure [Adding an FTP Server](#) on page 511.

When a backup of the database to the FTP server is performed, A file containing the database is created with the following naming convention is created:

"CLLI string"- "Release number string"- "yymmddhh".tar.gz

The CLLI string is the CLLI value shown in the output header. The release number string is the release number shown in the output header. If the archbldid option, shown in the `rtrv-stopts` output, is set to `yes`, the release number string contains the build number instead of the release number. If you wish to change the archbldid option, perform the procedure [Configuring the Archive Build ID Option](#) on page 669. The string yymmddhh is the year (yy - 2 digits), the month (mm), the day (dd), and the hour (hh) that the backup was performed. For example, the file name for a backup performed on September 26, 2008 at 12 noon would be:

rlghncxa03w-39.2.0-08092612.tar.gz. This file name will be needed to restore the database from the FTP server.

1. Verify that the database in the active partition of the active MASP (FD CRNT) is coherent using the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 08-09-01 16:07:48 GMT EAGLE5 39.2.0
DATABASE STATUS: >> OK <<
 TDM 1114 (STDBY) TDM 1116 (ACTV)
 C LEVEL TIME LAST BACKUP C LEVEL TIME LAST BACKUP

FD BKUP Y 35 04-06-01 10:19:18 GMT Y 35 04-06-01 10:19:18 GMT
FD CRNT Y 106
 MDAL 1117

RD BKUP - - - -
```

If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the output.

```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
 TDM 1114 (STDBY) TDM 1116 (ACTV)
 C LEVEL TIME LAST BACKUP C LEVEL TIME LAST BACKUP

FD BKUP Y 35 09-02-19 09:38:25 GMT Y 35 09-02-19 09:38:25 GMT
FD CRNT Y 106
 MCAP 1113

RD BKUP - - - -
USB BKP - - - Y 3 09-02-07 01:11:22 GMT
```

If the database is coherent, continue the procedure with [Step 2](#) on page 660.

If the database is not coherent, refer to [Verifying the Database](#) on page 22 and resolve the database problems. After the database problems have been resolved, continue the procedure with [Step 2](#) on page 660.

2. Display the E5-IPSMs that are in the database by entering this command.

`rept-stat-card:appl=ips`

This is an example of the possible output.

```
rlghncxa03w 08-09-01 16:07:48 GMT EAGLE5 39.2.0
CARD VERSION TYPE GPL PST SST AST
1111 131-010-000 IPSM IPSHC IS-NR Active -----
1317 ----- IPSM IPS OOS-MT Isolated -----
2217 131-010-000 IPSM IPS IS-NR Active -----
```

Command Completed.

E5-IPSMs are shown by the entry IPSHC in the GPL column of the `rept-stat-gpl` output. IPSMs are shown by the entry IPS in the GPL column of the `rept-stat-gpl` output. Continue the procedure by performing one of these actions.

- If no entries are shown in the `rept-stat-card` output, add an E5-IPSM by performing the procedure [Adding an IPSM](#) on page 523. After the E5-IPSM has been added, continue the procedure with [Step 3](#) on page 661.
  - If E5-IPSMs are shown in the `rept-stat-card` output, continue the procedure with [Step 3](#) on page 661.
  - If only IPSMs are shown in the `rept-stat-card` output, continue the procedure by performing one of these actions.
    - If two or less entries are shown in this step, add the E5-IPSM by performing the procedure [Adding an IPSM](#) on page 523. After the E5-IPSM has been added, continue the procedure with [Step 3](#) on page 661.
    - If three entries are shown in this step, no more IPSMs or E5-IPSMs can be added. A IPSM must be removed so the E5-IPSM can be added. perform the procedure [Removing an IPSM](#) on page 538 to remove the IPSM. Add the E5-IPSM by performing the procedure [Adding an IPSM](#) on page 523. After the E5-IPSM has been added, continue the procedure with [Step 3](#) on page 661.
3. Display the FTP servers that are provisioned in the database by entering the `rtrv-ftp-serv` command. This is an example of the possible output.

```
rlghncxa03w 08-09-01 16:07:48 GMT EAGLE5 39.2.0
```

| APP  | IPADDR         | LOGIN    | PRI0 | PATH        |
|------|----------------|----------|------|-------------|
| db   | 10.20.50.102   | dbuser1  | 1    | ~/eagle     |
| dist | 100.200.50.102 | dbuser1  | 1    | ~/eagle     |
| meas | 1.255.0.100    | ftpmeas3 | 3    | ~meas\local |

If the entry `db` is shown in the APP column, continue the procedure with [Step 4](#) on page 661.

If the entry `db` is not shown in the APP column, perform the procedure [Adding an FTP Server](#) on page 511 to add the FTP server. After the FTP server has been added, continue the procedure with [Step 4](#) on page 661.

4. Enter the `chg-db:action=backup:dest=server` command.

During command execution, these messages should appear.

```
BACKUP (SERVER): MASP A - Backup starts on active MASP.
BACKUP (SERVER) : Copy Database to card memory for processing.
BACKUP (SERVER) : Compress Database before archiving.
BACKUP (SERVER) : Send database archive to server.
BACKUP (SERVER): MASP A - Backup to remote server complete.
```

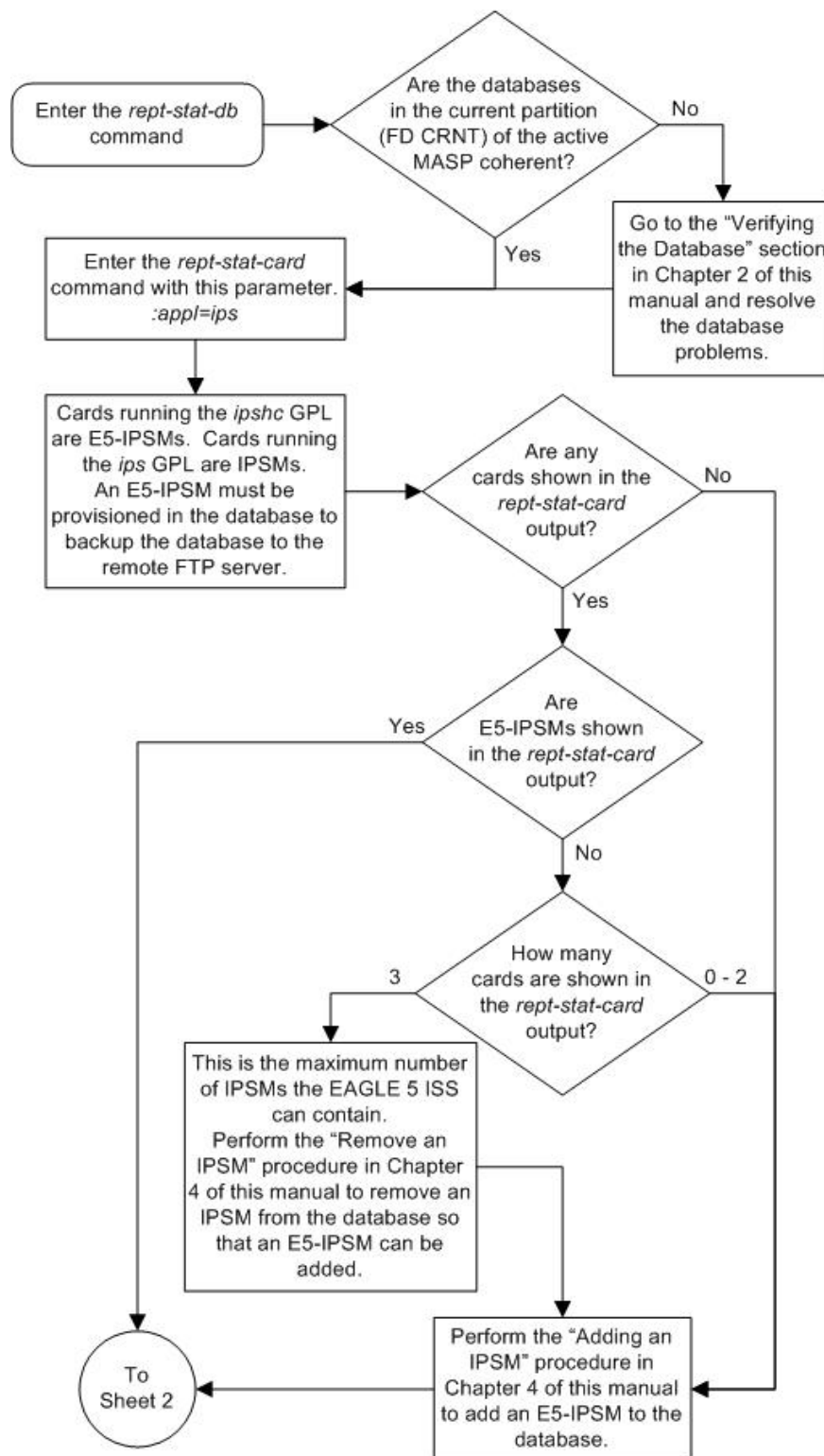
A file with the following naming convention is created.

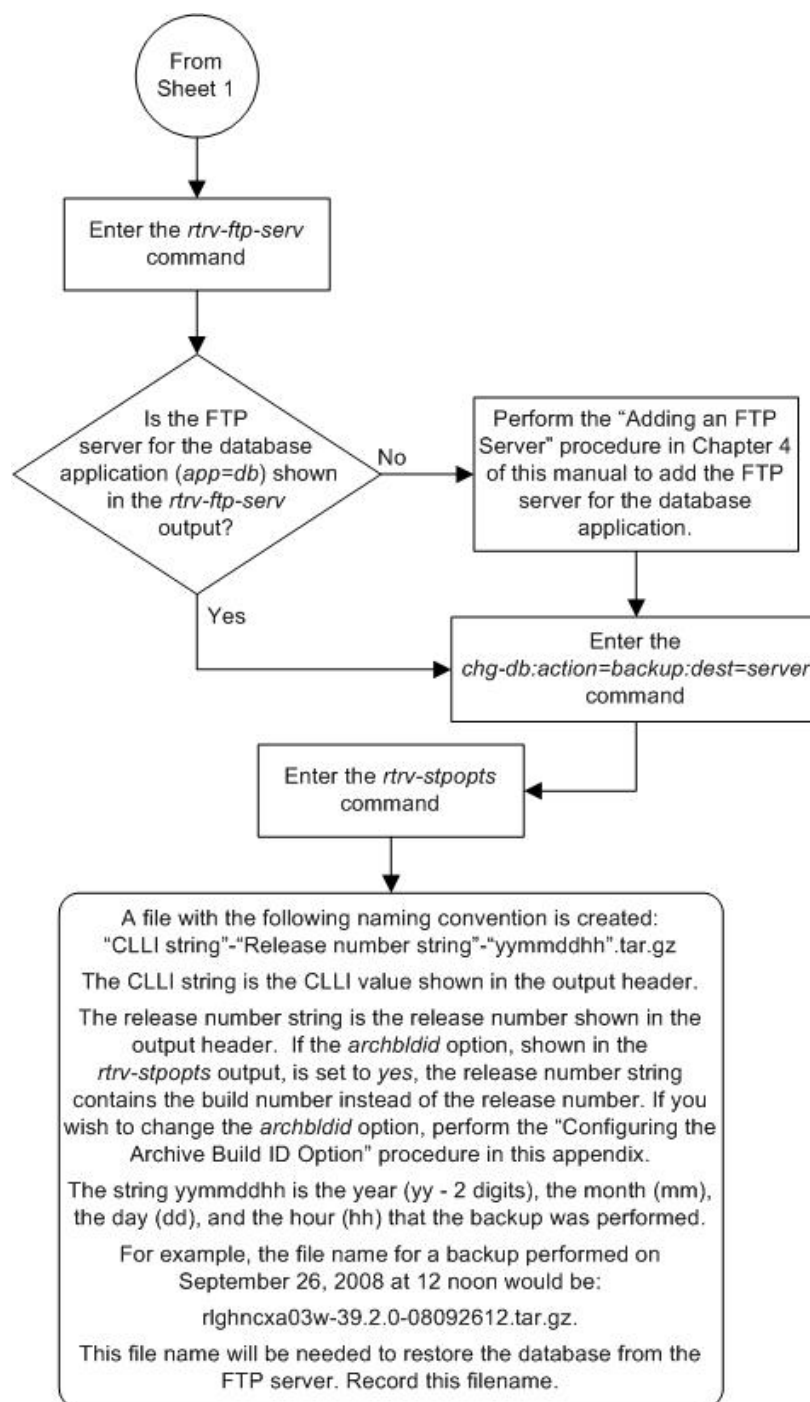
"CLLI string"- "Release number string"- "yymmddhh".tar.gz

The CLI string is the CLI value shown in the output header. The release number string is the release number shown in the output header. If the `archbldid` option, shown in the `rtrv-stpopts` output, is set to yes, the release number string contains the build number

instead of the release number. If you wish to change the `archbldid` option, perform the procedure [Configuring the Archive Build ID Option](#) on page 669. The string `yymmddhh` is the year (yy - 2 digits), the month (mm), the day (dd), and the hour (hh) that the backup was performed. For example, the file name for a backup performed on September 26, 2008 at 12 noon would be: `rlghncxa03w-39.2.0-08092612.tar.gz`. This file name will be needed to restore the database from the FTP server. Record this filename.

**Figure 92: Making a Backup of the Database to the FTP Server**





## Restoring the Database from the FTP Server

This procedure is used to restore the database from the FTP server using the *chg-db* command with these parameters.

- `action=restore`
- `src=server`
- `file` - the name of the TAR file on the FTP server that contains database that is being restored.

The EAGLE 5 ISS must contain at least one E5-IPSM and an FTP server for the DB application. The `rept-stat-gpl` command with the `appl=ips` parameter displays the E5-IPSMs and IPSMs that are in the database. E5-IPSMs are shown by the entry `IPSHC` in the `GPL` column of the `rept-stat-gpl` output. IPSMs are shown by the entry `IPS` in the `GPL` column of the `rept-stat-gpl` output. The `rtrv-ftp-serv` command shows the FTP servers that are configured. E5-IPSMs can be added by performing the procedure [Adding an IPSM](#) on page 523. FTP servers can be added by performing the procedure [Adding an FTP Server](#) on page 511.

The EAGLE 5 ISS must contain at least one E5-IPSM and an FTP server for the DB application. The `rtrv-stp` command with the `gpl=ipshc` parameter displays the E5-IPSMs. The `rtrv-ftp-serv` command shows the FTP servers that are configured. E5-IPSMs can be added by performing the procedure [Adding an IPSM](#) on page 523. FTP servers can be added by performing the procedure [Adding an FTP Server](#) on page 511.

**CAUTION**

**CAUTION:** Using the `action=restore` parameter with the `chg-db` command is an emergency recovery procedure, and requires the `init-sys` command to download the restored database to all the cards in the EAGLE 5 ISS.

1. Display the E5-IPSMs that are in the database by entering this command.

```
rept-stat-card:appl=ips
```

This is an example of the possible output.

| rlghncxa03w | 08-09-01    | 16:07:48 | GMT   | EAGLE5 | 39.2.0   |       |  |
|-------------|-------------|----------|-------|--------|----------|-------|--|
| CARD        | VERSION     | TYPE     | GPL   | PST    | SST      | AST   |  |
| 1111        | 131-010-000 | IPSM     | IPSHC | IS-NR  | Active   | ----- |  |
| 1317        | -----       | IPSM     | IPS   | 00S-MT | Isolated | ----- |  |
| 2217        | 131-010-000 | IPSM     | IPS   | IS-NR  | Active   | ----- |  |

Command Completed.

E5-IPSMs are shown by the entry `IPSHC` in the `GPL` column of the `rept-stat-gpl` output. IPSMs are shown by the entry `IPS` in the `GPL` column of the `rept-stat-gpl` output. Continue the procedure by performing one of these actions.

- If no entries are shown in the `rept-stat-card` output, add an E5-IPSM by performing the procedure [Adding an IPSM](#) on page 523. After the E5-IPSM has been added, continue the procedure with [Step 2](#) on page 666.
- If E5-IPSMs are shown in the `rept-stat-card` output, continue the procedure with [Step 2](#) on page 666.
- If only IPSMs are shown in the `rept-stat-card` output, continue the procedure by performing one of these actions.
  - If two or less entries are shown in this step, add the E5-IPSM by performing the procedure [Adding an IPSM](#) on page 523. After the E5-IPSM has been added, continue the procedure with [Step 2](#) on page 666.
  - If three entries are shown in this step, no more IPSMs or E5-IPSMs can be added. A IPSM must be removed so the E5-IPSM can be added. perform the procedure [Removing an](#)

[IPSM](#) on page 538 to remove the IPSM. Add the E5-IPSM by performing the procedure [Adding an IPSM](#) on page 523 After the E5-IPSM has been added, continue the procedure with [Step 2](#) on page 666.

2. Display the FTP servers that are provisioned in the database by entering the `rtrv-ftp-serv` command. This is an example of the possible output.

```
rlghncxa03w 08-09-01 16:07:48 GMT EAGLE5 39.2.0
```

| APP  | IPADDR         | LOGIN    | PRI0 | PATH        |
|------|----------------|----------|------|-------------|
| db   | 10.20.50.102   | dbuser1  | 1    | ~/eagle     |
| dist | 100.200.50.102 | dbuser1  | 1    | ~/eagle     |
| meas | 1.255.0.100    | ftpmeas3 | 3    | ~meas\local |

If the entry `db` is shown in the APP column, continue the procedure with [Step 3](#) on page 666.

If the entry `db` is not shown in the APP column, perform the procedure [Adding an FTP Server](#) on page 511 to add the FTP server. After the FTP server has been added, continue the procedure with [Step 3](#) on page 666.

3. Enter the `chg-db` command with the `action=restore`, `src=server`, and `file` parameters. For this example, enter this command.

```
chg-db:action=restore:src=server:file="rlghncxa03w-39.2.0-08092612.tar.gz"
```

During command execution, these messages appear (the active MASP is displayed first).

```
RESTORE (SERVER) : Retrieve database archive from server.
RESTORE (SERVER) : Validate database archive.
RESTORE (SERVER) : Restore starts on active MASP.
RESTORE (SERVER) : Restore from server on active MASP complete.
RESTORE (SERVER) : Restore starts on standby MASP.
RESTORE (SERVER) : Restore from server on standby MASP complete.
RESTORE (SERVER) : MASP(s) will reboot to load data.
```

4. When the commands have successfully completed, re-initialize the EAGLE 5 ISS using the `init-sys` command.

**Note:** The `init-sys` command causes a complete reload of the EAGLE 5 ISS, and should only be used during periods of low traffic. Using this command ensures that all cards are running the same database, but will interrupt service.

**Note:** The `init-sys` command must be entered twice within 30 seconds for the EAGLE 5 ISS to be re-initialized. If the `init-sys` command is not executed twice within 30 seconds, the attempt to re-initialize the EAGLE 5 ISS is aborted.

When the `init-sys` command is first entered, this message should appear.

```
rlghncxa03w 08-09-01 07:05:01 GMT EAGLE5 39.2.0
CAUTION: This command causes a complete system reload, and
```



will result in traffic loss.  
Re-enter command within 30 seconds to confirm.

When the `init-sys` command is re-entered within the 30 second time limit, this message should appear.

```
rlghncxa03w 08-09-01 07:05:17 GMT EAGLE5 39.2.0
Init System command issued at terminal #4
```

From the time that the `init-sys` command is accepted, you must wait approximately 2 minutes before you can perform [Step 5](#) on page 667 (logging into the EAGLE 5 ISS). If the EAGLE 5 ISS terminal is in the VT-100/VT-320 mode, the terminal display will be refreshed with non-zero alarm counts. During this 2 minutes interval, an intermediate screen refresh caused by the MASPs role change from active to standby, and from standby to active. This screen refresh is typically a partial refresh and the alarm indicators are set to zero.

If you are logged into the EAGLE 5 ISS in the KSR mode, the only response you will receive that you are now able to log into the EAGLE 5 ISS is that you will receive UAM 0009, MASP became active. UAM 0009 could be issued twice due to possible transient MASP role change (switching from active to standby). Following the execution of the `init-sys` command, the MASP that was active before the `init-sys` command was entered will be the active MASP when the EAGLE 5 ISS has finished reinitializing.

- Log into the EAGLE 5 ISS using the `login` or `act-user` command.

This is an example of the messages that appear when you have successfully logged into the EAGLE 5 ISS.

```
NOTICE: This is a private computer system.
Unauthorized access or use may lead to prosecution.

0 LOGIN failures since last successful LOGIN
Last successful LOGIN was on port 4 on 08-09-01 @ 05:34:56
```

- Verify that the databases on the removable cartridge (RD BKUP) and the current partitions of both MASPs (FD CRNT) are coherent using the `rept-stat-db` command.

This is an example of the possible output.

```
rlghncxa03w 08-09-01 16:07:48 GMT EAGLE5 39.2.0
DATABASE STATUS: >> OK <<
 TDM 1114 (STDBY) TDM 1116 (ACTV)
 C LEVEL TIME LAST BACKUP C LEVEL TIME LAST BACKUP

FD BKUP Y 35 08-09-01 07:06:18 GMT Y 35 08-09-01 07:06:18 GMT
FD CRNT Y 106
 MDAL 1117

RD BKUP - - - -
```

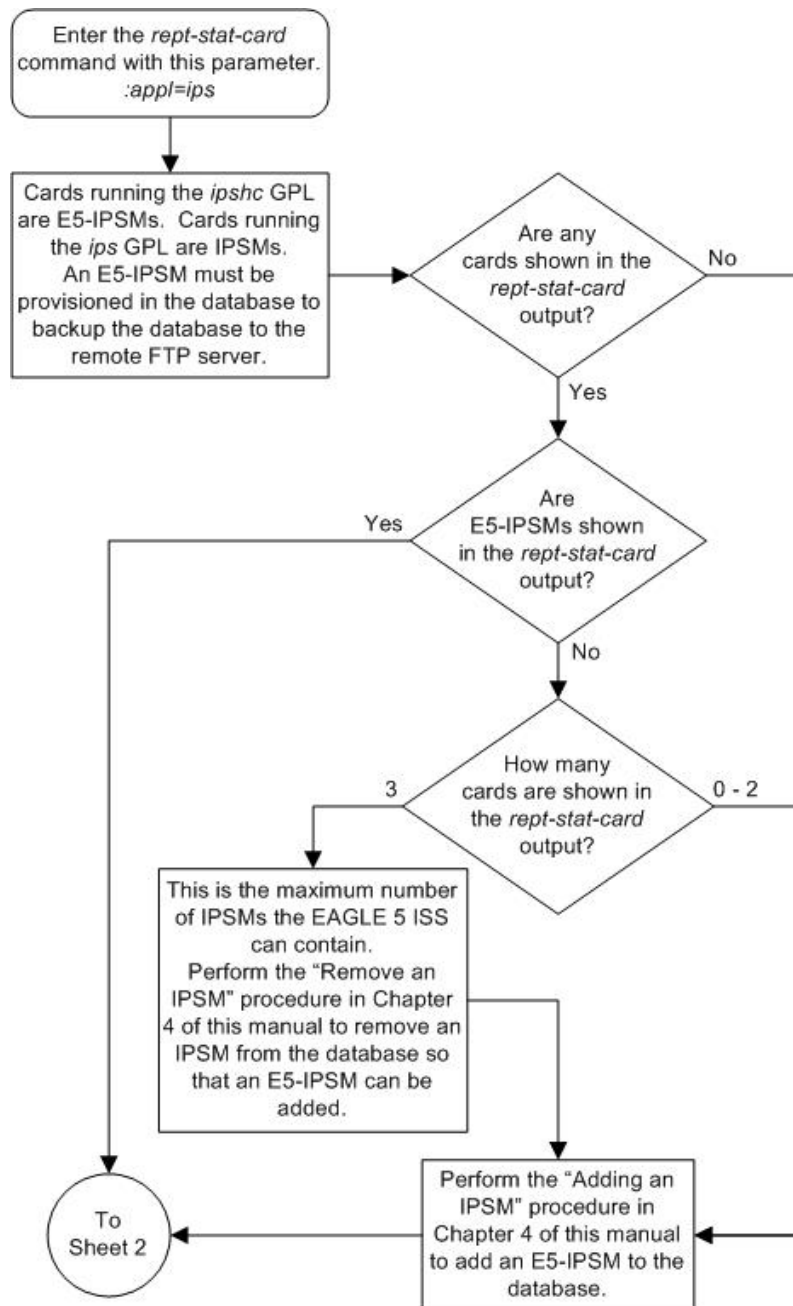
If E5-based control cards are installed in the EAGLE 5 ISS, this is an example of the output.

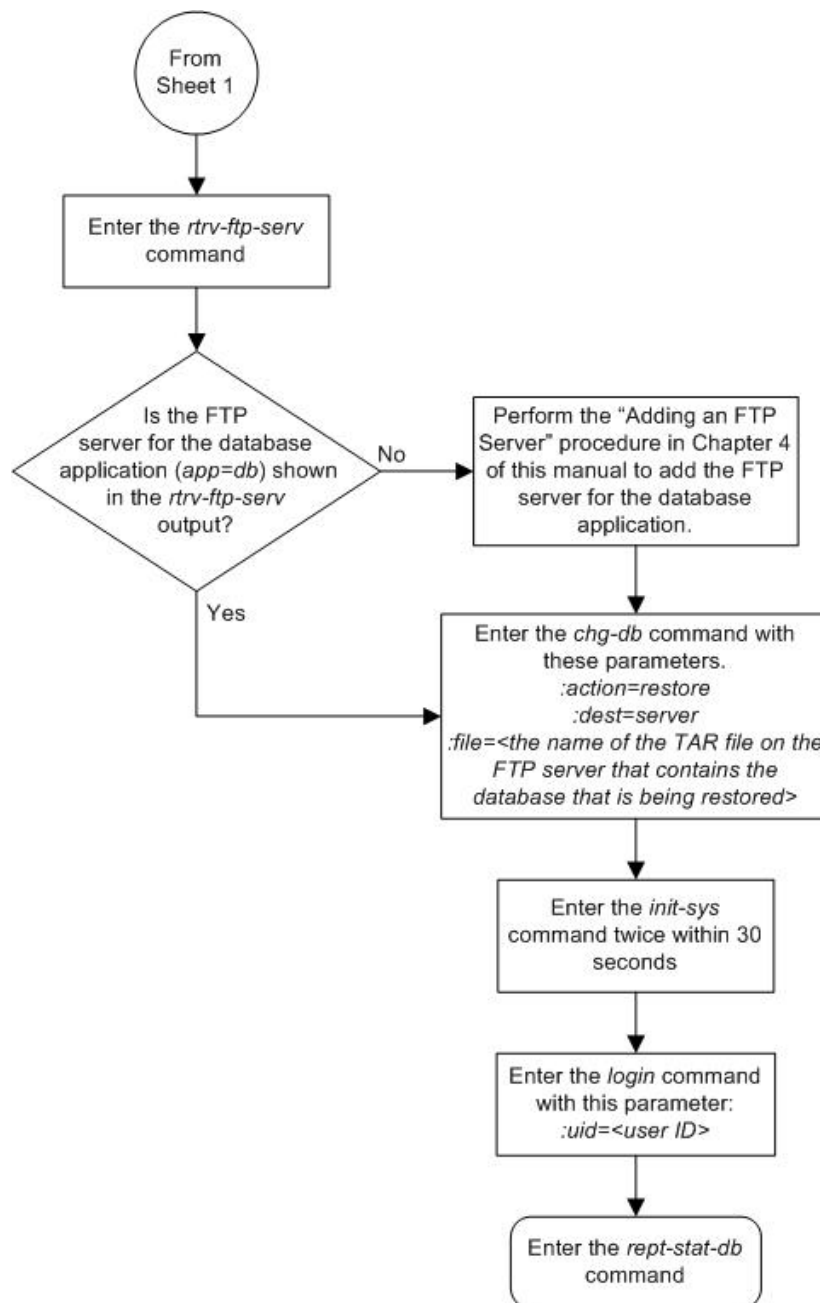
```
rlghncxa03w 09-03-01 16:07:48 GMT EAGLE5 40.1.0
DATABASE STATUS: >> OK <<
 TDM 1114 (STDBY) TDM 1116 (ACTV)
 C LEVEL TIME LAST BACKUP C LEVEL TIME LAST BACKUP

FD BKUP Y 35 09-02-19 09:38:25 GMT Y 35 09-02-19 09:38:25 GMT
FD CRNT Y 106
 MCAP 1113
 MCAP 1115
```

|         |   |   |   |   |   |    |          |          |     |
|---------|---|---|---|---|---|----|----------|----------|-----|
| RD BKUP | - | - | - | - | Y | 35 | 09-02-19 | 09:27:17 | GMT |
| USB BKP | - | - | - | - | Y | 3  | 09-02-07 | 01:11:22 | GMT |

Figure 93: Restoring the Database from the FTP Server





## Configuring the Archive Build ID Option

When the database is backed up to the FTP server, the release number string of the file name that is created is either the software release number or the software build number. The value of the *archbldid* parameter of the *chg-stopts* command determines which number is used as the release number string. This procedure is used to configure the value of the *archbldid* parameter. The *archbldid* parameter has two values.

- yes - the software build number is used as the release number string.
- no - the software release number is used as the release number string.

The system default value for the archbldid parameter is no.

1. Display the value for the archbldid parameter by entering the rtrv-stpopts command.

The value of the archbldid parameter is shown in the ARCHBLDID field. This is an example of the possible output.

```
rlghncxa03w 08-09-17 16:02:05 GMT EAGLE5 39.2.0
STP OPTIONS

ARCHBLDID no
```

**Note:** The rtrv-stpopts command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the rtrv-stpopts command, see the rtrv-stpopts command description in the *Commands Manual*.

2. Change the value of the archbldid parameter.

For this example, enter this command.

```
chg-stpopts:archbldid=yes
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-07 00:22:57 GMT EAGLE5 36.0.0
CHG-STPOPTS: MASP A - COMPLTD
```

3. Verify the changes using the rtrv-stpopts command.

This is an example of the possible output.

```
rlghncxa03w 08-09-17 16:02:05 GMT EAGLE5 39.2.0
STP OPTIONS

ARCHBLDID yes
```

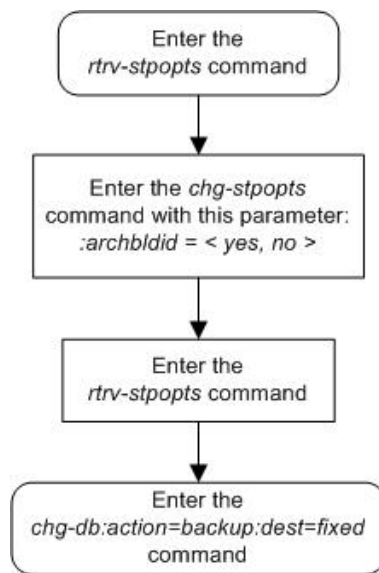
**Note:** The rtrv-stpopts command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the rtrv-stpopts command, see the rtrv-stpopts command description in the *Commands Manual*.

4. Back up the new changes using the chg-db:action=backup:dest=fixed command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

**Figure 94: Configuring the Archive Build ID Option**





# Glossary

## A

ALM

Alarm Card

ANSI

American National Standards Institute

An organization that administers and coordinates the U.S. voluntary standardization and conformity assessment system. ANSI develops and publishes standards. ANSI is a non-commercial, non-government organization which is funded by more than 1000 corporations, professional bodies, and enterprises.

AST

Associated State

The associated state of an entity.

ATM

Asynchronous Transfer Mode

A packet-oriented transfer mode that uses an asynchronous time division multiplexing technique to multiplex information flow in fixed blocks, called cells.

A high-bandwidth, low-delay switching, and multiplexing technology to support applications that include high-speed data, local area network interconnection, multimedia application and imaging, and residential applications such as video telephony and other information-based services.

**A**

|         |                                                               |
|---------|---------------------------------------------------------------|
| ATMANSI | The application used for high-speed ANSI ATM signaling links. |
| ATMITU  | The application used for high-speed E1 ATM signaling links.   |

**B**

|         |                                                                                                                                                                                     |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BAUD    | The transmission rate of the devices connected to the I/O ports expressed in bits per second.                                                                                       |
| BIOS    | Basic Input-Output System                                                                                                                                                           |
| BPDCM   | The communication software used in place of the IMT GPL on the Database Communications Module (DCM), Database Services Module (DSM), and General Purpose Services Module (GPSM-II). |
| BPHCAP  | The communication software used in place of the IMT GPL on the LIMATM and E1 ATM.                                                                                                   |
| BPHCAPT | The communication software used in place of the IMT GPL on the newer versions of the LIMATM and E1 ATM.                                                                             |
| BPHMUX  | The communication software used on the High Speed Multiplexer (HMUX) card.                                                                                                          |
| BPMPL   | The communication software used in place of the IMT GPL on the Multi-Port LIM (MPL).                                                                                                |



## B

BP MPLT

The communication software used in place of the IMT GPL on the Multi-Port LIM-T (MPLT) and the E1/T1 MIM.

## C

CCS

Common Channel Signaling

Allows operation over a permanent virtual circuit network via modem-derived data links, used to exchange call setup and routing information for interoffice trunks and to allow for queries to centralized databases and other calling services.

CCS7ITU

The application for the ITU SS7 signaling links that is used with card types limds0, limch, lime1, and limt1.

CCS MR

Common Channel Signaling  
Message Router

CET

Customer Environment Test

CLLI

Common Language Location  
Identifier

The CLLI uniquely identifies the STP in terms of its physical location. It is usually comprised of a combination of identifiers for the STP's city (or locality), state (or province), building, and traffic unit identity. The format of the CLLI is:

The first four characters identify the city, town, or locality.

The first character of the CLLI must be an alphabetical character.

The fifth and sixth characters identify state or province.

## C

The seventh and eighth characters identify the building.

The last three characters identify the traffic unit.

## Coherency

The operational status of the database. Coherency is an indication of whether the update to the database was successful. Each database has a coherency indicator. When an update is attempted, the coherency indicator is set to "incoherent" before the actual update is executed. When the update has been successfully completed, the coherency indicator is changed to coherent. If the update is not successful, the coherency indicator is not changed. If the coherency indicator is incoherent, this could be an indication of possible internal coherency problems when a restart is executed (for example, an index table was updated, but the corresponding data storage table was not modified).

## Command Class

A set of EAGLE 5 ISS commands that can be assigned to an EAGLE 5 ISS user or to a terminal port of the EAGLE 5 ISS. Command classes are assigned to a user to control the EAGLE 5 ISS commands that user can execute. Command classes are assigned to a terminal port to control the EAGLE 5 ISS commands that can be executed from a particular terminal.

## control cards

Cards that occupy slots 1113 through 1118 of the control shelf on an EAGLE 5 ISS and perform OAM, TDM, and database

## C

functions for the EAGLE 5 ISS. The legacy set consists of the single-slot GPSM-II card running the OAM application and EOAM GPL, the single-slot TDM card, and the dual-slot MDAL card. The E5-based set consists of the dual-slot E5-MASP card (the E5-MCAP module and the E5-TDM module) and the dual-slot E5-MDAL card.

### Control Shelf

The shelf in the EAGLE 5 ISS that contains the Maintenance and Administration Subsystem. The Maintenance and Administration Subsystem contains 5 cards: 2 CAM cards, 2 TDMs (Terminal Disk Modules), and 1 MDAL (Maintenance Disk and Alarm) card. This shelf is designated as Shelf 1100 and cannot be added or removed from the database.

### CPLD

Complex Programmable Logic Device

### credit card drive

Flash memory credit card-shaped drive used in the flush-mounted USB port on an E5-MCAP card for upgrade; it could be used for disaster recovery.

### CSV

Comma-separated value

The comma-separated value file format is a delimited data format that has fields separated by the comma character and records separated by newlines (a newline is a special character or sequence of characters signifying the end of a line of text).

## D

**D**

|             |                                                                                                                                                                                                                                                                                                    |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Database    | All data that can be administered by the user, including cards, destination point codes, gateway screening tables, global title translation tables, links, LNP services, LNP service providers, location routing numbers, routes, shelves, subsystem applications, and 10 digit telephone numbers. |
| DB          | Database<br>Daughter Board<br>Documentation Bulletin                                                                                                                                                                                                                                               |
| DBG         | Debugger                                                                                                                                                                                                                                                                                           |
| DCM         | Database Communication Module<br><br>The DCM provides IP connectivity for applications. Connection to a host is achieved through an ethernet LAN using the TCP/IP protocol.                                                                                                                        |
| DD          | Detailed Design                                                                                                                                                                                                                                                                                    |
| Destination | The node to which the signaling link traffic is routed. This destination is identified by a point code, either a full point code or a cluster point code.                                                                                                                                          |
| DSM         | Database Service Module.<br><br>The DSM provides large capacity SCCP/database functionality. The DSM is an application card that supports network specific functions such as EAGLE Provisioning Application Processor (EPAP), Global System for Mobile Communications (GSM), EAGLE                 |

## D

Local Number Portability (ELAP), and interface to Local Service Management System (LSMS).

**E**

|    |                                                                                                   |
|----|---------------------------------------------------------------------------------------------------|
| E1 | The European equivalent of T1 that transmits digital data over a telephone network at 2.048 Mbps. |
|----|---------------------------------------------------------------------------------------------------|

E5-E1T1 EPM-based E1/T1 Multi-Channel Interface Module

An EPM-based card that provides E1 and T1 connectivity. The E5 indicates the card is for existing EAGLE 5 control and extension shelves. E1T1 is an abbreviation for the ITU E1 and ANSI T1 interfaces. Thus the nomenclature defines the shelves where the card can be used and the physical interface that it provides.

|              |                                                                                                                                                                                                                              |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E5-MASP card | E5-based dual-slot card that consists of the E5-MCAP module (occupies slot 1113 and slot 1115) and the E5-TDM module (occupies slot 1114 and slot 1116) in an EAGLE 5 ISS control shelf. Used when the E5-MDAL card is used. |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|              |                                                                                                                                                                                                                                                                                                                                                          |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E5-MCAP card | The module contains the Communications Processor and Applications Processor and provides connections to the IMT bus. Controls the maintenance and database administration activity and performs both application and communication processing. Runs the OAM application and OAMHC GPL. Occupies slot 1113 and slot 1115 in an EAGLE 5 ISS control shelf. |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**E**

Used when the E5-MDAL card is used. Contains two USB ports.

**E5-MDAL card**

The E5 MDAL card processes alarm requests, provides general purpose relays, and provides fan control. Occupies slots 1117 and 1118 in an EAGLE 5 ISS Control Shelf. Used with E5-MASP cards. Does NOT contain a drive for removable cartridges.

**E5-ENET**

EPM-based Ethernet card

A high capacity single-slot IP signaling card (EPM card plus Gig Ethernet PMC cards).

**E5-IPSM**

Ethernet Card w/ 2GB of main memory

**E5IS**

EAGLE 5 Integrated Monitoring Support

The EAGLE 5 Integrated Monitoring Support feature allows the network traffic on the EAGLE 5 ISS's signaling links to be monitored by an ESP (extended services platform) or IMP (integrated message feeder) without additional intrusive cabling. Message Signaling Units (MSUs), alarms, and events are copied to the Sentinel/IMF to provide the network traffic monitoring. The monitored traffic is delivered to the Sentinel/IMF using the EAGLE'S STCs (Signaling Transport Cards) which are connected to the ESP/IMF subsystem by Ethernet links. The ESP/IMF subsystem delivers the monitored traffic to the Sentinel/IMF.

## E

|             |                                                                                                                                                                                                                                                                                                        |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E5-TDM card | The E5-TDM card provides the EAGLE 5 ISS with 16 ports for user terminals, contains fixed disk storage and distributes Composite Clocks and High Speed Master clocks throughout the EAGLE 5 ISS. Occupies slot 1114 and slot 1116 in an EAGLE 5 ISS Control Shelf. Used when the E5-MDAL card is used. |
| ELAP        | EAGLE Local Number Portability Application Processor                                                                                                                                                                                                                                                   |
| EMSALM      | Element Management System Alarm Monitor                                                                                                                                                                                                                                                                |
| EOAM        | Enhanced Operation, Administration, and Maintenance<br><br>The application used by the GPSM-II card for enhanced OAM functions.                                                                                                                                                                        |
| EOAP        | Embedded Operation Support System Applications Processor<br><br>Also, Enhanced OSS Application Process.                                                                                                                                                                                                |
| EPAP        | EAGLE Provisioning Application Processor                                                                                                                                                                                                                                                               |
| EROUTE      | The application used on the Sentinel Transport Card (STC) for the EAGLE 5 ISS with Integrated Sentinel feature. The Sentinel product does not support 24-bit ITU-N point codes.                                                                                                                        |

## F

|    |                     |
|----|---------------------|
| FD | Feature Description |
|----|---------------------|

**F**

File Descriptor

File Duplicator

Fixed Disk

fixed disk drive

Hard drive on the TDM card and  
the E5-TDM card.

flush-mounted USB port

USB port on the E5-MCAP card;  
used with credit card flash  
memory drives for upgrades and  
could be used for disaster  
recovery.

FTA

File Transfer Area

A special area that exists on each  
OAM hard disk, used as a staging  
area to copy files to and from the  
EAGLE 5 ISS using the Kermit  
file-transfer protocol.

FTP

File Transfer Protocol

A client-server protocol that allows  
a user on one computer to transfer  
files to and from another computer  
over a TCP/IP network.

FTRA

FTP-based Table Retrieve  
ApplicationAn application that runs in a PC  
outside of the EAGLE 5 ISS and  
that communicates with the  
EAGLE 5 ISS through the IPUI  
feature and the FTP Retrieve and  
Replace feature.**G**

GB

Gigabyte — 1,073,741,824 bytes

GLS

Generic Loading Services



## G

An application that is used by the TSM cards for downloading gateway screening to LIM cards.

GMT

Greenwich Mean Time

GPL

Generic Program Load

Software that allows the various features in the system to work. GPLs and applications are not the same software.

GPSM-II card

General Purpose Service Module II

Contains the communications processor and applications processor and provides connections to the Interprocessor Message Transport (IMT) bus. The GPSM-II card can run on the OAM, IPS, or MCP applications.

This card runs various GPLs and applications in the EAGLE 5 ISS. As a control card, it runs the OAM application and EOAM GPL. Used when the legacy TDM cad and MDAL card are used.

## H

HC-MIM

High Capacity Multi-Channel Interface Module

A card that provides access to eight E1/T1 ports residing on backplane connectors A and B. Each data stream consists of 24 T1 or 31 E1 DS0 signaling links assigned in a time-division multiplex (TDM) manner. Each channel occupies a unique timeslot in the data stream and can be selected as a local signaling link on the interface card. Each card has 8 E1 or 8 T1 port interfaces with a maximum of 64

**H**

signaling links provisioned among the 8 E1/T1 ports.

High-Speed Multiplexer

See HMUX.

HIPR

High-Speed IMT Packet Router

A card that provides increased system throughput and traffic capacity. HIPR moves EAGLE from an intra-shelf ring topology to an intra-shelf switch topology. HIPR acts as a gateway between the intra-shelf IMT BUS, running at 125Mbps, and the inter-shelf operating at 1.0625Gbps. The HIPR card will seat in the same slot as an HMUX card (slots xx09 & xx10 of each shelf).

HMUX

High-Speed Multiplexer

A card that supports the requirements for up to 1500 links, allowing communication on IMT buses between cards, shelves and frames. HMUX cards interface to 16 serial links, creating a ring from a series of point to point links. Each HMUX card provides a bypass multiplexer to maintain the ring's integrity as cards are removed and inserted into an operational shelf.

High-Speed IMT Multiplexer, a replacement card for the IPMX.

**I**

ID

Identity, identifier

IMT

Inter-Module-Transport

The communication software that operates the inter-module-transport bus on all

## I

cards except the LIMATM, DCM, DSM, and HMUX.

IMT Bus

Interprocessor Message Transport Bus

IMTPCI

IMT to PCI interconnection

IP

Internet Protocol

IP specifies the format of packets, also called datagrams, and the addressing scheme. The network layer for the TCP/IP protocol suite widely used on Ethernet networks, defined in STD 5, RFC 791. IP is a connectionless, best-effort packet switching protocol. It provides packet routing, fragmentation and re-assembly through the data link layer.

IP Address

The location of a device on a TCP/IP network. The IP Address is a number in dotted decimal notation which looks something like [192.168.1.1].

IPGHC

GPL name for IPGWx on the High-Capacity Blade platform.

IPGWI

An application that is used by the SSED CM/E5-ENET card for IP point-to-multi-point connectivity within an ITU-I or ITU-N network. The system allows a maximum of 64 cards to be assigned the IPGWI application.

IPLHC

GPL name for IPLIMx on the High-Capacity Blade platform.

**I**

|        |                                                                                                                                                                                                                                                           |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IPLIM  | The application used by the SSEDCEM/E5-ENET card for IP point-to-point connectivity for ANSI point codes.                                                                                                                                                 |
| IPLIMI | The application used by the SSEDCEM/E5-ENET card for IP point-to-point connectivity for ITU point codes.                                                                                                                                                  |
| IPS    | Internet Protocol Services<br><br>An application that is used by the IPSM card for the IP User Interface and FTP Retrieve and Replace features.                                                                                                           |
| IPSHC  | IPS GPL ported to run on the E5-IPSM                                                                                                                                                                                                                      |
| IPSM   | IP Services Module<br><br>A card that provides an IP connection for Telnet and FTP-based Table Retrieve applications. The IPSM is a GPSM-II card with a one Gigabyte (UD1G) expansion memory board in a single-slot assembly running the IPS application. |
| IS-NR  | In Service - Normal                                                                                                                                                                                                                                       |
| ISS    | Integrated Signaling System                                                                                                                                                                                                                               |
| ITU    | International Telecommunications Union                                                                                                                                                                                                                    |

**K**

|     |                                                                       |
|-----|-----------------------------------------------------------------------|
| Key | For the ICNP feature, a unique DS value used to access a table entry, |
|-----|-----------------------------------------------------------------------|

## K

consisting of a number length and number type.

KSR

Keyboard Send/Receive Mode

## L

latched USB port

On the E5-MCAP card, a USB port with a lockable latch. Used with removable media (flash memory "thumb" drives) to install and back up customer data.

LCA

Logic Cell Array

LED

Light Emitting Diode

An electrical device that glows a particular color when a specified voltage is applied to it.

LIM

Link Interface Module

Provides access to remote SS7, IP and other network elements, such as a Signaling Control Point (SCP) through a variety of signaling interfaces (DS0, MPL, E1/T1 MIM, LIM-ATM, E1-ATM, IPLIMx, IPGWx). The LIMs consist of a main assembly and possibly, an interface appliqué board. These appliques provide level one and some level two functionality on SS7 signaling links.

LIM-ATM

A link interface module (LIM) with the ATM interface.

LIM-E1

A link interface module (LIM) with the E1 Appliqué.

**L**

LIM-T1                      A link interface module (LIM) with the T1 Appliqué.

Link                        Signaling Link

**M**

MAS                        Maintenance and Administration Subsystem

A set of cards located in the Control Shelf, used to provide a central management point for the EAGLE 5 ISS. The MAS provides user interface, maintenance communication, peripheral services, alarm processing, system disk interface, and measurements using the following three subassemblies: GPSM-II, TDM, and MDAL.

MASP                      Maintenance and Administration Subsystem Processor

The Maintenance and Administration Subsystem Processor (MASP) function is a logical pairing of the GPSM-II card and the TDM card. The GPSM-II card is connected to the TDM card by means of an Extended Bus Interface (EBI) local bus.

The MDAL card contains the removable cartridge drive and alarm logic. There is only one MDAL card in the Maintenance and Administration Subsystem (MAS) and it is shared between the two MASPs.

MCP                        Measurement Collection Processor

This application is used by the MCPM card for the Measurements Platform feature.

## M

|                      |                                                                                                                                                                                                                                                                                        |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MCPM                 | <p>Measurement Collection and Polling Module</p> <p>The Measurement Collection and Polling Module (MCPM) provides comma delimited core STP measurement data to a remote server for processing. The MCPM is an EDSM with 2 GB of memory running the MCP application.</p>                |
| MDAL                 | Maintenance Disk and Alarm                                                                                                                                                                                                                                                             |
| Measurement Platform | <p>A feature that supports the EAGLE 5 ISS beyond 700 links by providing a dedicated processor for collecting and reporting STP, LNP, INP, G-Flex, and G-Port Measurements data. The Measurement Platform collection function cannot be disabled once it is enabled in the system.</p> |
| MIM                  | Multi-Channel Interface Module                                                                                                                                                                                                                                                         |
| MO                   | <p>Magneto Optical</p> <p>Managed Object</p> <p>Mobile Originated</p> <p>Refers to a connection established by a mobile communication subscriber. Everything initiated by the mobile station is known as mobile originated.</p>                                                        |
| MPL                  | Multi-port LIM                                                                                                                                                                                                                                                                         |
| MPS                  | <p>Multi-Purpose Server</p> <p>The Multi-Purpose Server provides database/reload functionality and a variety of high capacity/high speed offboard database functions</p>                                                                                                               |

**M**

for applications. The MPS resides in the General Purpose Frame.

MTP

The levels 1, 2, and 3 of the SS7 protocol that control all the functions necessary to route an SS7 MSU through the network.

**O**

OA

Onboard Administrator

The management processor for an HP c-Class enclosure.

OAM

Operations, Administration, and Maintenance

The generic load program (application) that operates the Maintenance and Administration Subsystem which controls the operation of the EAGLE 5 ISS.

OAP

A stand-alone processor that acts as an interface between the EAGLE 5 ISS and OSS (operation support system) devices using standard interfaces and converting the communications to the EAGLE 5 ISS proprietary serial interface.

OOS-MT

Out of Service - Maintenance

The entity is out of service and is not available to perform its normal service function. The maintenance system is actively working to restore the entity to service.

OOS-MT-DSBLD

Out of Service - Maintenance Disabled

The entity is out of service and the maintenance system is preventing



## O

the entity from performing its normal service function.

OPC

Originating Point Code

OS

Operations Systems

## P

PM

Processing Module

PST

Primary State

A field in the rept - stat command outputs showing the primary state of the specified entity.

## R

RD

Receive Data

Removable Disk

removable cartridge

MO cartridge used in the drive on the legacy MDAL card.

removable cartridge drive

Media drive for removable MO cartridges on the legacy MDAL card.

removable media

Flash memory or “thumb” drives used in the latched USB port on an E5-MCAP card for installation and backup of customer data.

ROM

Read Only Memory

RS

Requirement Specification

**R**

RTDB Real Time Database

**S**

SB Stop Bits

SBR Subsystem Backup Routing

SCCP Signaling Connection Control Part

SCCS Switching Control Center System

SCP Service Control Point

Service Control Points (SCP) are network intelligence centers where databases or call processing information is stored. The primary function of SCPs is to respond to queries from other SPs by retrieving the requested information from the appropriate database, and sending it back to the originator of the request.

Secure Copy

SEAS Signaling Engineering and Administration System

An interface defined by Bellcore and used by the Regional Bell Operating Companies (RBOCs), as well as other Bellcore Client Companies (BCCs), to remotely administer and monitor the signaling points in their network from a central location.

Security Log

The security log is a circular file, located on each MASP, containing a record of each command entered on a EAGLE 5 ISS terminal, the name (user ID) of the person

S

entering the command, the date and time the command was entered, and the terminal port that the command was entered on. This record can investigate unauthorized activities that may take place on the EAGLE 5 ISS, or when problems occur, this record can examine the commands that were entered before the problem occurred to check if one or more of those commands caused the problem.

SHLF

Shelf

A modular unit that contains the cards that make up the EAGLE 5 ISS. The EAGLE 5 ISS uses two types of shelves, the control shelf, and the extension shelf. The control shelf contains the components of the Maintenance and Administration Subsystem (MAS), and up to eight additional Link Interface Modules (LIMs). The extension shelf provides locations for two High Speed Multiplexer (HMUX) cards and also 16 card locations for any combination of Link Interface Modules (LIMs), STPLAN cards, and Service Modules.

SLAN

Signaling Transfer Point Local  
Area Network

A feature in the EAGLE 5 ISS that copies MSUs selected through the gateway screening process and sends these MSUs over the Ethernet to an external host computer for further processing.

SNR

Subsystem Normal Routing

## S

|         |                                                                                                                                                                                                                                                                                 |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SOG     | Subsystem Out-of-Service Grant<br>Service Order Gateway                                                                                                                                                                                                                         |
| SOR     | Support of Optimal Routing<br>System Out of Service Request                                                                                                                                                                                                                     |
| SRT     | Subsystem Routing Status Test                                                                                                                                                                                                                                                   |
| SS7     | Signaling System #7                                                                                                                                                                                                                                                             |
| SS7ANSI | SS7 ANSI<br><br>An application used by the LIM cards and the E1/T1 MIM card for the MTP functionality.                                                                                                                                                                          |
| SS7IPGW | SS7 IP Gateway<br><br>An application used by the DCM/SSEDCM card for IP point-to-multipoint capability within an ANSI network.                                                                                                                                                  |
| SS7ML   | An application used on the Multi-Port LIM (MPL or MPLT) for SS7 signaling links and on the E1/T1 MIM for E1 and T1 signaling links.                                                                                                                                             |
| SSA     | Subsystem Allowed                                                                                                                                                                                                                                                               |
| SSH     | Secure Shell<br><br>A protocol for secure remote login and other network services over an insecure network. SSH encrypts and authenticates all EAGLE 5 ISS IPUI and MCP traffic, incoming and outgoing (including passwords) to effectively eliminate eavesdropping, connection |

S

hijacking, and other network-level attacks.

SSP

Subsystem Prohibited network management message.

Subsystem Prohibited SCCP (SCMG) management message. (CER)

SST

Secondary State

The secondary state of the specified entity.

Subsystem Status Test network management message.

STC

Signaling Transport Card

The Signaling Transport Card (STC) is a member of the DCM card family with an “eroute” generic program load (GPL) installed. The STCs provide the IP interface between the LIM cards on the IMT bus and the Signaling Extended Services Platform (ESP) subassembly. The STC is used for sending MSU data to the ESP/IMF.

STP

Signal Transfer Point

STPs are ultra-reliable, high speed packet switches at the heart of SS7 networks, which terminate all link types except F-links. STPs are nearly always deployed in mated pairs for reliability reasons. Their primary functions are to provide access to SS7 networks and to provide routing of signaling messages within and among signaling networks.

STPLAN

Signaling Transfer Point Local Area Network

**S**

The generic program load and application used by the STPLAN card to support the STP LAN application. This GPL does not support 24-bit ITU-N point codes.

**T**

T1

Transmission Level 1

A T1 interface terminates or distributes T1 facility signals for the purpose of processing the SS7 signaling links carried by the E1 carrier.

A leased-line connection capable of carrying data at 1,544,000 bits-per-second.

TCP

Transfer Control Protocol

TCP/IP

Transmission Control  
Protocol/Internet Protocol

TDM

Terminal Disk Module  
Time Division Multiplexing

TRM

Termination Response Mode

TSM

Translation Services Module

Provides translation capability and Global Title Translation (GTT) implementation for the Local Number Portability (LNP) function and is used for downloading gateway screening tables to link interface modules (LIMs).

**U**

UAM

Unsolicited Alarm Message.

## U

|          |                                                                                                                                                                                                                                                                                               |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UID      | User ID                                                                                                                                                                                                                                                                                       |
| UIM      | Unsolicited Information Message                                                                                                                                                                                                                                                               |
| USB port | Receptacle for flash memory drives on personal computers. On the E5-MDAL card, a flush-mounted USB port used with credit card flash memory drives for upgrade. On the E5-MCAP card, a latched USB port for use with flash memory "thumb" drives for installation and backup of customer data. |
| UTILITY  | The application that is used by the factory for testing. This application has no use in the field.                                                                                                                                                                                            |

## V

|         |                                                                                                                                                                                                                                                                                                                                                                                |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VSCCP   | <p>VxWorks Signaling Connection Control Part</p> <p>The application used by the Service Module card to support the G-Flex, G-Port, INP, AINPQ, EIR, A-Port, IGM, V-Flex, and LNP features. If the G-Flex, G-Port, INP, AINPQ, EIR, A-Port, IGM, V-Flex, or LNP feature is not turned on, and a Service Module card is present, the VSCCP GPL processes normal GTT traffic.</p> |
| VXWSLAN | An application used by the DCM card to support the STP LAN application. This GPL does not support 24-bit ITU-N point codes.                                                                                                                                                                                                                                                    |





# Database Administration Manual

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VT320 terminal type 434

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