

Tekelec EAGLE® 5 *Integrated Signaling System*

Release 37.5

Database Administration Manual - System Management

910-5054-001 Revision B

November 2007



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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

Foreign Patent Numbers:

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

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Overview

The *Database Administration Manual – System Management* describes the procedures necessary for database administration personnel or translations personnel to manage the EAGLE 5 ISS's database and GPLs, and to configure basic system requirements such as user names and passwords, system-wide security requirements, and terminal configurations.

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*.

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:

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

[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.

[Chapter 3 GPL Management Procedures](#) describes the procedures used for managing the system data (GPLs) on the EAGLE 5 ISS.

[Chapter 4 System Administration Procedures](#) describes the procedures used to administer the system wide security requirements, user names and passwords, the system date and time, terminal configurations, shelves, SS7 LIM cards, and configuration information for the Measurements Platform feature.

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

[Appendix A Controlled Feature Activation Procedures](#) 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.

[Appendix B 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.

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 that is 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 a CD-ROM. 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. This site allows for 24-hour access to the most up-to-date documentation.

Printed documentation is available for GA releases on request only and with a lead time of 4 weeks. The printed documentation set includes pocket guides for commands and alarms. Pocket guides may also be ordered as a set or individually. Exceptions to printed documentation are:

- Hardware or Installation manuals are printed only 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.

Content changes are indicated with change bars, the revision of the manual part number is incremented, and the month of publication is updated.

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.

	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 offers a point of contact for product and service support through highly trained engineers or service personnel. The Tekelec Customer Care Center is available 24 hours a day, 7 days a week at the following locations:

- Tekelec, USA
Phone:
+1 888 367 8552 (US and Canada only)
+1 919 460 2150 (international)
Email: support@tekelec.com
- Tekelec, Europe
Phone: +44 1784 467804
Email: ecsc@tekelec.com

When a call is received, a Customer Service Report (CSR) is issued to record the request for service. Each CSR includes an individual tracking number.

Once a CSR is issued, the Customer Care Center determines the classification of the trouble. If a critical problem exists, emergency procedures are initiated. If the problem is not critical, information regarding the serial number of the system, COMMON Language Location Identifier (CLLI), initial problem symptoms (includes outputs and messages) is recorded. A primary Customer Care Center engineer is also assigned to work on the CSR and provide a solution to the problem. The CSR is closed when the problem is resolved.

Emergency Response

In the event of a critical service situation, emergency response is offered by Tekelec Technical Services twenty-four hours a day, seven 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 Tekelec Technical Services.

Maintenance and Administration Subsystem

The maintenance and administration subsystem consists of two processors, MASP (maintenance and administration subsystem processor) A and MASP B.

Each MASP is made up of two cards, the GPSM-II card (general purpose service module) and the TDM (terminal disk module).

The GPSM-II card contains the communications processor and applications processor and provides connections to the IMT bus. The GPSM-II controls the maintenance and database administration activity.

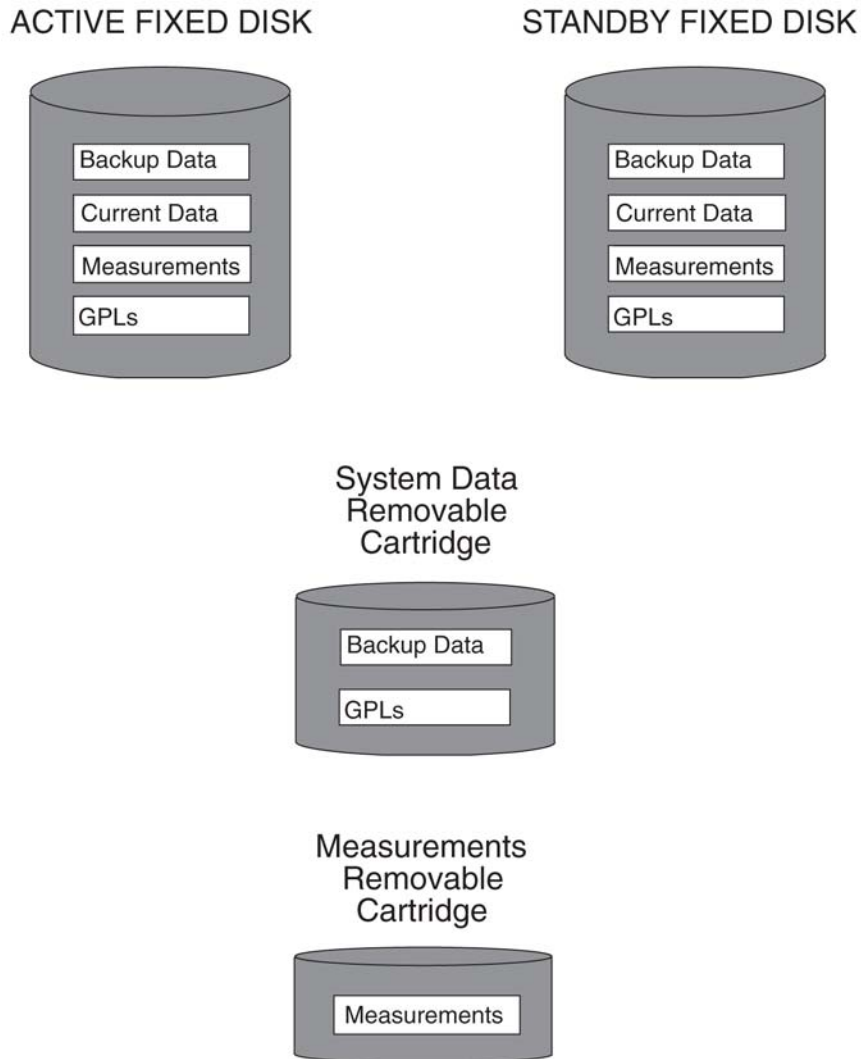
The TDM contains the fixed disk drive, the terminal processor for the 16 serial I/O ports and interfaces to the MDAL (maintenance disk and alarm) card which contains the removable cartridge drive and alarm logic. There is only one MDAL card in the maintenance and administration subsystem and it is shared between the two MASPs.

For more information on these cards, go to the *Hardware Manual - EAGLE 5 ISS*.

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 1-1](#).

Figure 1-1. EAGLE 5 ISS Database Partitions



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

A removable cartridge 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 cannot store all of the data in the database, GPL and measurements partitions.

To use a removable cartridge to hold the system data, it must be formatted for system data. To use a removable cartridge 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 for either of these purposes. A removable cartridge 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 drives can be found in the *Hardware Manual - EAGLE 5 ISS*.

The removable cartridge drive is located on the MDAL card in card location 1117.

Additional and preformatted removable cartridges are available from the Customer Care Center.

Locate Product Documentation on the Customer Support Site

To view or download product documentation, log into the Tekelec Customer Support site at:

<https://support.tekelec.com/index.asp>

1. Log in with your user name and password. (Click on "Need an Account?" if you need to register).
2. Select EAGLE from the Product Support menu.
3. Select the release number from the Release menu.
4. Locate the Notices section to view the latest Feature Notice.
5. Locate the Manuals section to view all manuals applicable to this release.
The documentation is listed in alphabetical order by the manual name. Only the first three manuals display. Click **more...** to see the remaining manuals.
6. Locate the latest revision of the manual name.

Confirm the release number and last available revision.

Select the 936-xxxx-x01 part number to download the complete documentation set with all linked files.

NOTE: The electronic file for this part number is quite large.

7. To view a manual, double-click the manual name.
8. To download a manual, right-click and select Save Target As.

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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
- Restoring the database
 - from the backup partition of the fixed disk
 - from the removable cartridge
- Repairing the database
- Copying the database from the active to the standby fixed disk
- Backing up system data to the removable cartridge
- Restoring system data from a removable cartridge
- Formatting a removable cartridge
- Formatting the fixed disk of the standby TDM

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).

Each MASP is made up of two cards, the GPSM-II card (general purpose service module) and the TDM (terminal disk module).

The GPSM-II card contains the communications processor and applications processor and provides connections to the Interprocessor Message Transport (IMT) bus. The GPSM-II card controls the maintenance and database administration activity.

The TDM contains the fixed disk drive, the terminal processor for the 16 serial I/O ports and interfaces to the MDAL (maintenance disk and alarm) card, which contains the removable cartridge drive and alarm logic. There

is only one MDAL card in the maintenance and administration subsystem, and it is shared between the two MASPs.

The TDM is associated with a specific GPSM-II card. For example, the TDM in location 1114 is associated with the GPSM-II 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 in location 1115 and the combination of these two cards designated as MASP B. When MASP A is active, the GPSM-II in location 1113 and TDM in location 1114 are active. When MASP A is standby, the GPSM-II 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, or examine the LEDs on both TDMs or the MDAL card.

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. The entry **STANDBY** in the **SST** field for the GPSM-II card shows which MASP is standby.

If the LED on the TDM is green, the associated MASP is active. If the LED on the TDM is toggling from green to amber, the associated MASP is standby.

The MDAL card has two LEDs that also show the status of each MASP. These LEDs are labeled MASP A and MASP B and the LED that is green shows which MASP is active.

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 is only referred to when inserting or removing the removable cartridge because the removable cartridge drive resides on the MDAL.

Removable Cartridge

Some of these procedures are used with a removable cartridge. When the removable cartridge is not being used, it should be write protected and stored in a secure place. The database on the removable cartridge can be used to restore the database in the event of a catastrophe, or to retrieve a particular database configuration.

The removable cartridge used with these procedures must be formatted for either system data or measurements data. The EAGLE 5 ISS provides the user the ability to format a removable cartridge for either of these purposes. A removable cartridge 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*. To format a removable cartridge, go to the [Formatting a Removable Cartridge](#) procedure .

Additional and preformatted removable cartridges are available from the Customer Care Center. Refer to [Customer Care Center](#) for the contact information.

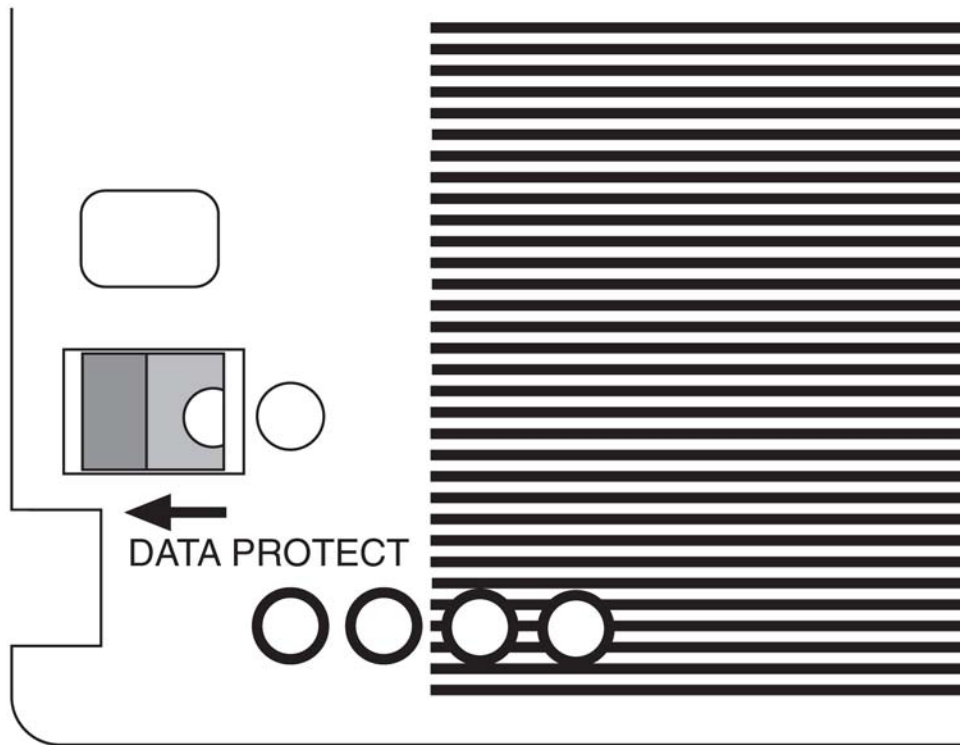
Procedures that use the removable cartridge require that the removable cartridge be either write protected or write enabled. When the cartridge is write protected, no data can be written to the cartridge, nor can the cartridge be formatted. The data can only be read from the cartridge. When the cartridge is write enabled, data can be written to the cartridge, data can be read from the cartridge, and the cartridge can be formatted and any data on the cartridge will be lost.

This section contains the procedures for handling removable cartridges. In addition to procedures for write protecting and write enabling the removable cartridge, this section also contains procedures for inserting the removable cartridge into the removable cartridge drive and removing the removable cartridge from the removable cartridge drive.

Write Protecting the Removable Cartridge

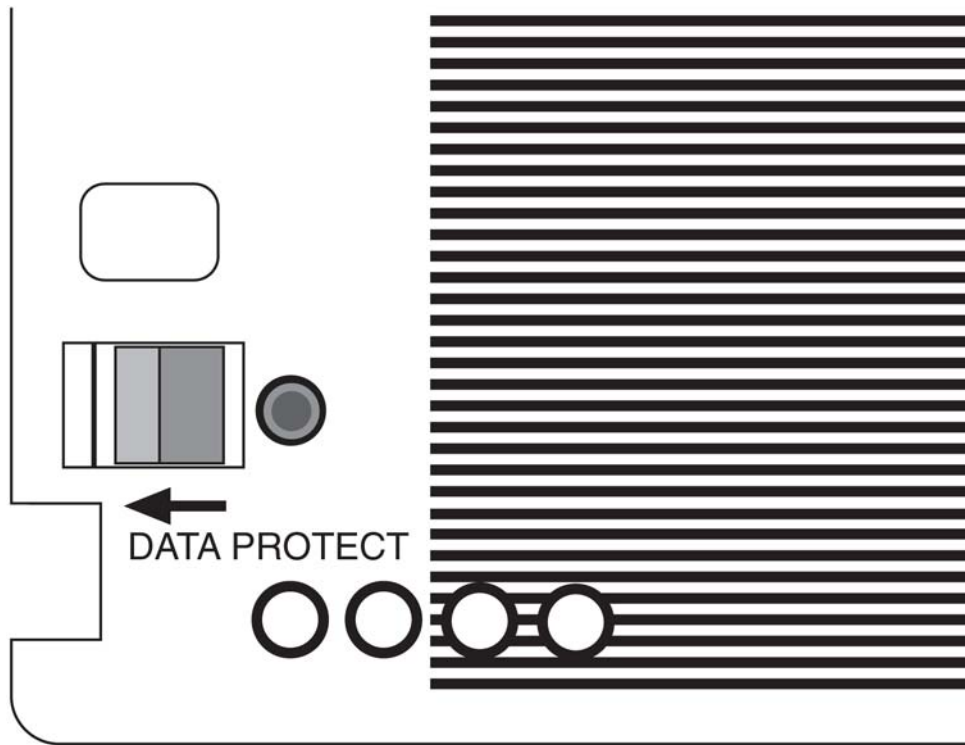
The write protecting mechanism of the removable cartridge is a tab located in the lower left corner of the cartridge. Under the tab is an arrow pointing toward the left edge of the cartridge and the words “DATA PROTECT” are under the arrow. To write protect the removable cartridge, slide the tab to the 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 2-1](#) .

Figure 2-1. Write Protected Removable Cartridge



Write Enabling the Removable Cartridge

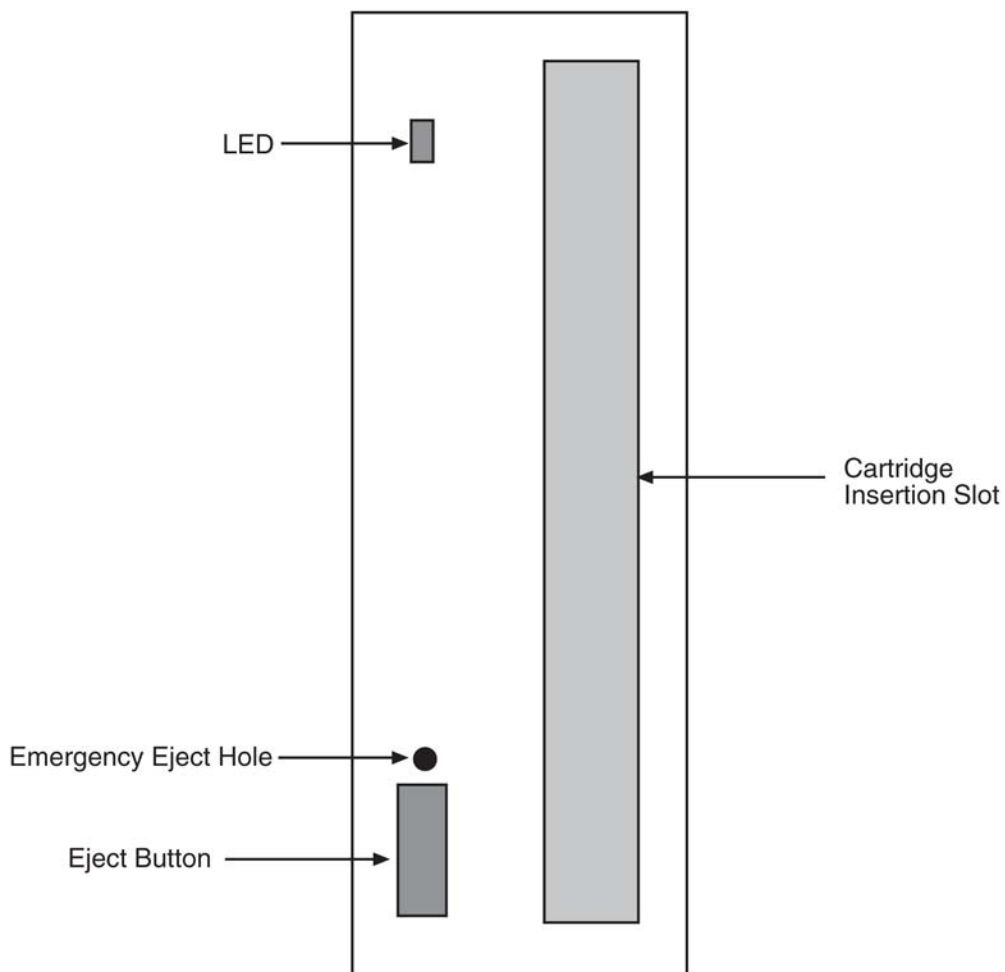
To write enable the removable cartridge, slide the tab to the right, the opposite direction of the arrow, until it snaps into place. The hole to the right of the tab should be filled with a red dot. See [Figure 2-2](#) .

Figure 2-2. Write Enabled Removable Cartridge

Inserting the Removable Cartridge

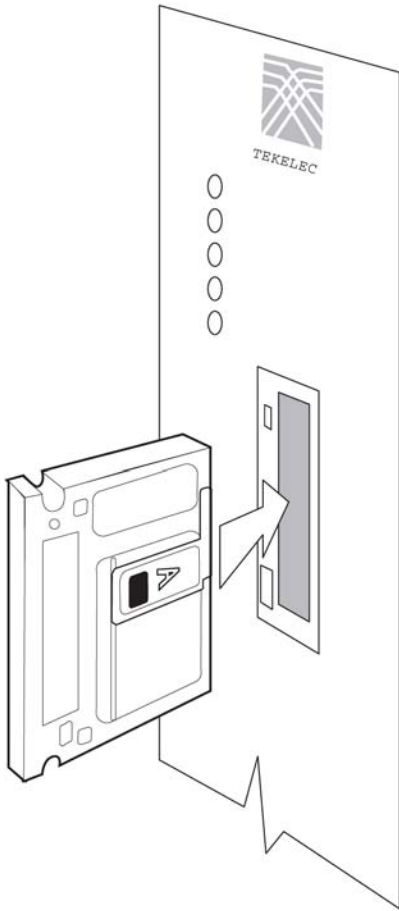
The removable cartridge is a two sided cartridge with each side designated as side A and side B. The removable cartridge drive can only access one side of the cartridge at a time, which side is accessed depends on how the cartridge is inserted into the removable cartridge drive. The side indicator is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

[Figure 2-3](#) shows the layout of the removable cartridge drive.

Figure 2-3. Removable Cartridge Drive Layout

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, as shown in [Figure 2-4](#) .

Figure 2-4. Inserting the Removable Cartridge to Use Side A



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.

When the removable cartridge is inserted into the removable cartridge drive, the LED is yellow while the cartridge is spinning up. When the cartridge is finished spinning up and ready to use, the LED is green.

Removing the Removable Cartridge

To remove the removable cartridge from the removable cartridge drive, the LED should be green. If the LED is yellow, the drive is being accessed by the EAGLE 5 ISS and the cartridge cannot be removed from the drive. Wait until the LED is green before attempting to remove the cartridge from the drive. 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. The LED is off when the cartridge is fully ejected from the drive. The cartridge can then be removed from the drive.

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).

REPT-STAT-DB Output Fields

The outputs of the **rept-stat-db** command contains these fields. There are fields that are displayed only when specific parameters are specified. Some of these fields are displayed only when certain features are on. The conditions under which these fields are displayed are noted in the description of the fields.

Database Status: – an indication of any database alarms on the MASPs.

>> **OK**<< – there are no database alarms

>>**NOT OK**<< – database alarms are present

This indicator is not used with the **loc** parameter output.

(**ACTV**) – The specified MASP is the active processor. This is not used with the **loc** parameter output.

(**STDBY**) – The specified MASP is the standby processor. This is not used with the **loc** parameter output.

(**NOACCS**) – The specified processor is not accessible. This is not used with the **loc** parameter output.

(**OFF-LINE**) – The specified TDM has been inhibited and may have been removed from the control shelf. This is not used with the **loc** parameter output.

C – an indicator of whether the database is coherent. A “Y” means that the database is coherent; an “N” means that the database is not coherent; a “-” means that the database is not accessible.

LEVEL – the number of updates made to the database partitions.

TIME LAST BACKUP – the date and time the last change was performed on the removable cartridge (if inserted) and the backup partition of the fixed disk. This field is not used with the **loc** parameter output. If a dash (-) is displayed in this field for the **FD BACKUP** or **RD BACKUP** partitions, then no backup has been created for that partition.

RD BKUP – Removable cartridge backup partition.

FD BKUP – Fixed disk backup partition.

FD CRNT – Fixed disk current partition. This field is not used with the **loc** parameter output.

DIFF CONTENTS – The specified database’s contents are different when compared to the other database in that partition.

DIFF LEVEL – The specified database’s level (other than the backup partition of the fixed disk – **FD BKUP**) does not match the level of the current partition of the active fixed disk (**FD CRNT**).

DIFF TIME – The specified database’s level matches the level of the current partition of the active fixed disk (**FD CRNT**), but the time that the database was updated, when compared to the current partition of the active fixed disk (**FD CRNT**), is different. This occurs when the time/date stamp of the database being updated is corrupted.

CORRUPTED – The specified database is corrupted.

INCOHERENT – The specified database is incoherent.

OFF-LINE – The specified TDM is off-line and has been removed from the control shelf.

EXCEPTION – The condition of the specified database that the EAGLE 5 ISS has detected a problem with. These conditions are: **DIFF CONTENTS**, **DIFF LEVEL**, **DIFF TIME**, **CORRUPTED**, **INCOHERENT**, and **OFF-LINE**. A “-” indicates that the database was not accessible. A blank entry indicates that the database has no problems. A number in this field indicates the number of corrupted records that have been repaired on the specific DSM. The number value is displayed until the DSM is reset. This field is used with the **display=except**, **display=all**, and **loc** parameter outputs.

CARD/APPL – the card type or the application assigned to the card specified in the **LOC** field. This field is not used with the **display=brief** (default) parameter output.

- **TDM-BKUP** – Backup partition on the fixed disk on the TDM.
- **TDM-CRNT** – Current partition on the fixed disk on the TDM.
- **MDAL** – The maintenance disk and alarm card. This card contains the removable cartridge drive.
- **ATMANSI** – The **atmansi** application. This application is used for high-speed ATM signaling links.
- **EBDABLM** – The application used by the TSM to store the LNP database downloaded from the LSMS for the Enhanced Bulk Download feature.
- **EBDADCM** – The application used by the DCM to transmit the LSMS LNP database at high speed over an Ethernet connection for the Enhanced Bulk Download feature.
- **CCS7ITU** – The **ccs7itu** application. This application is used for CCS7ITU signaling links.
- **IPLIM** – The **iplim** application software for TCP/IP point-to-point ANSI connectivity.
- **IPLIMI** – The **iplimi** application software for TCP/IP point-to-point ITU connectivity.
- **GLS** – The **gls** application. This application is used for the gateway screening feature.
- **SCCP** – The **sccp** application. This application is used for the global title translation and LNP features.
- **VSCCP** – The **vsccp** application. This application is used for the global title translation, G-Flex, INP, G-Port, PPSMS the ELAP Configuration, LNP, EIR, ANSI-41 INP Query, A-Port, and IS41 GSM Migration features.

- **SS7ANSI** – The **ss7ansi** application. This application is used for SS7 signaling links.
- **SS7IPGW** – The application software for TCP/IP point-to-multipoint connectivity within an ANSI network.
- **SS7GX25** - The **ss7gx25** application. This application is used for X.25 signaling links.
- **STPLAN** – The **stplan** application. This application is used by the STPLAN feature.

LOC – the card location of the database. This field is not used with the **display=brief** (default) parameter output.

T – an indicator of whether the specified database is in transition. A “Y” means that the database is in transition; an “N” means that the database is not in transition. A database is in transition when the database for the Link Interface Module (LIM) or SCCP card is in the process of being loaded with the new screen set information after an update to the database, and the database has not reached the current reported database level. This field is not used with the **display=brief** (default) parameter output.

TIME LAST UPDATE – the date and time the last change was performed on the specified card and its associated database. This field is not used with the **display=brief** (default) parameter output.

VERSION – The version number of each database.

111-000-000 – The version number of the database. This number will be different for different software releases.

“-” – The database is not available.

This field is only used with the **display=version** parameter output.

STATUS – The operational status of the database version.

NORMAL – The database version is fully operational.

A blank entry indicates that the database is not available or is unknown. A numeric value indicates that the database is invalid. The value displayed is the status value found in the field and is for diagnostic purposes.

This field is only used with the **display=version** parameter output.

EPAP A (ACTV) – The active Eagle Provisioning Application Processor. This field is displayed when the G-Flex feature is on, or the INP, ANSI-41 INP Query, G-Port, A-Port, IS41 GSM Migration, EIR or PPSMS features are enabled and on. This field is not displayed with the **loc** parameter output.

EPAP B (STDBY) – The standby Eagle Provisioning Application Processor. This field is displayed only when the G-Flex feature is on, or the INP, ANSI-41 INP Query, G-Port, A-Port, IS41 GSM Migration, EIR or PPSMS features are enabled and on. This field is not displayed with the **loc** parameter output.

ELAP A (ACTV) – The active Eagle LNP Application Processor. This field is displayed only when the ELAP Configuration feature is enabled and on. This field is not displayed with the **loc** parameter output.

ELAP B (STDBY) – The standby Eagle LNP Application Processor. This field is displayed only when the ELAP Configuration feature is enabled and on. This field is not displayed with the **loc** parameter output.

BIRTHDATE – The date and time of creation for the database. This field is displayed only when the G-Flex feature is on, or the INP, ANSI-41, INP Query, G-Port, A-Port, IS41 GSM Migration EIR, PPSMS or the ELAP Configuration features are enabled and on.

PDB – The provisioning database status information. This field is displayed only when the G-Flex feature is on, or the INP, ANSI-41 INP Query, G-Port, A-Port, IS41 GSM Migration, EIR or PPSMS features are enabled and on. This field is not displayed with the **loc** parameter output.

RTDB – The provisioning database status information that was used to create the resident real-time database. The RTDB information may be different than the PDB information if the PDB has been reloaded, or if the RTDB has not been loaded from the PDB. If the RTDB birthdate is different than the PDB or if the level is too old to be able to resynchronize the databases, then a “Reload Required” alarm is generated. This field is displayed only when the G-Flex feature is on, or the INP, ANSI-41 INP Query, G-Port, A-Port, IS41 GSM Migration, EIR, or PPSMS features are enabled and on, or the ELAP Configuration features are enabled and on. This field is not displayed with the **loc** parameter output.

RTDB-EAGLE – The EPAP resident real-time database status information. This database is downloaded to DSM cards. If the birthdate or level do not match the DSM card, then the DSM card generates an alarm. The RTDB database is reloaded from the PDB, and the birthdate and level are reset and will not match the database status information. This database status mismatch condition indicates an abnormal condition that requires DSM cards to be reloaded. This field is displayed only when the G-Flex feature is on, or the INP, ANSI-41 INP Query, G-Port, A-Port, IS41 GSM Migration, EIR, or PPSMS features are enabled and on, or the ELAP Configuration features are enabled and on. This field is not displayed with the **loc** parameter output.

IN-SRVC – The amount of time, in days (d), hours (h), and minutes (m), that the DSM card has been running since it was brought into service. This field is displayed in the **EAGLE RTDB REPORT** section of the **rept-stat-db** output. This field is displayed only when the the G-Flex feature is on, or the INP, ANSI-41 INP Query, G-Port, A-Port, IS41 GSM Migration, EIR, or PPSMS features are enabled and on, or the ELAP Configuration features are enabled and on. This field is not displayed with the **display=version** and **loc** parameter outputs.

For any databases that are not accessible, dashes are displayed in the output of the **rept-stat-db** command. Dashes are also displayed in the removable cartridge backup partition (**RD BACKUP**) if no system removable cartridge is in the removable cartridge drive, or if a measurements removable cartridge is in the removable cartridge drive.

REPT-STAT-DB Outputs

The following sections show the different outputs that the **rept-stat-db** command can generate depending on which parameters are specified with the **rept-stat-db** command.

- **display=brief** (the default value)
- **display=except**
- **display=all**
- **display=version**
- **loc**
- **db**

DISPLAY=BRIEF Parameter

The output of the **rept-stat-db** command with the **display=brief** parameter specified (the default parameter if no parameters are specified) contains the operational status of both MASPs and the removable cartridge drive on the MDAL card. This is an example of the output when the **display=brief** parameter is used or when no parameters are used.

```
r1ghncxa03w 06-10-01 16:07:48 GMT EAGLE5 37.6.0
```

```

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 the G-Flex feature is on, or the INP, ANSI-41 INP Query, G-Port, A-Port, IS41 GSM Migration, EIR, or PPSMS features are enabled and on, or the ELAP Configuration features are enabled and on, the output of the **rept-stat-db** command also shows the status of the databases on EPAP A and EPAP B as shown in this example.

```

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 04-06-01 14:29:03 GMT
      EPAP A ( ACTV )
      C  BIRTHDATE      LEVEL      EXCEPTION
      -  - - - - -
PDB      04-06-01 10:19:18      10      -
RTDB      Y 04-06-01 10:19:18      10      -
RTDB-EAGLE 04-06-01 10:19:18      10      -
      EPAP B ( STDBY )
      C  BIRTHDATE      LEVEL      EXCEPTION
      -  - - - - -
PDB      04-06-01 10:19:18      10      -
RTDB      Y 04-06-01 10:19:18      10      -
RTDB-EAGLE 04-06-01 10:19:18      10      -

```

If the ELAP Configuration feature is enabled and on, the output of the **rept-stat-db** command also shows the status of the databases on ELAP A and ELAP B as shown in this example.

```

DATABASE STATUS: >> OK <<
      TDM 1114 ( ACTV )
      C  LEVEL      TIME LAST BACKUP
      -  - - - - -
FD BKUP  Y          11 04-06-01 08:20:13 GMT
FD CRNT  Y          11
      MDAL 1117
      -  - - - - -
RD BKUP  Y          1 04-05-31 15:44:20 GMT
      ELAP A ( ACTV )
      C  BIRTHDATE      LEVEL      EXCEPTION
      -  - - - - -
RTDB      Y 04-06-01 08:20:04      12345      -
RTDB-EAGLE 04-06-01 08:20:04      12345      -
      ELAP B ( STDBY )
      C  BIRTHDATE      LEVEL      EXCEPTION
      -  - - - - -
RTDB      Y 04-06-01 08:20:04      12345      -
RTDB-EAGLE 04-06-01 08:20:04      12345      -

```

DISPLAY=EXCEPT Parameter

The output from the **display=except** parameter contains all the information displayed from the **display=brief** parameter along with the coherency indicator and the number of updates for all the cards whose database level does not match the active fixed disk current partition, reference database level, or is incoherent. All

databases that are not accessible are also displayed. The time stamp for the last database update for every card is displayed. This is an example of the output when the **display=except** parameter is used.

```
rlghncxa03w 06-10-01 08:28:59 GMT EAGLE5 37.6.0
DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( ACTV )                      TDM 1116 (
STDBY)
      C   LEVEL   TIME LAST BACKUP          C   LEVEL   TIME LAST BACKUP
-----
FD BKUP  Y       74 04-06-01 23:30:05 GMT    Y       74 04-06-01 23:30:05 GMT
FD CRNT  N       78 CORRUPTED                 Y       75 DIFF LEVEL
      MDAL 1117
      - - - - -
RD BKUP  -       -       -       -
      CARD/APPL  LOC  C  T  LEVEL           TIME LAST UPDATE   EXCEPTION
-----
SCCP      1101  -  -  -       -             -             -
TDM-CRNT  1114  N  N  78           04-06-01 23:15:06    CORRUPTED
TDM-CRNT  1116  Y  N  75           04-06-01 22:47:05    DIFF LEVEL
CCS7ITU   1207  N  N  78           04-06-01 23:05:06    INCOHERENT
```

If the G-Flex feature is on, the G-Port, A-Port, or IS41 GSM Migration features are enabled, or the EIR, INP, PPSMS, ANSI-41 INP Query features are enabled and on, the output of the **rept-stat-db:display=except** command also shows the status of the databases on EPAP A and EPAP B, followed by the status of the VSCCP card database, as shown in this example.

```
rlghncxa03w 06-10-01 08:55:54 GMT EAGLE5 37.6.0
rept-stat-db:display=except
DATABASE STATUS: >> OK <<
      TDM 1114 ( ACTV )                      TDM 1116 ( STDBY)
      C   LEVEL   TIME LAST BACKUP          C   LEVEL   TIME LAST BACKUP
-----
FD BKUP  Y       11 04-06-01 08:20:13 GMT    Y       11 04-06-01 08:20:13 GMT
FD CRNT  Y       12                               Y       12
      MDAL 1117
      - - - - -
RD BKUP  Y       1 04-05-31 15:44:20 GMT

      CARD/APPL  LOC  C  T  LEVEL           TIME LAST UPDATE   EXCEPTION
-----
SS7ANSI      1103  Y  N  10           04-06-01 08:03:48    DIFF LEVEL
TDM-BKUP     1114  Y  -  11           04-06-01 08:04:00    DIFF LEVEL
TDM-BKUP     1116  Y  -  11           04-06-01 08:04:00    DIFF LEVEL
MDAL         1117  Y  -  1           04-05-31 15:06:29    DIFF LEVEL
      EPAP A ( ACTV )
      C   BIRTHDATE           LEVEL           EXCEPTION
-----
PDB          Y  04-06-01 08:20:04         12345           -
RTDB         Y  04-06-01 08:20:04         12345           -
RTDB-EAGLE   Y  04-06-01 08:20:04         12345           -
      EPAP B ( STDBY )
      C   BIRTHDATE           LEVEL           EXCEPTION
-----
PDB          Y  04-06-01 08:20:04         12345           -
RTDB         Y  04-06-01 08:20:04         12345           -
RTDB-EAGLE   Y  04-06-01 08:20:04         12345           -
      EAGLE RTDB REPORT
      CARD/APPL  LOC  C  BIRTHDATE           LEVEL           EXCEPTION   IN-SRVC
-----
VSCCP         1203  Y  04-06-01 08:20:04         12340    DIFF LEVEL    10d 23h 21m
```

If the ELAP Configuration feature is enabled and on, the output of the **rept-stat-db:display=except** command also shows the status of the databases on ELAP A and ELAP B, followed by the status of the VSCCP card database, as shown in this example.

```
rlghncxa03w 06-10-01 08:55:54 GMT EAGLE5 37.6.0
```

```

rept-stat-db:display=except
DATABASE STATUS: >> OK <<
      TDM 1114 ( ACTV )
      C   LEVEL   TIME LAST BACKUP
      - - - - -
FD BKUP  Y       11 04-06-01 08:20:13 GMT
FD CRNT  Y       12
      MDAL 1117
      - - - - -
RD BKUP  Y       1 04-05-31 15:44:20 GMT

CARD/APPL LOC C T LEVEL TIME LAST UPDATE EXCEPTION
-----
SS7ANSI   1103 Y N 10 04-06-01 08:03:48 DIFF LEVEL
TDM-BKUP  1114 Y - 11 04-06-01 08:04:00 DIFF LEVEL
TDM-BKUP  1116 Y - 11 04-06-01 08:04:00 DIFF LEVEL
MDAL      1117 Y - 1 04-06-01 15:06:29 DIFF LEVEL
      ELAP A ( ACTV )
      C BIRTHDATE LEVEL EXCEPTION
      - - - - -
RTDB      Y 04-06-01 08:20:04 12345 -
RTDB-EAGLE Y 04-06-01 08:20:04 12345 -
      ELAP B ( STDBY )
      C BIRTHDATE LEVEL EXCEPTION
      - - - - -
RTDB      Y 04-06-01 08:20:04 12345 -
RTDB-EAGLE Y 04-06-01 08:20:04 12345 -
      EAGLE RTDB REPORT
CARD/APPL LOC C BIRTHDATE LEVEL EXCEPTION IN-SRVC
-----
VSCCP     1203 Y 04-06-01 08:20:04 12340 DIFF LEVEL 10d 23h 21m

```

DISPLAY=ALL Parameter

The output from the **display=all** parameter contains the same information displayed from the **display=brief** parameter as well as the coherency and the number of updates for all the databases. The time stamp for the last database update for every card is displayed. This is an example of the output when the **display=all** parameter is used.

```

rlghncxa03w 06-10-01 08:39:24 GMT EAGLE5 37.6.0
rept-stat-db:display=all
DATABASE STATUS: >> OK <<
      TDM 1114 ( ACTV )
      C   LEVEL   TIME LAST BACKUP
      - - - - -
FD BKUP  Y       11 04-06-01 08:20:13 GMT
FD CRNT  Y       11
      MDAL 1117
      - - - - -
RD BKUP  Y       1 04-05-31 15:44:20 GMT

CARD/APPL LOC C T LEVEL TIME LAST UPDATE EXCEPTION
-----
SS7ANSI   1102 Y N 11 04-06-01 08:04:00 -
SS7ANSI   1103 Y N 11 04-06-01 08:04:00 -
VSCCP     1105 Y N 11 04-06-01 08:04:00 -
STPLAN    1107 Y N 11 04-06-01 08:04:00 -
TDM-CRNT  1114 Y N 11 04-06-01 08:04:00 -
TDM-BKUP  1114 Y - 11 04-06-01 08:04:00 -
TDM-CRNT  1116 Y N 11 04-06-01 08:04:00 -
TDM-BKUP  1116 Y - 11 04-06-01 08:04:00 -
MDAL      1117 Y - 1 04-05-31 15:06:29 DIFF LEVEL
VSCCP     1201 Y N 11 04-06-01 08:04:00 -
VSCCP     1203 Y N 11 04-06-01 08:04:00 -

```

If the G-Flex feature is on, the G-Port, A-Port, or IS41 GSM Migration features are enabled, or the EIR, INP, PPSMS, ANSI-41 INP Query features are enabled and on, the output of the **rept-stat-**

db:display=all command also shows the status of the databases on EPAP A and EPAP B, followed by the status of the VSCCP card database, as shown in this example.

```
rlghncxa03w 06-10-01 08:39:24 GMT EAGLE5 37.6.0
rept-stat-db:display=all
DATABASE STATUS: >> OK <<

      TDM 1114 ( ACTV )
      C   LEVEL   TIME LAST BACKUP
      - - - - -
FD BKUP  Y       11 04-06-01 08:20:13 GMT
FD CRNT  Y       11
      MDAL 1117
      - - - - -
RD BKUP  Y       1 04-05-31 15:44:20 GMT

CARD/APPL LOC  C  T  LEVEL          TIME LAST UPDATE  EXCEPTION
-----
SS7ANSI   1102 Y  N  11          04-06-01 08:04:00    -
SS7ANSI   1103 Y  N  11          04-06-01 08:04:00    -
STPLAN    1107 Y  N  11          04-06-01 08:04:00    -
TDM-CRNT  1114 Y  N  11          04-06-01 08:04:00    -
TDM-BKUP  1114 Y  -  11          04-06-01 08:04:00    -
TDM-CRNT  1116 Y  N  11          04-06-01 08:04:00    -
TDM-BKUP  1116 Y  -  11          04-06-01 08:04:00    -
MDAL      1117 Y  -  1          04-05-31 15:06:29    DIFF LEVEL
VSCCP     1201 Y  N  11          04-06-01 08:04:00    -
VSCCP     1203 Y  N  11          04-06-01 08:04:00    -

      EPAP A ( ACTV )
      C  BIRTHDATE          LEVEL          EXCEPTION
      - - - - -
PDB       Y  04-06-01 08:20:04    12345        -
RTDB      Y  04-06-01 08:20:04    12345        -
RTDB-EAGLE Y  04-06-01 08:20:04    12345        -

      EPAP B ( STDBY )
      C  BIRTHDATE          LEVEL          EXCEPTION
      - - - - -
PDB       Y  04-06-01 08:20:04    12345        -
RTDB      Y  04-06-01 08:20:04    12345        -
RTDB-EAGLE Y  04-06-01 08:20:04    12345        -

      EAGLE RTDB REPORT
CARD/APPL LOC  C  BIRTHDATE          LEVEL          EXCEPTION  IN-SRVC
-----
VSCCP     1201 Y  04-06-01 08:20:04    12345        -          10d 23h 21m
VSCCP     1203 Y  04-06-01 08:20:04    12345        -           5d  3h  1m
VSCCP     1105 Y  04-06-01 08:20:04    12345        -           9d 12h 37m
```

If the ELAP Configuration feature is enabled and on, the output of the **rept-stat-db:display=all** command also shows the status of the databases on ELAP A and ELAP B, followed by the status of the VSCCP card database, as shown in this example.

```
rlghncxa03w 06-10-01 08:39:24 GMT EAGLE5 37.6.0
rept-stat-db:display=all
DATABASE STATUS: >> OK <<

      TDM 1114 ( ACTV )
      C   LEVEL   TIME LAST BACKUP
      - - - - -
FD BKUP  Y       11 04-06-01 08:20:13 GMT
FD CRNT  Y       11
      MDAL 1117
      - - - - -
RD BKUP  Y       1 04-05-31 15:44:20 GMT

CARD/APPL LOC  C  T  LEVEL          TIME LAST UPDATE  EXCEPTION
-----
SS7ANSI   1102 Y  N  11          04-06-01 08:04:00    -
SS7ANSI   1103 Y  N  11          04-06-01 08:04:00    -
```

VSCCP	1105	Y	N	11	04-06-01 08:04:00	-
STPLAN	1107	Y	N	11	04-06-01 08:04:00	-
TDM-CRNT	1114	Y	N	11	04-06-01 08:04:00	-
TDM-BKUP	1114	Y	-	11	04-06-01 08:04:00	-
TDM-CRNT	1116	Y	N	11	04-06-01 08:04:00	-
TDM-BKUP	1116	Y	-	11	04-06-01 08:04:00	-
MDAL	1117	Y	-	1	04-05-31 15:06:29	DIFF LEVEL
VSCCP	1201	Y	N	11	04-06-01 08:04:00	-
VSCCP	1203	Y	N	11	04-06-01 08:04:00	-

ELAP A (ACTV)					
	C	BIRTHDATE	LEVEL	EXCEPTION	
	-	-	-	-	-
RTDB	Y	04-06-01 08:20:04	12345	-	
RTDB-EAGLE		04-06-01 08:20:04	12345	-	

ELAP B (STDBY)					
	C	BIRTHDATE	LEVEL	EXCEPTION	
	-	-	-	-	-
RTDB	Y	04-06-01 08:20:04	12345	-	
RTDB-EAGLE		04-06-01 08:20:04	12345	-	

EAGLE RTDB REPORT						
CARD/APPL	LOC	C	BIRTHDATE	LEVEL	EXCEPTION	IN-SRVC
VSCCP	1201	Y	04-06-01 08:20:04	12345	-	10d 23h 21m
VSCCP	1203	Y	04-06-01 08:20:04	12345	-	5d 3h 1m
VSCCP	1105	Y	04-06-01 08:20:04	12345	-	9d 12h 37m

DISPLAY=VERSION Parameter

The output from the **display=version** parameter contains the same information displayed from the **display=all** parameter except that the **EXCEPTION** field is replaced with the **VERSION** and **STATUS** fields. The **display=version** parameter displays this information.

- the coherency indicator for each database
- the number of updates for the active and standby databases
- the database version of each database
- the operational status of each database

This is an example of the output when the **display=version** parameter is used.

```

rlghncxa03w 06-10-01 08:18:47 GMT EAGLE5 37.6.0
DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( ACTV )          TDM 1116 ( STDBY)
      C  LEVEL    TIME LAST BACKUP  C  LEVEL    TIME LAST BACKUP
-----
FD BKUP  Y        74 04-06-01 23:30:05 GMT  Y        74 04-06-01 23:30:05 GMT
FD CRNT  N        78 CORRUPTED             Y        75 DIFF LEVEL
      MDAL 1117
      - - - - -
RD BKUP  -        -        -        -

```

CARD/APPL	LOC	C	T	LEVEL	TIME LAST UPDATE	VERSION	STATUS
TDM-CRNT	1114	Y	N	78	04-06-01 23:15:06	111-000-000	NORMAL
TDM-BKUP	1114	Y	-	74	04-06-01 17:24:29	123-081-188	249
TDM-CRNT	1116	Y	N	75	04-06-01 23:47:05	111-000-000	NORMAL
TDM-BKUP	1116	Y	-	74	04-06-01 17:24:29	123-081-188	249
MDAL	1117	-	-	-	-	-	-

If the LNP feature is enabled, shown by the entry **LNP TNS** in the **rtrv-ctrl-feat** command output with a quantity greater than zero, the output of the **rept-stat-db:display=version** command include the version number of the LNP database with each database listed in the **CARD/APPL** field as shown in this example.

```
rlghncxa03w 06-10-01 11:34:04 GMT EAGLE5 37.6.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( ACTV )          TDM 1116 ( STDBY )
      C  LEVEL    TIME LAST BACKUP  C  LEVEL    TIME LAST BACKUP
-----
FD BKUP  Y        74 04-05-31 21:03:21 GMT  Y        74 04-05-31 21:03:21 GMT
FD CRNT  Y        78                      Y        78
      MDAL 1117
      -
RD BKUP  Y        74 04-05-31 21:03:21 GMT

CARD/APPL  LOC  C  T  LEVEL    TIME LAST UPDATE  VERSION STATUS
-----
TDM-CRNT   1114 Y  N  78        04-06-01 23:12:37  111-000-000  NORMAL
LNP
TDM-BKUP   1114 Y  -  74        04-05-31 21:03:21  111-000-000  NORMAL
LNP
TDM-CRNT   1116 Y  N  78        04-06-01 23:12:37  111-000-000  NORMAL
LNP
TDM-BKUP   1116 Y  -  74        04-05-31 21:03:21  111-000-000  NORMAL
LNP
MDAL       1117 Y  -  74        04-05-31 21:03:21  111-000-000  NORMAL
LNP
```

If the G-Flex feature is on, the G-Port, A-Port, or IS41 GSM Migration features are enabled, or the EIR, INP, PPSMS, ANSI-41 INP Query features are enabled and on, the output of the **rept-stat-db:display=version** command also shows the status of the databases on EPAP A and EPAP B, followed by the status of the VSCCP card database, as shown in this example.

```
rlghncxa03w 06-10-01 08:18:47 GMT EAGLE5 37.6.0
DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( ACTV )          TDM 1116 ( STDBY )
      C  LEVEL    TIME LAST BACKUP  C  LEVEL    TIME LAST BACKUP
-----
FD BKUP  Y        74 04-06-01 23:30:05 GMT  Y        74 04-06-01 23:30:05 GMT
FD CRNT  N        78 CORRUPTED              Y        75 DIFF LEVEL
      MDAL 1117
      -
RD BKUP  -        -        -        -

CARD/APPL  LOC  C  T  LEVEL    TIME LAST UPDATE  VERSION STATUS
-----
TDM-CRNT   1114 Y  N  78        04-06-01 23:15:06  111-000-000  NORMAL
TDM-BKUP   1114 Y  -  74        04-06-01 17:24:29  123-081-188  249
TDM-CRNT   1116 Y  N  75        04-06-01 23:47:05  111-000-000  NORMAL
TDM-BKUP   1116 Y  -  74        04-06-01 17:24:29  123-081-188  249
MDAL       1117 -  -  -        -        -        -

      EPAP A ( ACTV )
      C  BIRTHDATE          LEVEL    EXCEPTION
      -
PDB      04-06-01 10:19:18      8        -
RTDB      Y  04-06-01 10:19:18      8        -
RTDB-EAGLE 04-06-01 10:19:18      8  CORRUPTED

      EPAP B ( STDBY )
      C  BIRTHDATE          LEVEL    EXCEPTION
      -
PDB      04-06-01 10:19:18      8        -
RTDB      Y  04-06-01 10:19:18     10        -
RTDB-EAGLE 04-06-01 10:10:18     10  DIFF LEVEL
```

```
      EAGLE RTDB REPORT
CARD/APPL  LOC  C  BIRTHDATE          LEVEL    EXCEPTION
-----
```

```

VSCCP      1101  -  -  -  -  -
VSCCP      1103  N  04-06-01 10:19:18      8  -
VSCCP      1213  Y  04-06-01 10:10:18      10 DIFF LEVEL

```

If the ELAP Configuration feature is enabled and on, the output of the **rept-stat-db:display=version** command also shows the status of the databases on ELAP A and ELAP B, followed by the status of the VSCCP card database, as shown in this example.

```

rlghncxa03w 06-10-01 08:18:47 GMT EAGLE5 37.6.0
DATABASE STATUS: >> NOT OK <<

      TDM 1114 ( ACTV )
      C  LEVEL      TIME LAST BACKUP
      -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -
FD BKUP  Y          74 04-06-01 23:30:05 GMT Y      74 04-06-01 23:30:05 GMT
FD CRNT  N          78 CORRUPTED              Y      75 DIFF LEVEL
      MDAL 1117
      -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -
RD BKUP  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -

CARD/APPL LOC  C  T  LEVEL      TIME LAST UPDATE      VERSION      STATUS
-----
TDM-CRNT  1114 Y  N  78      04-06-01 23:15:06    111-000-000    NORMAL
TDM-BKUP  1114 Y  -  74      04-06-01 17:24:29    123-081-188    249
TDM-CRNT  1116 Y  N  75      04-06-01 23:47:05    111-000-000    NORMAL
TDM-BKUP  1116 Y  -  74      04-06-01 17:24:29    123-081-188    249
MDAL      1117 -  -  -      -      -      -      -

      ELAP A ( ACTV )
      C  BIRTHDATE      LEVEL      EXCEPTION
      -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -
RTDB-EAGLE Y      04-06-01 10:19:18      10 DIFF LEVEL
TIME LAST UPDATE      04-06-01 16:01:48

      ELAP B ( STDBY )
      C  BIRTHDATE      LEVEL      EXCEPTION
      -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -
RTDB-EAGLE Y      04-06-01 10:19:18      10 DIFF LEVEL
TIME LAST UPDATE      04-06-01 16:01:48

      EAGLE RTDB REPORT
CARD/APPL LOC  C  T  LEVEL      TIME LAST UPDATE      EXCEPTION
-----
VSCCP      1101  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -
VSCCP      1103  N  04-06-01 10:19:18      8  -
VSCCP      1213  Y  04-06-01 10:10:18      10 DIFF LEVEL

```

LOC Parameter

The output from the **loc** parameter contains the coherency and the number of updates of the database on the specified application board. The time stamp for the last database update for the specified card is displayed. This is an example of the output when the **loc** parameter is used.

```

rlghncxa03w 06-10-01 08:37:39 GMT EAGLE5 37.6.0
CARD/APPL LOC  C  T  LEVEL      TIME LAST UPDATE      EXCEPTION
-----
CCS7ITU   1207 Y  N  78      04-06-01 23:15:06      -

```

If the G-Flex feature is on, the G-Port, A-Port, or IS41 GSM Migration features are enabled, or the EIR, INP, PPSMS, ANSI-41 INP Query features are enabled and on, or ELAP Configuration features are enabled and on, and the card being displayed is a VSCCP card, the output of the **rept-stat-db** command also contains the status of the VSCCP card database, as shown in this example.

```

CARD/APPL LOC  C  T  LEVEL      TIME LAST UPDATE      EXCEPTION
-----
VSCCP      1213 Y  N          78 04-06-01 23:15:06      -

```

CARD/APPL	LOC	C	BIRTHDATE	LEVEL	EXCEPTION
VSCCP	1213	Y	04-06-01 10:10:18	10	DIFF LEVEL

DB Parameter

The DB parameter specifies which databases to display. Through the DB parameter, you can specify the output to report on:

- EAGLE 5 ISS databases (**db=stp**)
- MPS/ELAP/EPAP databases (**db=mps**), which support the G-Port, G-Flex, PPSMS, INP, EIR, ANSI-41 INP Query, A-Port, and IS41 GSM Migration features, and the LNP feature when the ELAP Configuration feature is enabled and on.
- All databases (**db=all**), the default value that provides output for both the STP and MPS databases.

The following example shows an output when the **db=stp** parameter is used on an ELAP or an EPAP.

```
rlghncxa03w 06-10-01 08:39:24 GMT EAGLE5 37.6.0
rept-stat-db:db=stp
DATABASE STATUS: >> OK <<
      TDM 1114 ( ACTV )      TDM 1116 ( STDBY)
      C  LEVEL    TIME LAST BACKUP  C  LEVEL    TIME LAST BACKUP
-----
FD BKUP  Y        11 04-06-01 08:20:13 GMT  Y        11 04-06-01 08:20:13 GMT
FD CRNT  Y        11
MDAL 1117
-----
RD BKUP  Y        1 04-05-31 15:44:20 GMT
```

The output from the **db** parameter provides expanded detail about the cards in the EAGLE 5 ISS when the **display=all** parameter is used with the **db=stp** parameter, as shown in this example.

```
rlghncxa03w 06-10-01 08:39:24 GMT EAGLE5 37.6.0
rept-stat-db:display=all:db=stp
DATABASE STATUS: >> OK <<
      TDM 1114 ( ACTV )      TDM 1116 ( STDBY)
      C  LEVEL    TIME LAST BACKUP  C  LEVEL    TIME LAST BACKUP
-----
FD BKUP  Y        11 04-06-01 08:20:13 GMT  Y        11 04-06-01 08:20:13 GMT
FD CRNT  Y        11
MDAL 1117
-----
RD BKUP  Y        1 04-05-31 15:44:20 GMT

CARD/APPL  LOC  C  T  LEVEL    TIME LAST UPDATE  EXCEPTION
-----
SS7ANSI    1102 Y  N  11      04-06-01 08:04:00  -
SS7ANSI    1103 Y  N  11      04-06-01 08:04:00  -
VSCCP      1105 Y  N  11      04-06-01 08:04:00  -
STPLAN     1107 Y  N  11      04-06-01 08:04:00  -
TDM-CRNT   1114 Y  N  11      04-06-01 08:04:00  -
TDM-BKUP   1114 Y  -  11      04-06-01 08:04:00  -
TDM-CRNT   1116 Y  N  11      04-06-01 08:04:00  -
TDM-BKUP   1116 Y  -  11      04-06-01 08:04:00  -
MDAL       1117 Y  -  1       04-05-31 15:06:29  DIFF LEVEL
VSCCP      1201 Y  N  11      04-06-01 08:04:00  -
```

The output from the following **db** parameter displays the MPS database in an ELAP. Because the **display** parameter is not specified, its default of **brief** is used, resulting in no information about any RTDB cards and reporting on only the MPS databases.

```
rlghncxa03w 06-10-01 08:39:24 GMT EAGLE5 37.6.0
rept-stat-db:db=mps
```

ELAP A (ACTV)				
	C	BIRTHDATE	LEVEL	EXCEPTION
RTDB	Y	04-06-01 08:20:04	12345	-
RTDB-EAGLE		04-06-01 08:20:04	12345	-

ELAP B (STDBY)				
	C	BIRTHDATE	LEVEL	EXCEPTION
RTDB	Y	04-06-01 08:20:04	12345	-
RTDB-EAGLE		04-06-01 08:20:04	12345	-

When the ELAP Configuration feature is enabled and on, the MPS/ELAP databases are used. The following sample shows the output for **db=mps** to display the MPS databases and for **display=except** to display RTDB card exception conditions.

```
rlghncxa03w 06-10-01 08:55:54 GMT EAGLE5 37.6.0
rept-stat-db:display=except:db=mps
```

ELAP A (ACTV)				
	C	BIRTHDATE	LEVEL	EXCEPTION
RTDB	Y	04-06-01 08:20:04	12345	-
RTDB-EAGLE	Y	04-06-01 08:20:04	12345	-

ELAP B (STDBY)				
	C	BIRTHDATE	LEVEL	EXCEPTION
RTDB	Y	04-06-01 08:20:04	12345	-
RTDB-EAGLE	Y	04-06-01 08:20:04	12345	-

EAGLE RTDB REPORT						
CARD/APPL	LOC	C	BIRTHDATE	LEVEL	EXCEPTION	IN-SRVC
VSCCP	1203	Y	04-06-01 08:20:04	12340	DIFF LEVEL	5d 3h 1m

When the G-Flex feature is on, the G-Port, A-Port, or IS41 GSM Migration features are enabled, or the EIR, INP, PPSMS, ANSI-41 INP Query features are enabled and on, the MPS/EPAP databases are used. Output from the DB parameter provides expanded detail about the databases and cards in the MPS/EPAP when the **display=all** parameter is used with the **db=mps** parameter, as shown in this example.

```
rlghncxa03w 06-10-01 08:39:24 GMT EAGLE5 37.6.0
rept-stat-db:display=all:db=mps
```

EPAP A (ACTV)				
	C	BIRTHDATE	LEVEL	EXCEPTION
PDB	Y	04-06-01 08:20:04	12345	-
RTDB	Y	04-06-01 08:20:04	12345	-
RTDB-EAGLE	Y	04-06-01 08:20:04	12345	-

EPAP B (STDBY)				
	C	BIRTHDATE	LEVEL	EXCEPTION
PDB	Y	04-06-01 08:20:04	12345	-
RTDB	Y	04-06-01 08:20:04	12345	-
RTDB-EAGLE	Y	04-06-01 08:20:04	12345	-

EAGLE RTDB REPORT						
CARD/APPL	LOC	C	BIRTHDATE	LEVEL	EXCEPTION	IN-SRVC

```

-----
VSCCP      1201  Y  04-06-01 08:20:04      12345      -      10d 23h 21m
VSCCP      1203  Y  04-06-01 08:20:04      12345      -      5d  3h  1m
VSCCP      1105  Y  04-06-01 08:20:04      12345      -      9d 12h 37m

```

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, go to the [Making a Backup of the Database on the Fixed Disk](#) procedure.

```

rlghncxa03w 06-10-01 16:07:48 GMT  EAGLE5 37.6.0
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  -          -          -

```

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, go to the [Making a Backup of the Database to the Removable Cartridge](#) procedure.

```

rlghncxa03w 06-10-01 16:07:48 GMT  EAGLE5 37.6.0
DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( STDBY)      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP  Y          35 04-06-01 10:19:18 GMT  Y          35 04-06-01 10:19:18 GMT
FD CRNT  Y          106                  Y          106
      MDAL 1117
      -
RD BKUP  N          106 INCOHERENT

```

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, go to the [Restoring the Database from the Backup Partition of the Fixed Disk](#) procedure. This condition is shown in this example output of the **rept-stat-db** command.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 37.6.0
DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( STDBY)          TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP  C  LEVEL      TIME LAST BACKUP
      -----
FD BKUP  Y          35 04-06-01 10:19:18 GMT  Y          35 04-06-01 10:19:18 GMT
FD CRNT  Y          35 DIFF LEVEL           N          68 INCOHERENT
      MDAL 1117
      -----
RD BKUP  -          -          -          -
```

- 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, go to the [Restoring the Database from the Removable Cartridge](#) procedure. This condition is shown in this example output of the **rept-stat-db** command.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 37.6.0
DATABASE STATUS: >> NOT OK <<
      TDM 1114 ( STDBY)          TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP  C  LEVEL      TIME LAST BACKUP
      -----
FD BKUP  Y          35 04-06-01 10:19:18 GMT  Y          35 04-06-01 10:19:18 GMT
FD CRNT  Y          106 DIFF LEVEL           N          93 INCOHERENT
      MDAL 1117
      -----
RD BKUP  Y          106 04-05-31 14:29:03 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, go to the [Repairing the Database](#) procedure. This condition is shown in this example output of the **rept-stat-db** command.

```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 37.6.0
DATABASE STATUS: >> NOT 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 DIFF LEVEL
      MDAL 1117
      -----
RD BKUP  -          -          -          -
```

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

Backing Up the Database

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, either the backup partition of the fixed disk (**fixed**) or the removable cartridge (**remove**). If the **dest** parameter is not specified, the current database is backed up to the backup partition of the fixed disk.

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, read [Verifying the Database](#) .

Procedure

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.

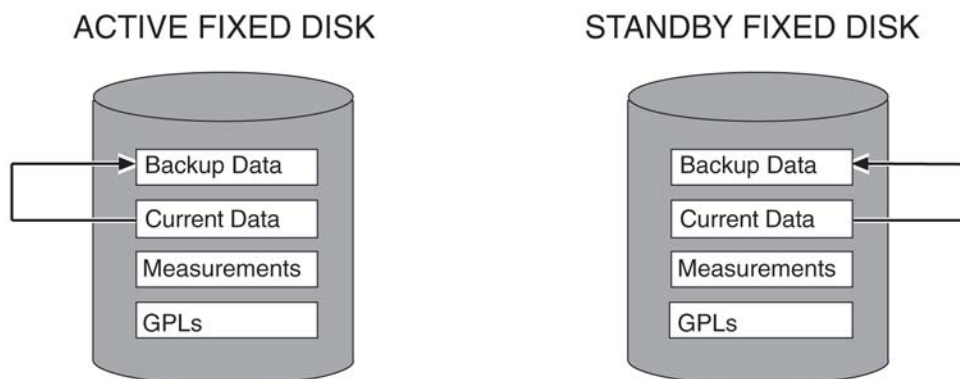
```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY)
      C  LEVEL      TIME LAST BACKUP
      -----
FD BKUP  Y          35 04-06-01 10:19:18 GMT
FD CRNT  Y          106
      MDAL 1117
      -----
RD BKUP  Y          106 04-05-31 14:29:03 GMT
```

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 2-5](#) .

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

Figure 2-5. 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.

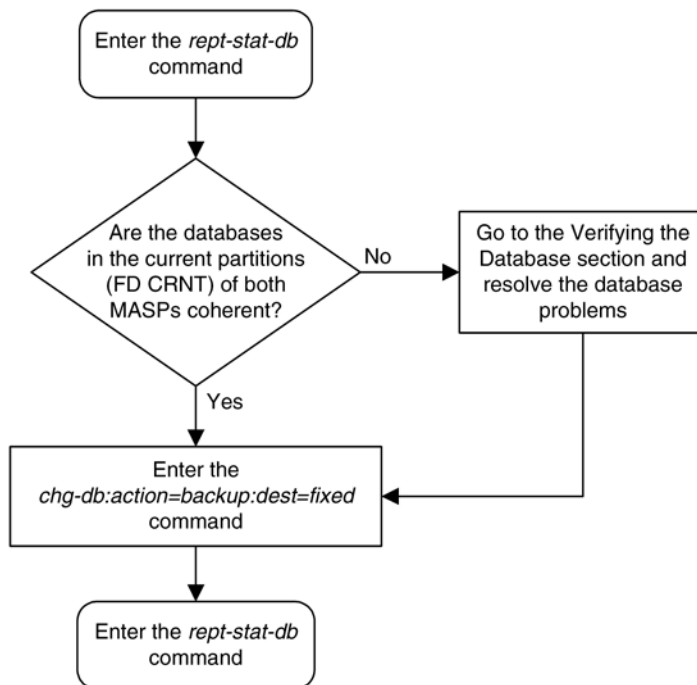
This is an example of the possible output.

```

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

```

Flowchart 2-1. Making a Backup of the Database to the Fixed Disk



Making a Backup of the Database to the Removable Cartridge

This procedure is used to make a backup of the database to the removable cartridge 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, read [Verifying the Database](#).

A formatted blank removable cartridge that is write enabled is required. If the removable cartridge is not formatted, go to the [Formatting a Removable Cartridge](#) and format the cartridge. To write enable a removable cartridge, see [Write Enabling the Removable Cartridge](#).

Procedure

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                      Y          106
      MDAL 1117
      -----
RD BKUP -          -          -          -          -          -
```

2. Insert the pre-formatted removable cartridge in the removable cartridge drive on the MDAL card.

For more information on inserting the removable cartridge in the removable cartridge drive, see [Inserting the Removable Cartridge](#).

3. Enter the **chg-db:action=backup:dest=remove** command.

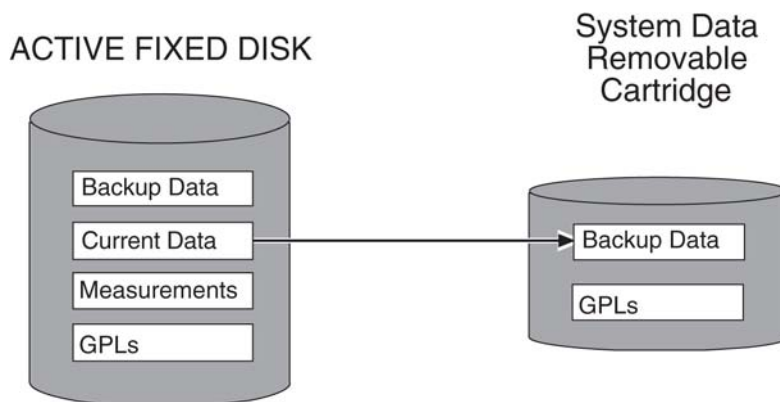
During command execution, these messages should appear.

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

This command is only performed on the active MASP. The action of this command is shown in [Figure 2-6](#). 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 for assistance. Refer to [Customer Care Center](#) for the contact information.

Figure 2-6. Backup Action to the Removable Cartridge



4. Verify that the databases on the removable cartridge (RD BKUP) and the current partition of the active MASP (FD CRNT) are 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		Y	106		
		MDAL 1117					
RD BKUP	Y	106	04-05-31 16:09:53 GMT				

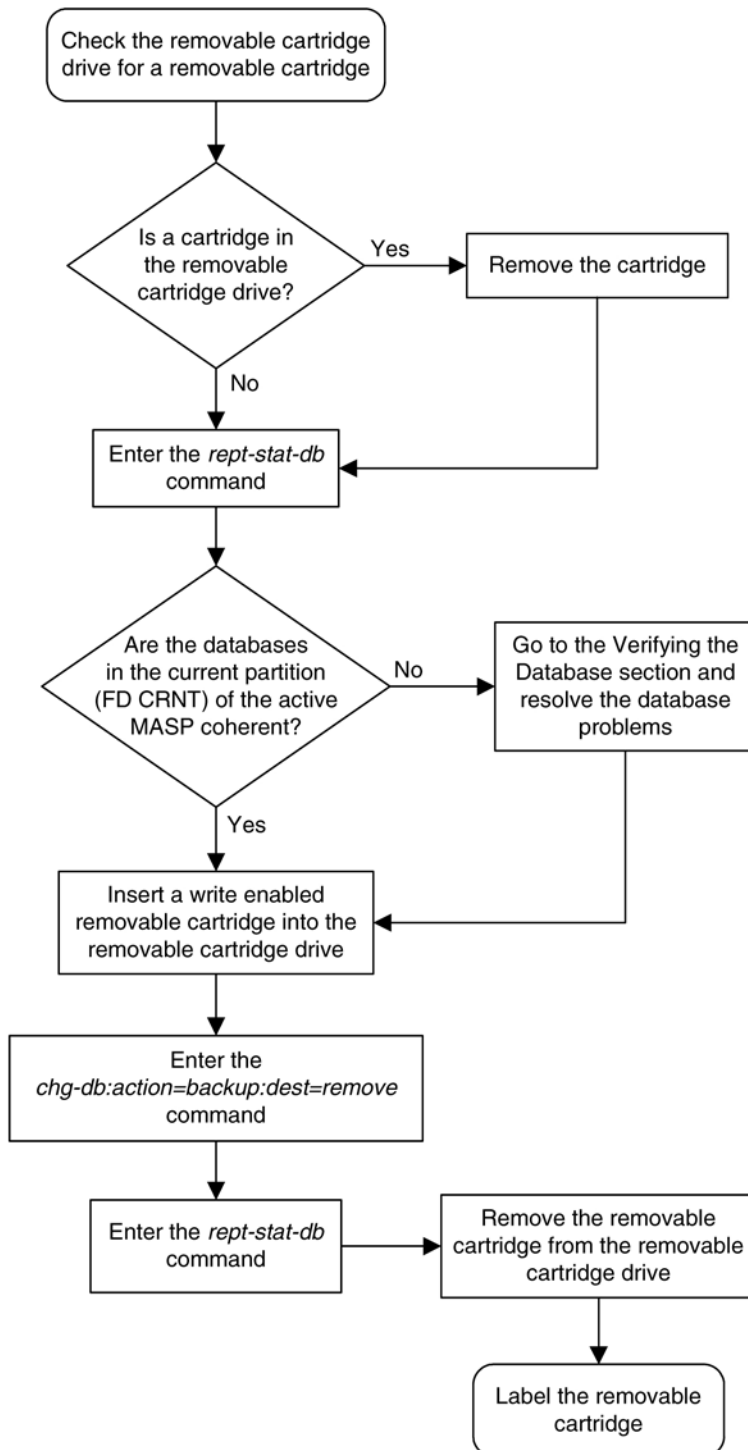
- Remove the removable cartridge from the removable cartridge drive on the MDAL card.

For more information on removing the removable cartridge from the removable cartridge drive, see [Removing the Removable Cartridge](#) .

- Label the removable cartridge, 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, see Chapter 2, “Preventive Maintenance,” in the *Maintenance Manual*. Store this cartridge in a secure place.

Flowchart 2-2. Making a Backup of the Database to the Removable Cartridge



Restoring the Database

The **restore** procedures are used to bring a database from the backup partition of both MASP's and load the database onto the current partitions of both MASP's. It is also used to load a database from a removable cartridge onto the current partitions of both MASP's. 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 being restored, either the backup partition of the fixed disk (**fixed**) or the removable cartridge (**remove**). If the **src** parameter is not specified, the database is restored from the backup partition of the fixed disk (**fixed**).



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 MASPs (RD BKUP) must be coherent. For more information on verifying the database, read [Verifying the Database](#) .



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.

Procedure

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)
          C  LEVEL          TIME LAST BACKUP
          -  - - - - -
FD BKUP  Y           35 04-06-01 10:19:18 GMT
FD CRNT  Y           106
          MDAL 1117
          -  - - - - -
RD BKUP  -           -           -           -

```

2. 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](#) for the contact information.

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

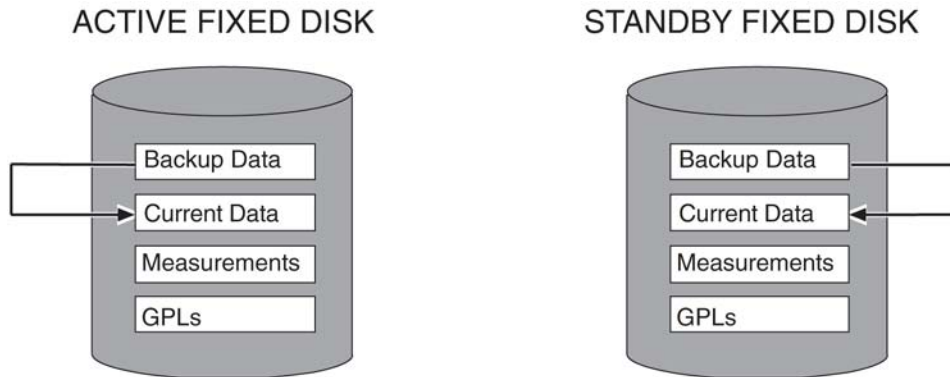
```

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 2-7](#) .

Figure 2-7. Restore Action on the Fixed Disk



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



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 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.

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.

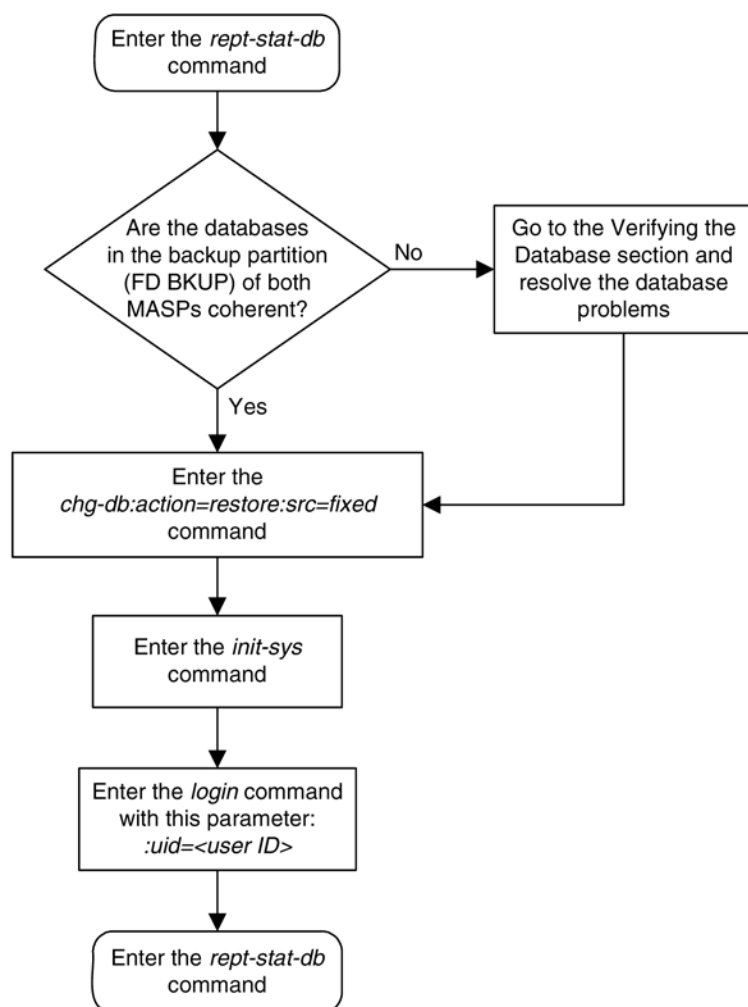
NOTICE: This is a private computer system.
Unauthorized access or use may lead to prosecution.

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                      Y          35
MDAL 1117
      -  - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
RD BKUP  -          -          -          -
```

Flowchart 2-3. Restoring the Database from the Fixed Disk

Restoring the Database from the Removable Cartridge

This procedure is used to restore the database from the removable cartridge using the **chg-db** command with the **action=restore** and **src=remove** parameters.

The database on the removable cartridge (RD BKUP) must be coherent. For more information on verifying the database, see the [Verifying the Database](#) section.

The removable cartridge must contain the database configuration to be restored. The removable cartridge should be write protected. To write protect a removable cartridge, see the [Write Protecting the Removable Cartridge](#) section.



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.

Procedure

1. 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, see the [Removing the Removable Cartridge](#) section.

2. 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, see the [Inserting the Removable Cartridge](#) section.

3. Verify that the database on the removable cartridge (RD BKUP) is coherent using the **rept-stat-db** command.

This is an example of the possible output.

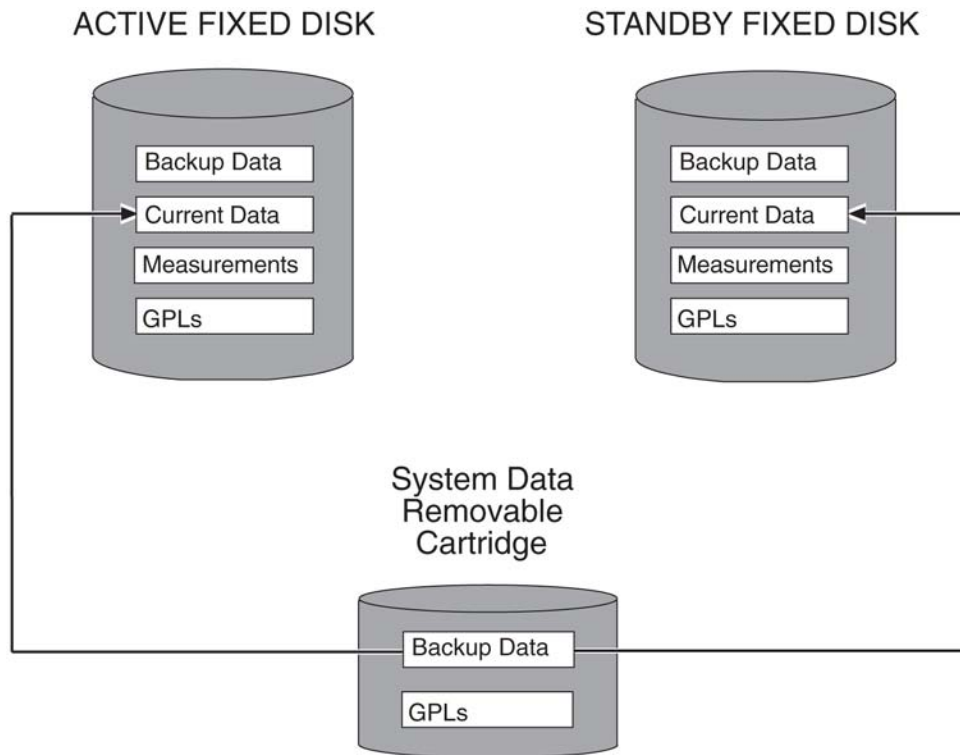
```
rlghncxa03w 06-10-01 16:07:48 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( STDBY)          TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP  C  LEVEL      TIME LAST BACKUP
-----
FD BKUP  Y          35 04-06-01 10:19:18 GMT  Y          35 04-06-01 10:19:18 GMT
FD CRNT  Y    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

4. Enter the **chg-db:action=restore:src=remove** 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 for assistance. Refer to [Customer Care Center](#) for the contact information.

The action of this command is shown in [Figure 2-8](#) .

Figure 2-8. Restore Action from the Removable Cartridge

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

```
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 cartridge complete.
```

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.

5. 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 6](#) (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.

6. 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
```

7. 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.

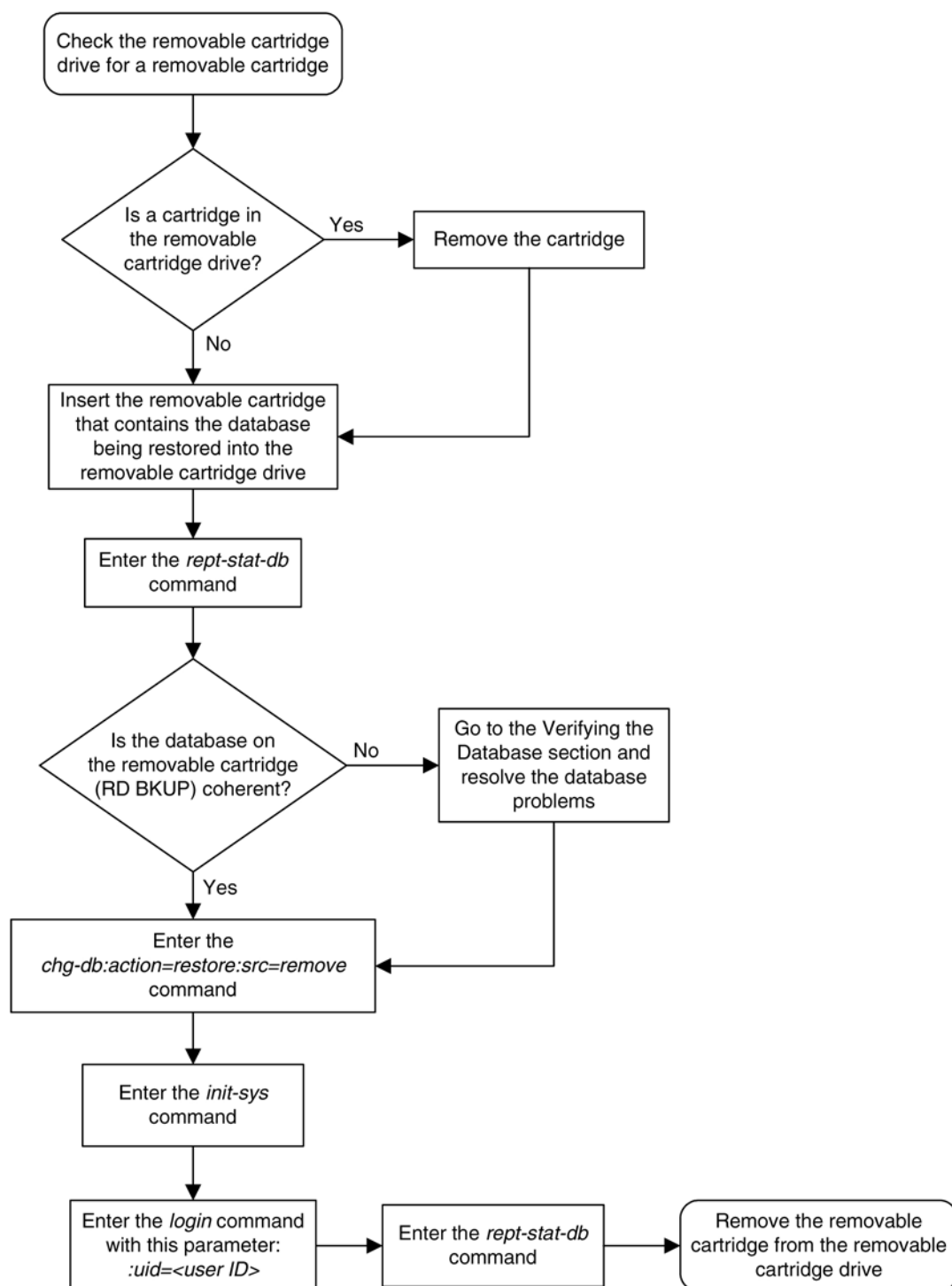
This is an example of the possible output.

```
rlghncxa03w 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                      Y          106
      MDAL 1117
      - - - - -
RD BKUP  Y          106 04-05-31 20:27:53 GMT
```

8. 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, see the [Removing the Removable Cartridge](#) section.

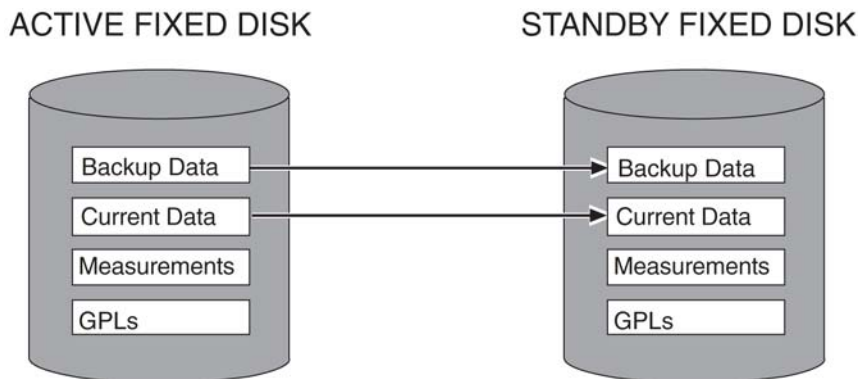
Flowchart 2-4. Restoring the Database from the Removable Cartridge



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 2-9](#) 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 2-9. 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, read the [Verifying the Database](#) section.



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.

Procedure

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-db** command.

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  N          35 INCOHERENT          Y          55 DIFF LEVEL
FD CRNT  N          106 INCOHERENT          Y          55
      MDAL 1117
      - - - - -
RD BKUP  -          -          -          -
```

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 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	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

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	YES	YES	YES	YES	YES	YES	YES
7	YES	YES	YES	YES	YES	YES	YES
8	NO	NO	NO	NO	YES	NO	YES
9	YES	YES	YES	YES	YES	YES	YES
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

```

```

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 YES YES
7 NO YES 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 NO
11 NO NO 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 NO NO
13 NO NO 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 NO NO
15 NO NO 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 NO NO
17 NO NO 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 YES NO
19 NO NO 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 NO NO
21 NO NO 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 NO NO
23 NO NO 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 NO NO
25 NO NO 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 NO NO
27 NO NO NO NO NO NO NO NO NO NO NO NO YES NO
28 NO NO 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 NO NO
30 NO NO 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 NO NO
32 NO NO 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 NO NO
34 NO NO 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 NO NO
36 NO NO 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 NO NO
38 NO NO 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 NO NO
40 NO NO NO NO NO NO NO NO NO NO NO NO NO NO

```

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 `rtv-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](#) 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                      Y          55
      MDAL 1117
      -  - - - - -
RD BKUP  -          -          -          -
```

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.

7. 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
```

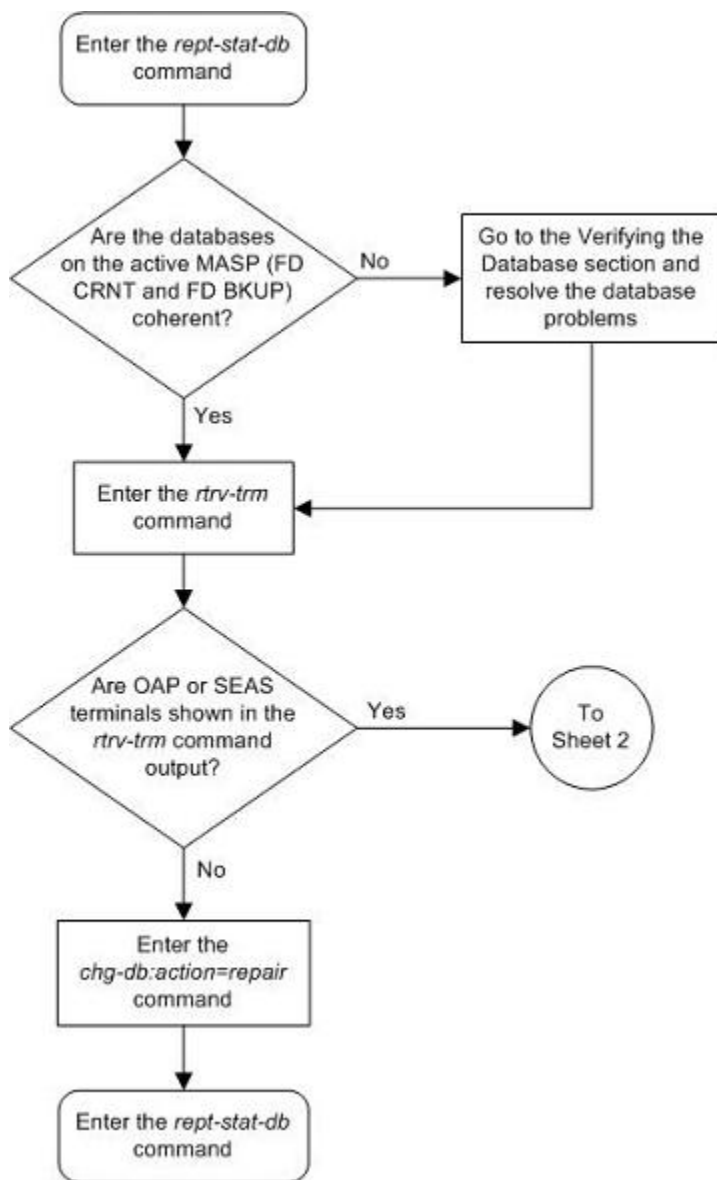
```
rst-trm:trm=27
```

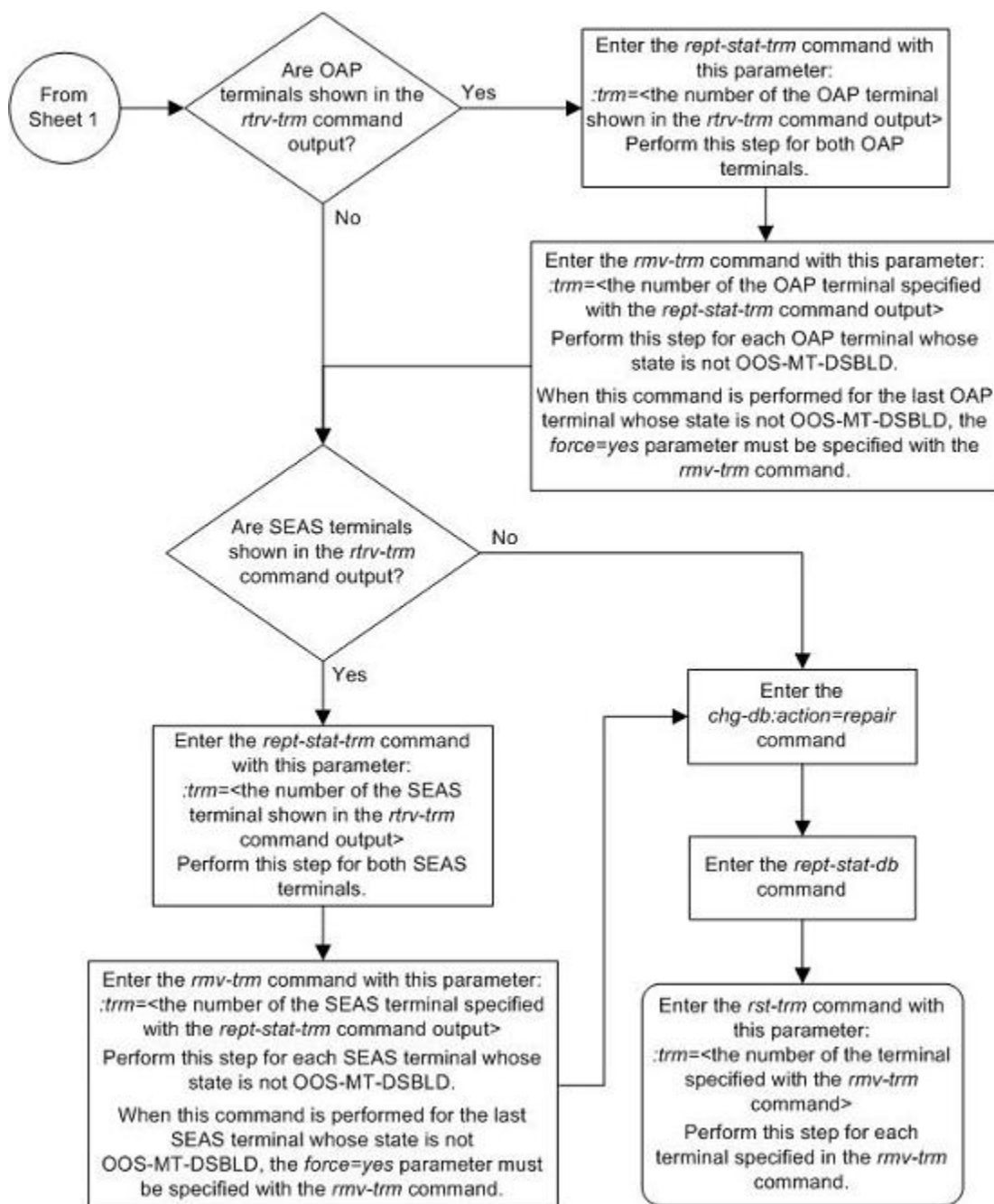
This message should appear when each command has successfully completed.

```
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.
```

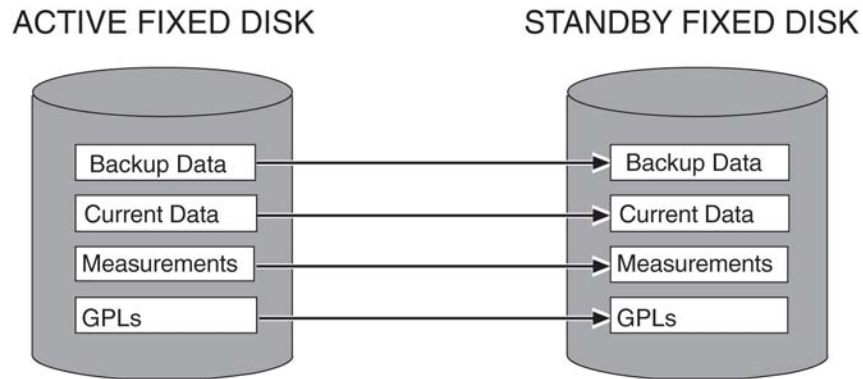

Flowchart 2-5. Repairing the Database





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 2-10](#) shows the action of the **copy-disk** command.

Figure 2-10. 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](#) for the contact information. If the **copy-disk** operation without the low-level format exceeds 1.5 hours, call 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, read the [Verifying the Database](#) section. 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: 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.

Procedure

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-db** command.

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  -          -          -          -          -          -
```

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
MTCD-STP       = on
MTCD-LINK      = on
MTCD-STPLAN    = on
MTCD-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-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 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:slog=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 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 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-O-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

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	YES	YES	YES	YES	YES	YES	YES
7	YES	YES	YES	YES	YES	YES	YES
8	NO	NO	NO	NO	YES	NO	YES
9	YES	YES	YES	YES	YES	YES	YES
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

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 YES NO 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 YES YES
7 NO YES 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 NO NO
11 NO NO NO 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 NO NO NO
13 NO NO NO 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 NO NO NO
15 NO NO NO 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 NO NO NO
17 NO NO NO 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 YES NO
19 NO NO 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 NO NO
21 NO NO 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 NO NO
23 NO NO 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 NO NO
25 NO NO 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 NO NO
27 NO NO NO NO NO NO NO NO NO NO NO NO YES NO
28 NO NO 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 NO NO
30 NO NO 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 NO NO
32 NO NO 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 NO NO
34 NO NO 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 NO NO
36 NO NO 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 NO NO
38 NO NO 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 NO NO
40 NO NO NO NO NO NO NO NO NO NO NO NO NO NO

```

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 1: 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](#) for the contact information. If the copy-disk operation without the low-level format exceeds 1.5 hours, call the [Customer Care Center](#).



WARNING: Failure of the **copy-disk** command may result in corrupted TDMs. If you experience a **copy-disk** command failure, call the Customer Care Center for assistance. Refer to [Customer Care Center](#) 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)      TDM 1116 ( ACTV )
      C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP
-----
FD BKUP  Y          95 04-06-01 05:53:36 GMT  Y          95 04-06-01 05:53:36 GMT
FD CRNT  Y          105                      Y          105
MDAL 1117
-----
RD BKUP  -          -          -          -          -          -
```

If OAP or SEAS terminals are shown in the `rtrv-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.

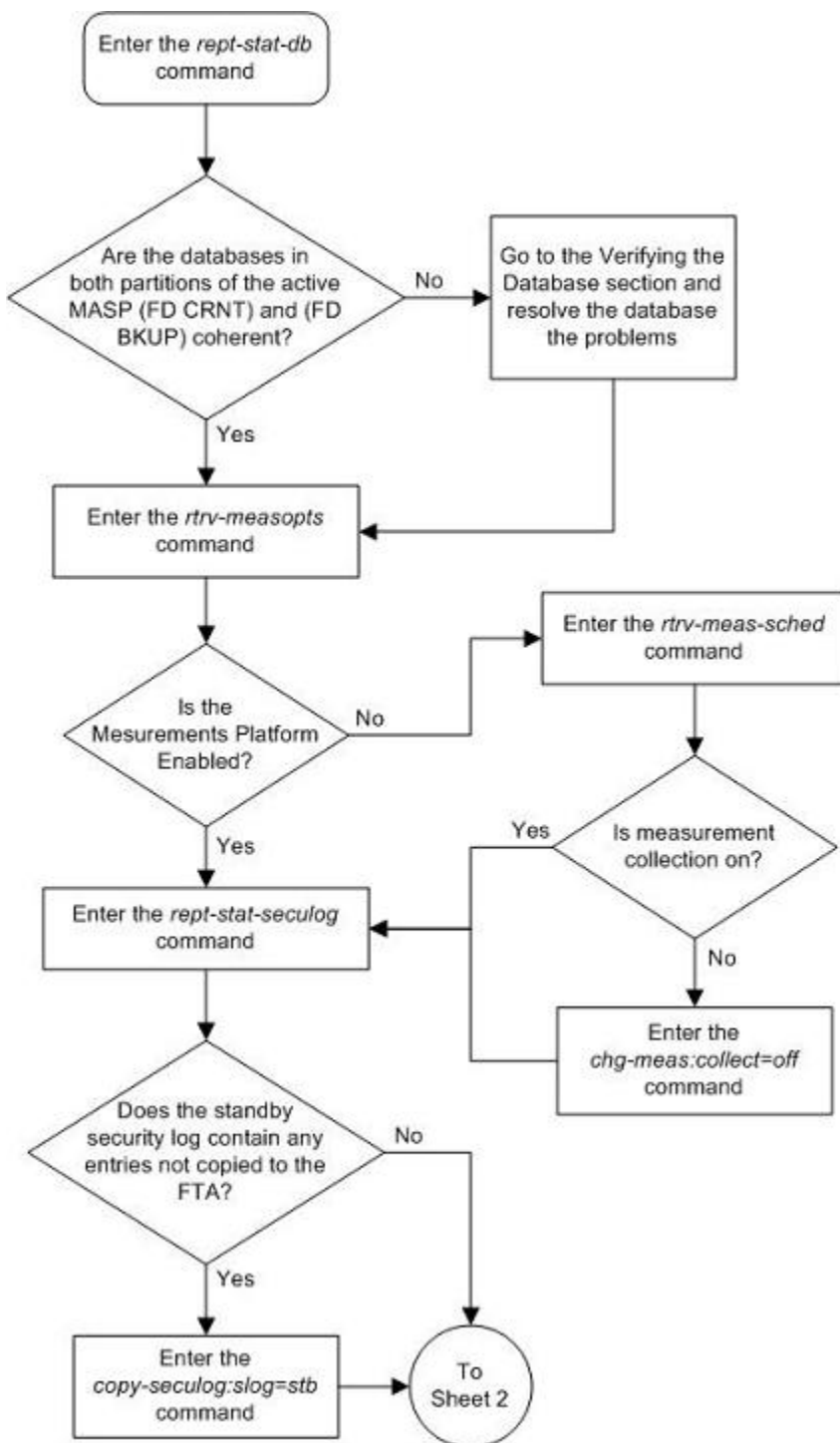
```
rst-trm:trm=6
rst-trm:trm=9
rst-trm:trm=18
rst-trm:trm=27
```

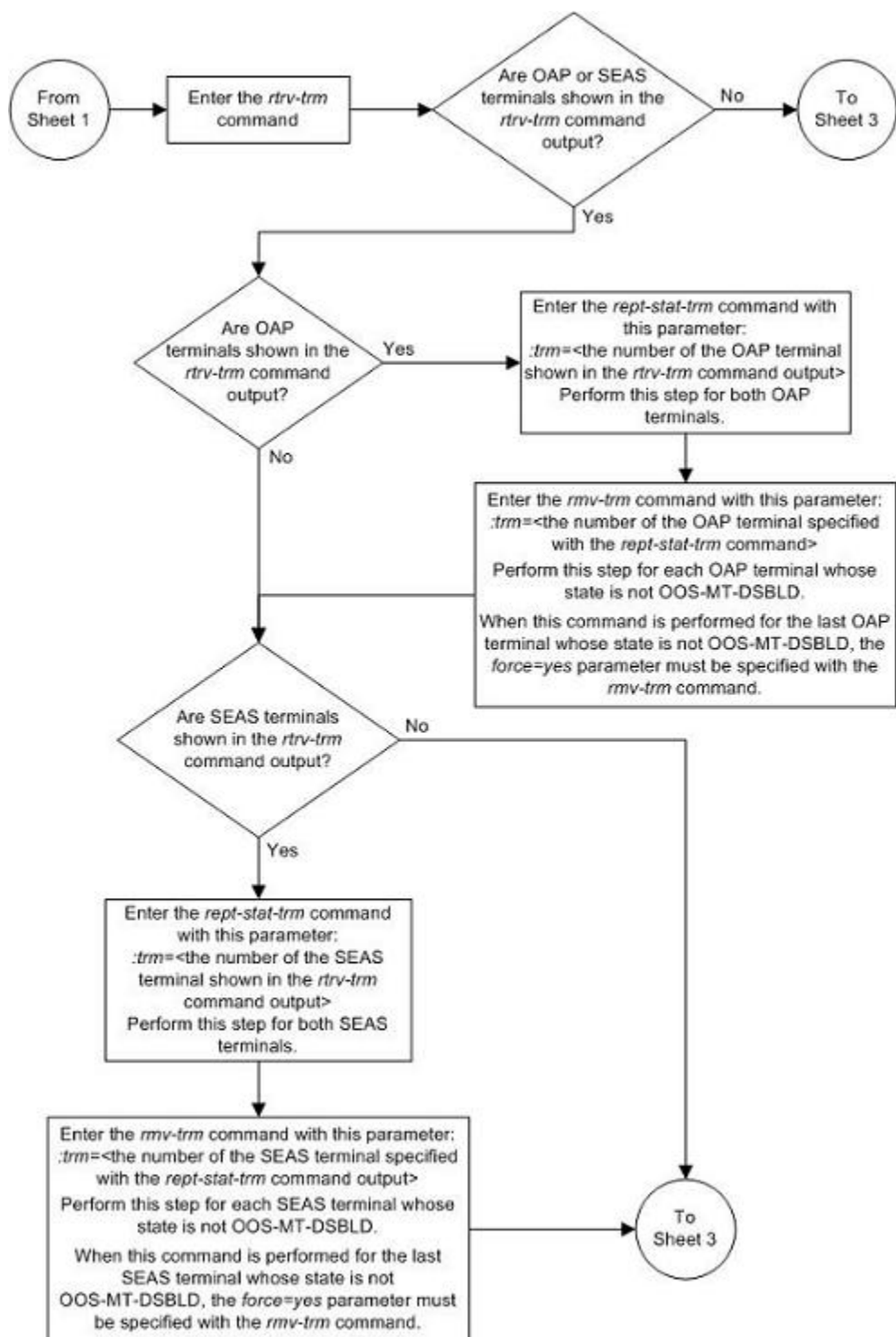
This message should appear when each command has successfully completed.

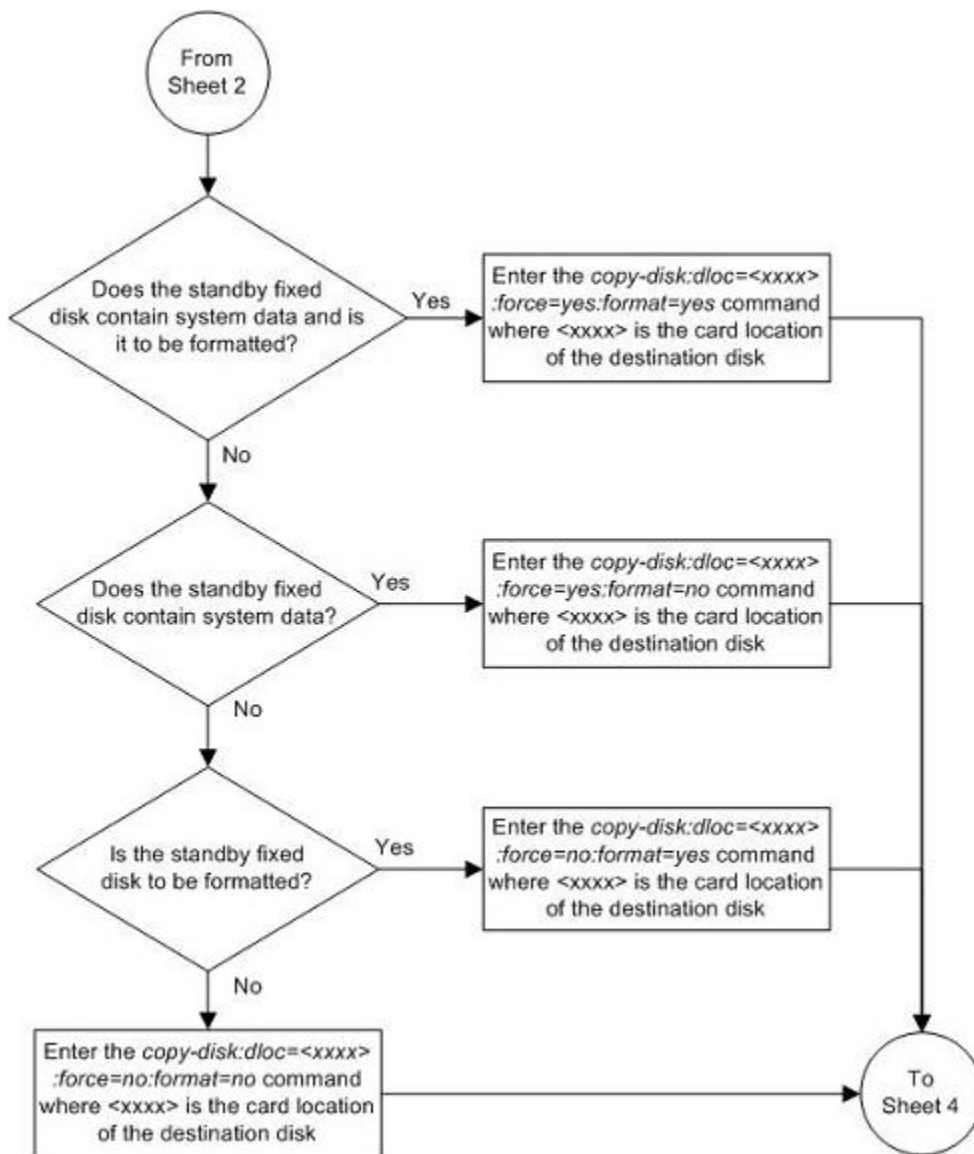
```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0  
Allow message sent to terminal
```

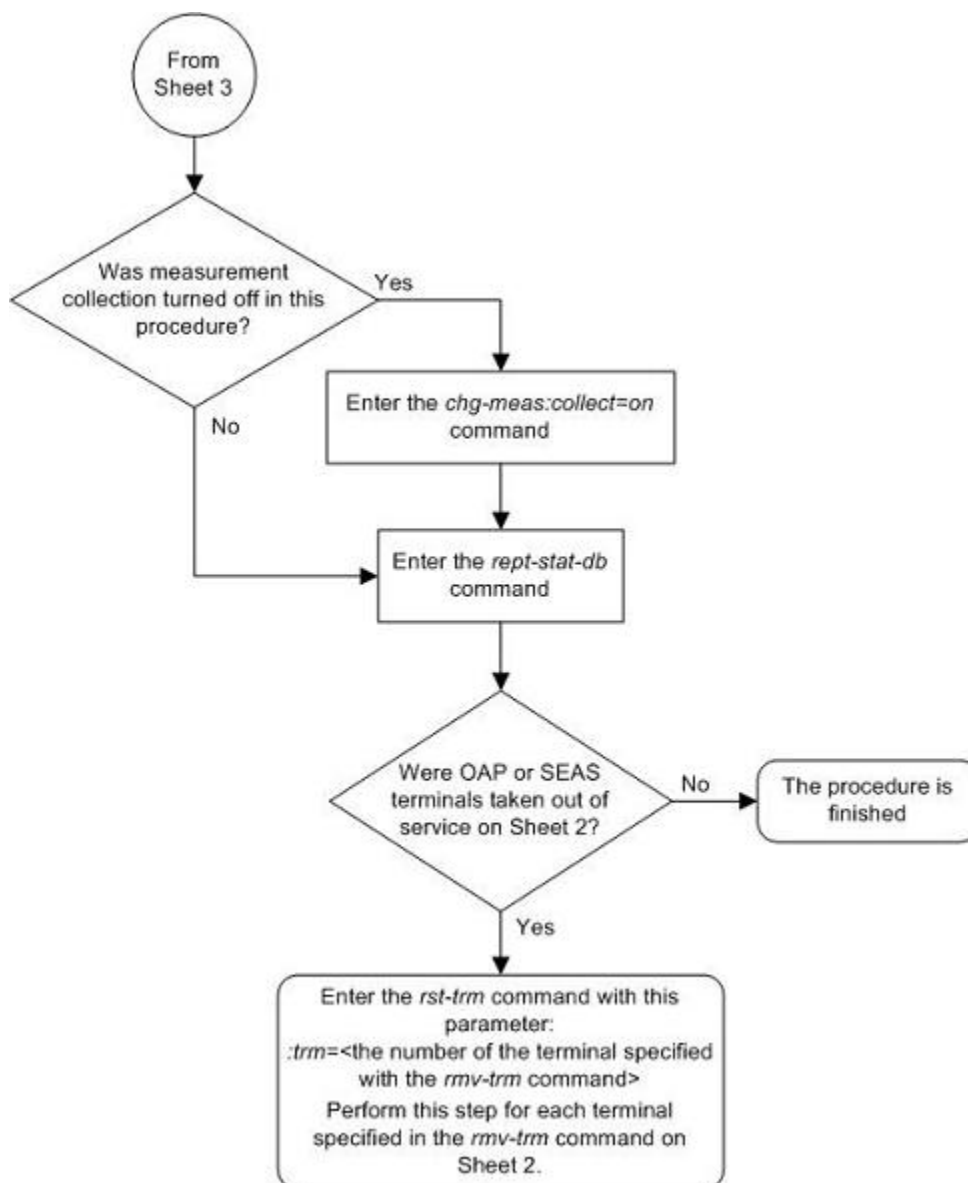
```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0  
Command Completed.
```

Flowchart 2-6. Copying the Database from the Active to the Standby Fixed Disk









Backing Up System Data to the Removable Cartridge

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).

This procedure is used to make a backup copy of the system data.

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

A pre-formatted removable cartridge that is write enabled is required. If the removable cartridge is not formatted, go to the [Formatting a Removable Cartridge](#) and format the cartridge. To write enable a removable cartridge, see the [Write Enabling the Removable Cartridge](#) section.

Procedure

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          95 04-06-01 05:53:36 GMT  Y          95 04-06-01 05:53:36 GMT
FD CRNT  Y          105                      Y          105
      MDAL 1117
      -----
RD BKUP  -          -                      -          -
```

2. Insert the pre-formatted removable cartridge in the removable cartridge drive on the MDAL card.

For more information on inserting the removable cartridge in the removable cartridge drive, see the [Inserting the Removable Cartridge](#) section.

3. Enter the **chg-db:action=backup:dest=remove** command:

During command execution, these messages should appear.

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

4. Verify that the databases on the removable cartridge (RD BKUP) and the current partition of the active MASP (FD CRNT) are coherent using the **rept-stat-db** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:09:34 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          95 04-06-01 05:53:36 GMT  Y          95 04-06-01 05:53:36 GMT
FD CRNT  Y          105                      Y          105
      MDAL 1117
      -----
RD BKUP  Y          105 04-05-31 16:07:48 GMT
```

5. Make a backup copy of the GPLs on the fixed disk of the active TDM to the removable cartridge using the **copy-gpl** command.

For this example, enter this command.

copy-gpl:sloc=1116:dloc=1117

During command execution, these messages should appear.

```
rlghncxa03w 06-10-01 14:50:46 GMT EAGLE5 36.0.0
COPY-GPL: MASP B - COPY STARTS ON ACTIVE MASP
COPY GPL: MASP B - COPY TO REMOVABLE CARTRIDGE COMPLETE
```

6. Verify the GPLs on the removable cartridge with the **rtrv-gpl** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
UTILITY	1114	141-000-000	141-000-000	141-001-000	141-001-000
UTILITY	1116	141-000-000	141-000-000	-----	-----
EOAM	1114	113-003-000	113-003-000	113-004-000	113-004-000
EOAM	1116	113-003-000	113-003-000	-----	-----
GLS	1114	113-002-000	113-002-000	113-002-000	113-003-000
GLS	1116	113-002-000	113-002-000	113-002-000	-----
SCCP	1114	113-002-000	113-002-000	113-002-000	113-003-000
SCCP	1116	113-002-000	113-002-000	113-002-000	-----
VSCCP	1114	113-002-000	113-002-000	113-002-000	113-003-000
VSCCP	1116	113-002-000	113-002-000	113-002-000	-----
SS7ANSI	1114	113-002-000	113-002-000	113-002-000	113-003-000
SS7ANSI	1116	113-002-000	113-002-000	113-002-000	-----
ATMANSI	1114	113-002-000	113-002-000	113-001-000	113-002-000
ATMANSI	1116	113-002-000	113-002-000	113-001-000	-----
IPLIM	1114	113-002-000	113-002-000	113-002-000	113-003-000
IPLIM	1116	113-002-000	113-002-000	113-002-000	-----
IPLIMI	1114	113-002-000	113-002-000	113-002-000	113-003-000
IPLIMI	1116	113-002-000	113-002-000	113-002-000	-----
SS7IPGW	1114	113-002-000	113-002-000	113-002-000	113-003-000
SS7IPGW	1116	113-002-000	113-002-000	113-002-000	-----
SS7ML	1114	113-002-000	113-002-000	113-002-000	113-003-000
SS7ML	1116	113-002-000	113-002-000	113-002-000	-----
CCS7ITU	1114	113-002-000	113-002-000	113-002-000	113-003-000
CCS7ITU	1116	113-002-000	113-002-000	113-002-000	-----
SS7GX25	1114	113-001-000	113-001-000	113-001-000	113-002-000
SS7GX25	1116	113-001-000	113-001-000	113-001-000	-----
STPLAN	1114	113-001-000	113-001-000	113-001-000	113-002-000
STPLAN	1116	113-001-000	113-001-000	113-001-000	-----
IMT	1114	113-001-000	113-001-000	113-001-000	113-002-000
IMT	1116	113-001-000	113-001-000	113-001-000	-----
BPHCAP	1114	002-101-000	002-101-000	002-100-000	002-101-000
BPHCAP	1116	002-101-000	002-101-000	002-100-000	-----
BPDCM	1114	002-101-000	002-101-000	002-100-000	002-101-000
BPDCM	1116	002-101-000	002-101-000	002-100-000	-----
BPHMUX	1114	111-001-000	111-001-000	111-000-000	111-001-000
BPHMUX	1116	111-001-000	111-001-000	111-000-000	-----
BPMPPL	1114	002-101-000	002-101-000	002-100-000	002-101-000
BPMPPL	1116	002-101-000	002-101-000	002-100-000	-----
EBDABLM	1114	113-001-000	113-001-000	113-000-000	113-001-000
EBDABLM	1116	113-001-000	113-001-000	113-000-000	-----
EBDADCM	1114	113-001-000	113-001-000	113-000-000	113-001-000
EBDADCM	1116	113-001-000	113-001-000	113-000-000	-----
VXWSLAN	1114	113-001-000	113-001-000	113-000-000	113-001-000
VXWSLAN	1116	113-001-000	113-001-000	113-000-000	-----
OAP	1114	026-001-000	026-001-000	-----	026-001-000
OAP	1116	026-001-000	026-001-000	-----	-----

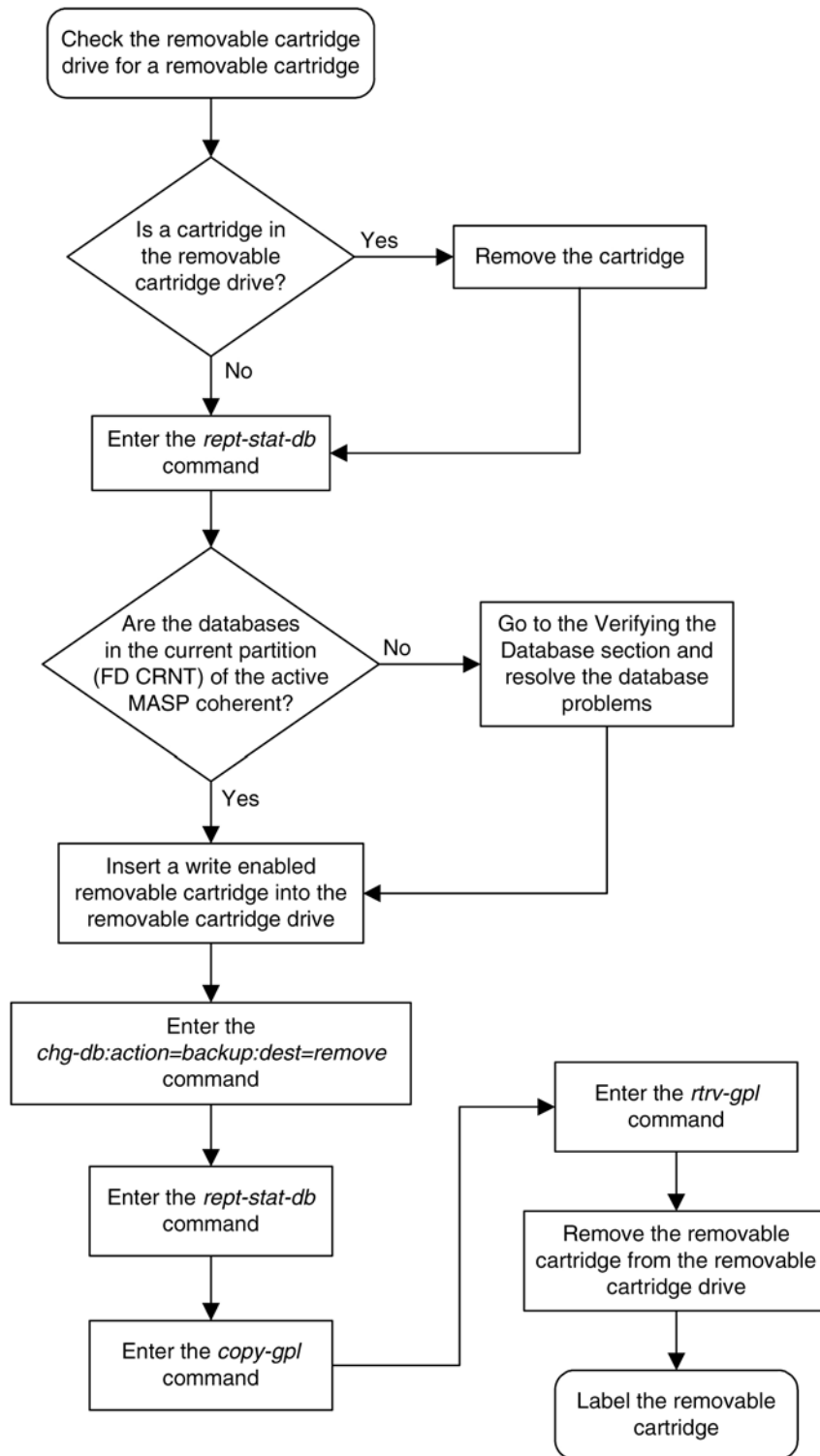
7. Remove the removable cartridge from the removable cartridge drive on the MDAL card.

For more information on removing the removable cartridge from the removable cartridge drive, see the [Removing the Removable Cartridge](#) section.

8. Label the removable cartridge, 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, see Chapter 2, “Preventive Maintenance,” in the *Maintenance Manual*. Store this cartridge in a secure place.

Flowchart 2-7. Backing Up System Data to the Removable Cartridge



Restoring System Data from a Removable Cartridge

This section presents the procedure for restoring system data from a system backup removable cartridge that was made using the **chg-db** command.

The database on the removable cartridge (RD BKUP) must be coherent. For more information on verifying the database, read the [Verifying the Database](#) section.

The removable cartridge must contain the database configuration to be restored. The removable cartridge should be write protected.

For some commands to be executed, they must use values obtained from previous steps. The best way to do this is echo the output of the command (for example, **rtrv-gpl**) to a printer. Enter the **rtrv-trm** command to make sure the output is echoed to a printer. If the output is not echoed to a printer, go to the [Changing Terminal Characteristics](#) to allow the output to be echoed to a printer.



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-stopts** 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
```

Procedure

1. 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, see the [Removing the Removable Cartridge](#) section.
2. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).
To write protect a removable cartridge, see the [Write Protecting the Removable Cartridge](#) section.
3. Insert the removable cartridge containing the system data into the removable cartridge drive of the MDAL card.
For more information on inserting the removable cartridge in the removable cartridge drive, see the [Inserting the Removable Cartridge](#) section.
4. Verify that the database on the removable cartridge (RD BKUP) is coherent using the **rept-stat-db:display=version** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 11:34:04 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( ACTV )      TDM 1116 ( STDBY )
      C  LEVEL    TIME LAST BACKUP  C  LEVEL    TIME LAST BACKUP
-----
FD BKUP Y       74 04-05-31 21:03:21 GMT Y       74 04-05-31 21:03:21 GMT
FD CRNT Y       78                      Y       78
      MDAL 1117
      -----
RD BKUP Y       74 04-05-31 21:03:21 GMT
```

CARD/APPL	LOC	C	T	LEVEL	TIME LAST UPDATE	VERSION	STATUS
TDM-CRNT LNP	1114	Y	N	78	04-06-01 23:12:37	111-000-000 000-000-001	NORMAL
TDM-BKUP LNP	1114	Y	-	74	04-05-31 21:03:21	111-000-000 000-000-001	NORMAL
TDM-CRNT LNP	1116	Y	N	78	04-06-01 23:12:37	111-000-000 000-000-001	NORMAL
TDM-BKUP LNP	1116	Y	-	74	04-05-31 21:03:21	111-000-000 000-000-001	NORMAL
MDAL LNP	1117	Y	-	74	04-05-31 21:03:21	111-000-000 000-000-001	NORMAL

If the LNP feature is not enabled, the LNP database versions are not shown in the **rept-stat-db:display=version** command output.

If the versions of the databases on the fixed disks (**TDM-CRNT** and **TDM-BKUP**) and the removable cartridge (**MDAL**) are not the same, stop performing this procedure and contact the Customer Care Center. Refer to [Customer Care Center](#) for the contact information.

- Enter the **chg-db:action=restore:src=remove** command.

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 cartridge complete.
```

- 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 06-10-01 11:34:04 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( ACTV )
      C  LEVEL    TIME LAST BACKUP
      -  -
FD BKUP Y        74 04-05-31 21:03:21 GMT
FD CRNT Y        78
      MDAL 1117
      -  -
RD BKUP Y        74 04-05-31 21:03:21 GMT
```

- 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, see the [Removing the Removable Cartridge](#) section.

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.

- 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 9](#) (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.

9. 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
```

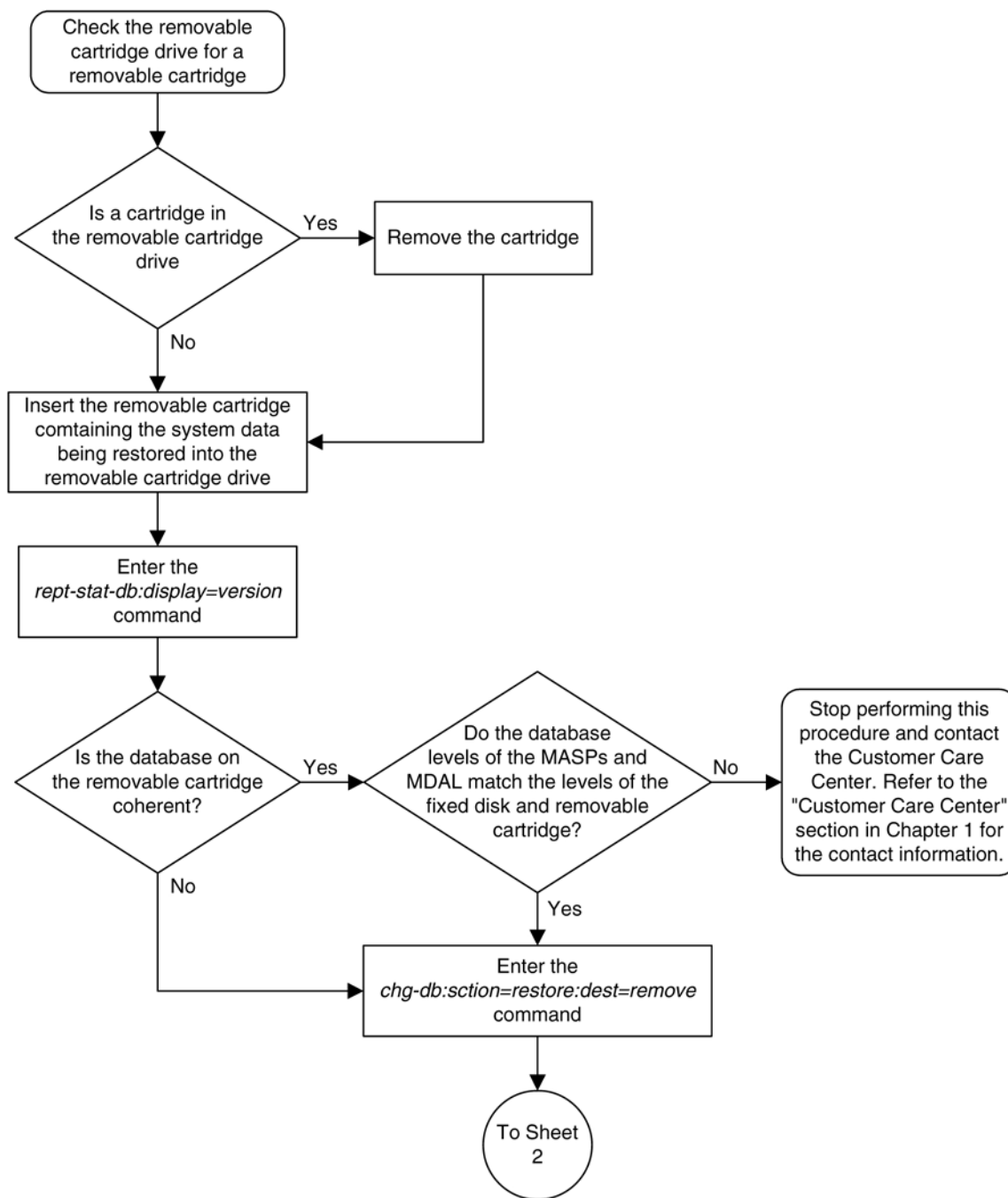
10. Enter the **rept-stat-db:display=all** command.

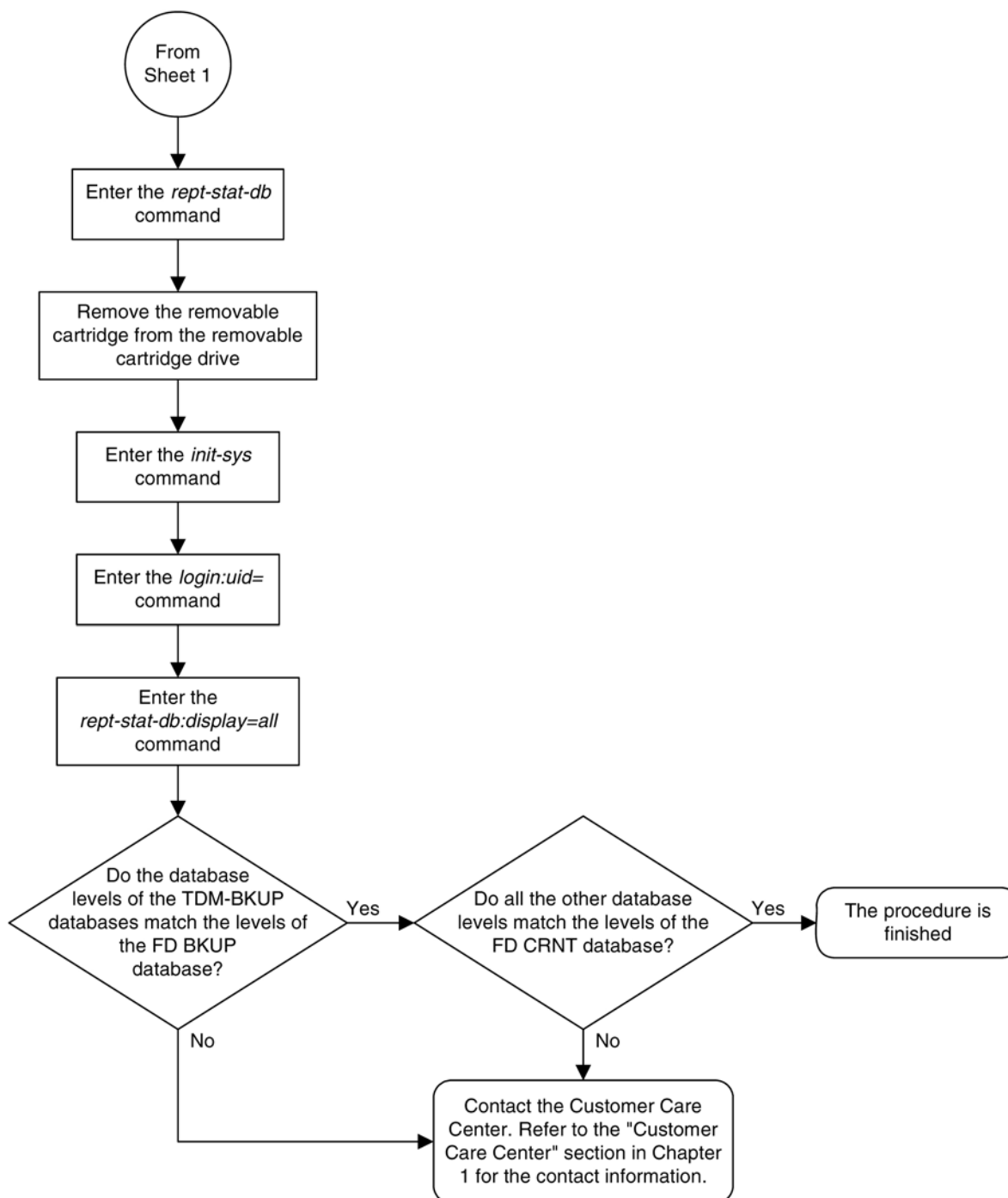
This is an example of the possible output.

```
rlghncxa03w 06-10-01 11:34:04 GMT EAGLE5 36.0.0
DATABASE STATUS: >> OK <<
      TDM 1114 ( ACTV )          TDM 1116 ( STDBY)
      C  LEVEL    TIME LAST BACKUP  C  LEVEL    TIME LAST BACKUP
-----
FD BKUP  Y         74 04-05-31 21:03:21 GMT  Y         74 04-05-31 21:03:21 GMT
FD CRNT  Y         78
MDAL 1117
-----
RD BKUP  -         -         -
CARD/APPL LOC  C  T  LEVEL    TIME LAST UPDATE  EXCEPTION
-----
SCCP      1101  Y  N  78         04-06-01 23:15:06      -
TDM-CRNT  1114  Y  N  78         04-06-01 23:15:06      -
TDM-BKUP  1114  Y  -  74         04-05-31 21:03:21      -
TDM-CRNT  1116  Y  N  78         04-06-01 23:15:06      -
TDM-BKUP  1116  Y  -  74         04-05-31 21:03:21      -
MDAL      1117  -  -  -         -                 -
SS7ANSI   1201  Y  N  78         04-06-01 23:15:06      -
SS7ANSI   1203  Y  N  78         04-06-01 23:15:06      -
SS7ANSI   1205  Y  N  78         04-06-01 23:15:06      -
CCS7ITU   1207  Y  N  78         04-06-01 23:15:06      -
CCS7ITU   1211  Y  N  78         04-06-01 23:15:06      -
ATMANSI   1217  Y  N  78         04-06-01 23:15:06      -
```

The level for the **TDM-BKUP** database, shown in the **CARD/APPL** field, should be the same as the level for the **FD BKUP** database. All other databases shown in the **CARD/APPL** field should be the same as the level of the **FD CRNT** database. If the levels of the databases are not the same, contact the Customer Care Center . Refer to [Customer Care Center](#) for the contact information.

Flowchart 2-8. Restoring System Data





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.

: 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](#) 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, see the [Verifying the Database](#) section.

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, see the [Write Enabling the Removable Cartridge](#) section.

Procedure

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, see the [Removing the Removable Cartridge](#) section.

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, see the [Inserting the Removable Cartridge](#) section.

For more information on write enabling the removable cartridge, see the [Write Enabling the Removable Cartridge](#) section.

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 it is a write enabled removable cartridge.

If the removable cartridge is not write enabled, see the [Write Enabling the Removable Cartridge](#) section 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, go to the [Verifying the Database](#) section 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
MTCO-STP     = on
MTCO-LINK    = on
MTCO-STPLAN  = on
MTCO-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: 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
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 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 06-10-01 16:43:42 GMT EAGLE5 36.0.0
```

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

CARD  VERSION      TYPE  PST          SST          AST
2107 P 101-9-000    MCPM IS-NR          Active          -----
      IP Link A      IS-NR          Active          Available
2108 101-9-000    MCPM IS-NR          Active          -----
      IP Link A      IS-NR          Active          Available
2111 101-9-000    MCPM 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 06-10-01 09:44:08 GMT  EAGLE5 36.0.0
format-disk:type=system
Command entered at terminal #3.
;

rlghncxa03w 06-10-01 09:44:08 GMT  EAGLE5 36.0.0
Format-disk of system removable cartridge started.
;

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

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

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

rlghncxa03w 06-10-01 09:44:08 GMT  EAGLE5 36.0.0
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 06-10-01 09:44:08 GMT  EAGLE5 36.0.0
format-disk:type=system
Command entered at terminal #3.
;

rlghncxa03w 06-10-01 09:44:08 GMT  EAGLE5 36.0.0
Format-disk of measurements removable cartridge started.
;

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

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

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

rlghncxa03w 06-10-01 09:44:08 GMT  EAGLE5 36.0.0
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 **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: 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 06-10-01 16:43:42 GMT EAGLE5 36.0.0

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

CARD  VERSION    TYPE  PST      SST      AST
2107 P 101-9-000  MCPM  IS-NR    Active  -----
      IP Link A   IS-NR    Active  Available
2108 101-9-000  MCPM  IS-NR    Active  -----
      IP Link A   IS-NR    Active  Available
2111 101-9-000  MCPM  IS-NR    Active  -----
```

IP Link A

IS-NR

Active

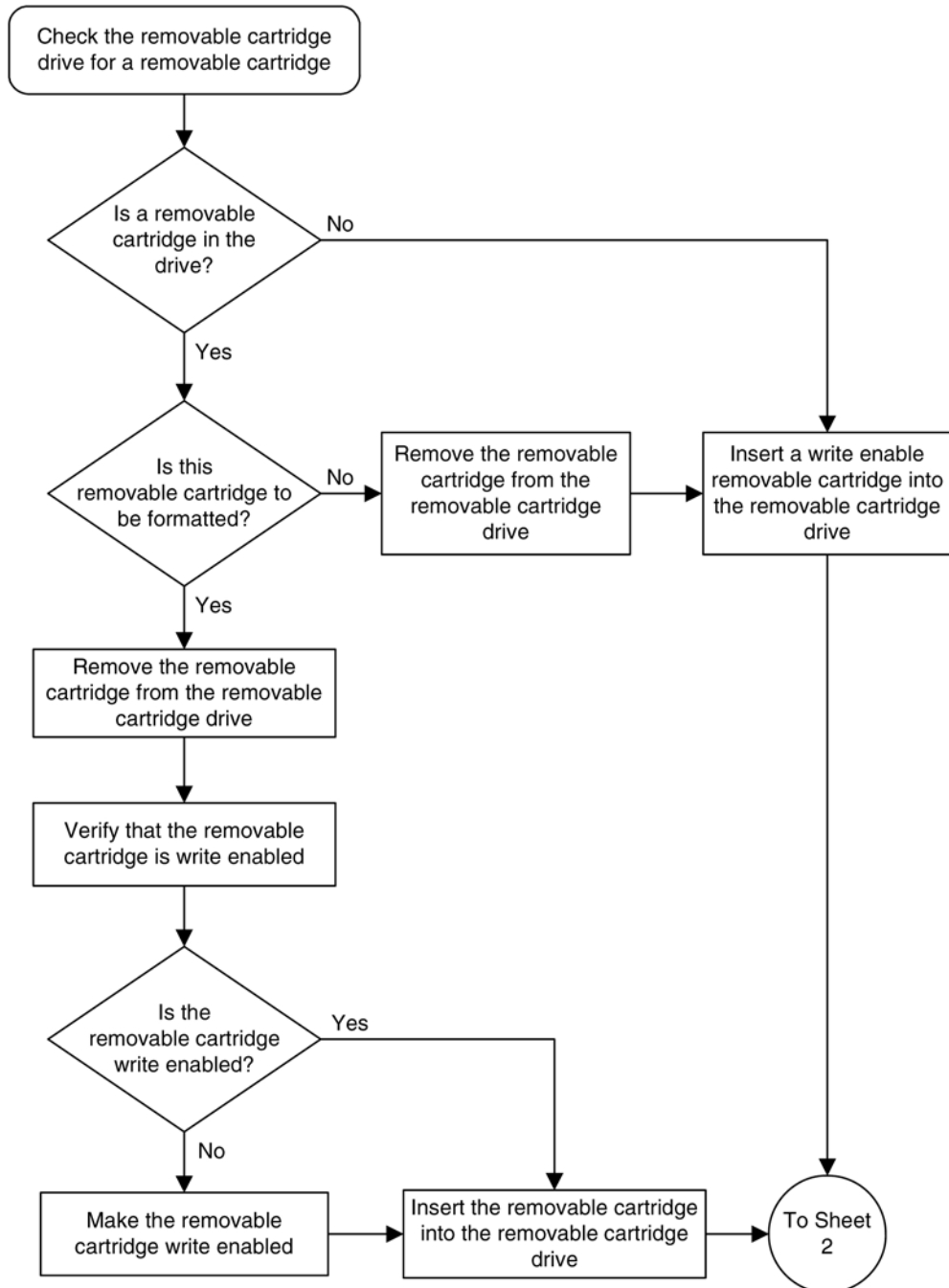
Available

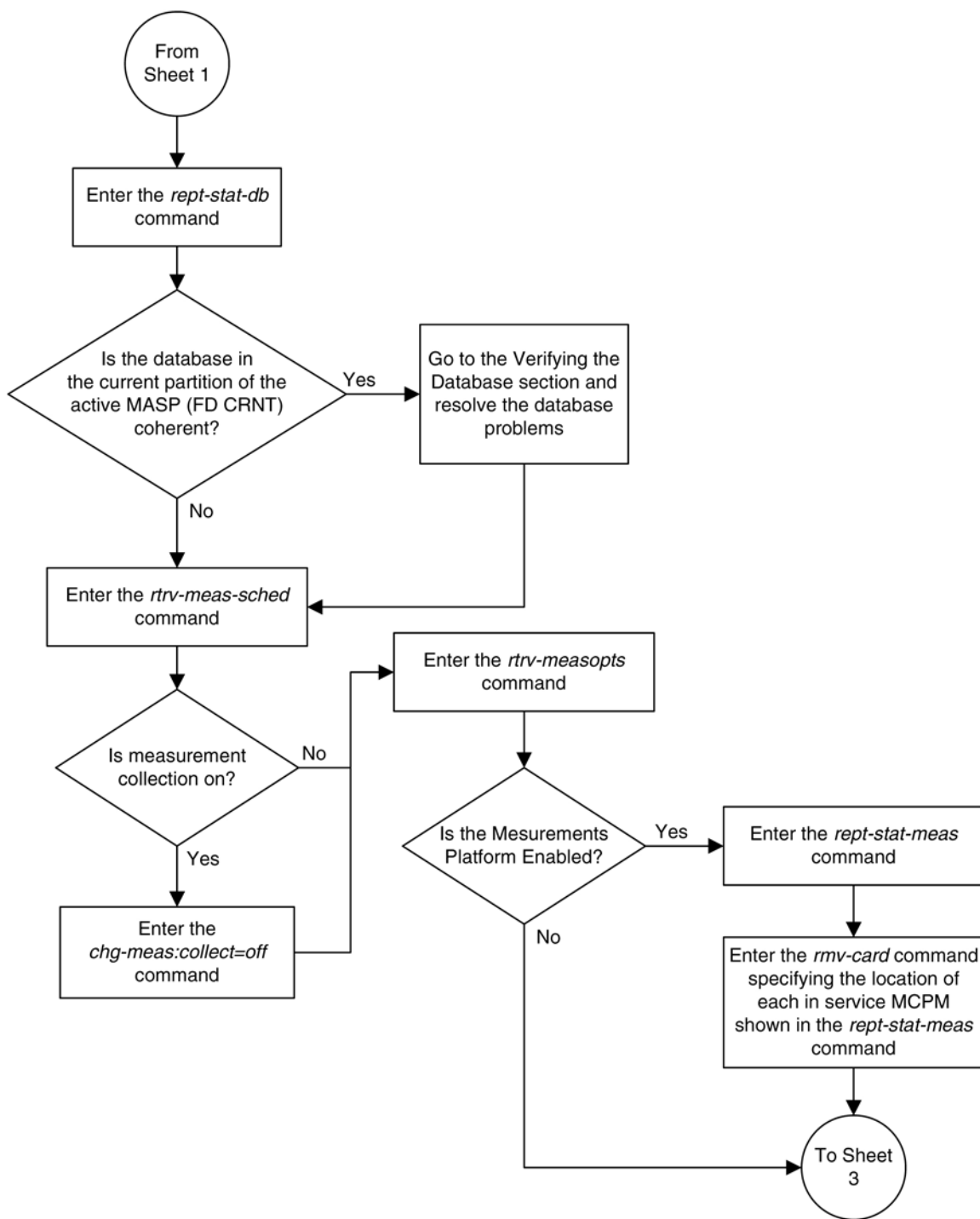
CARD 2107 ALARM STATUS = No Alarms

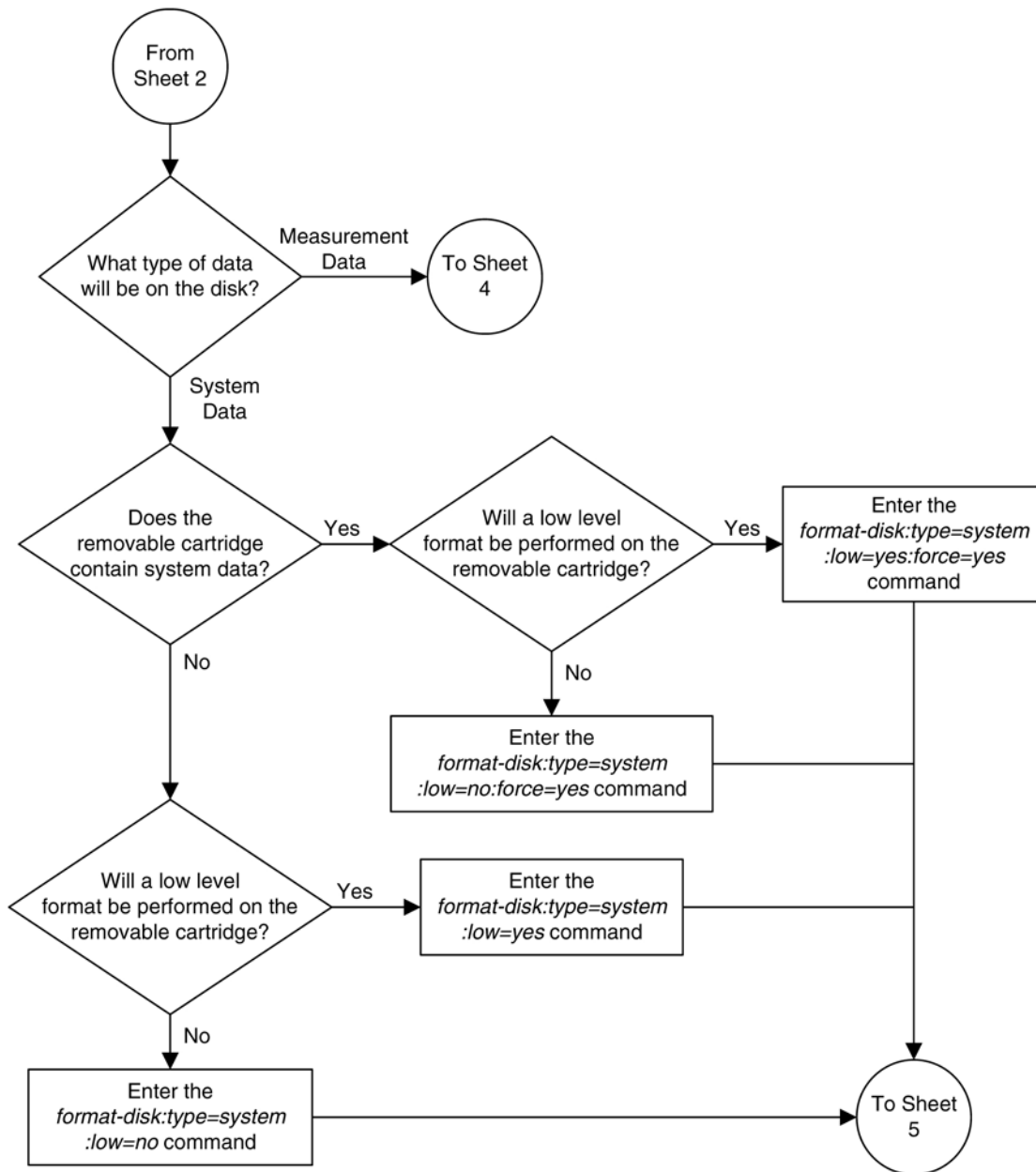
CARD 2108 ALARM STATUS = No Alarms

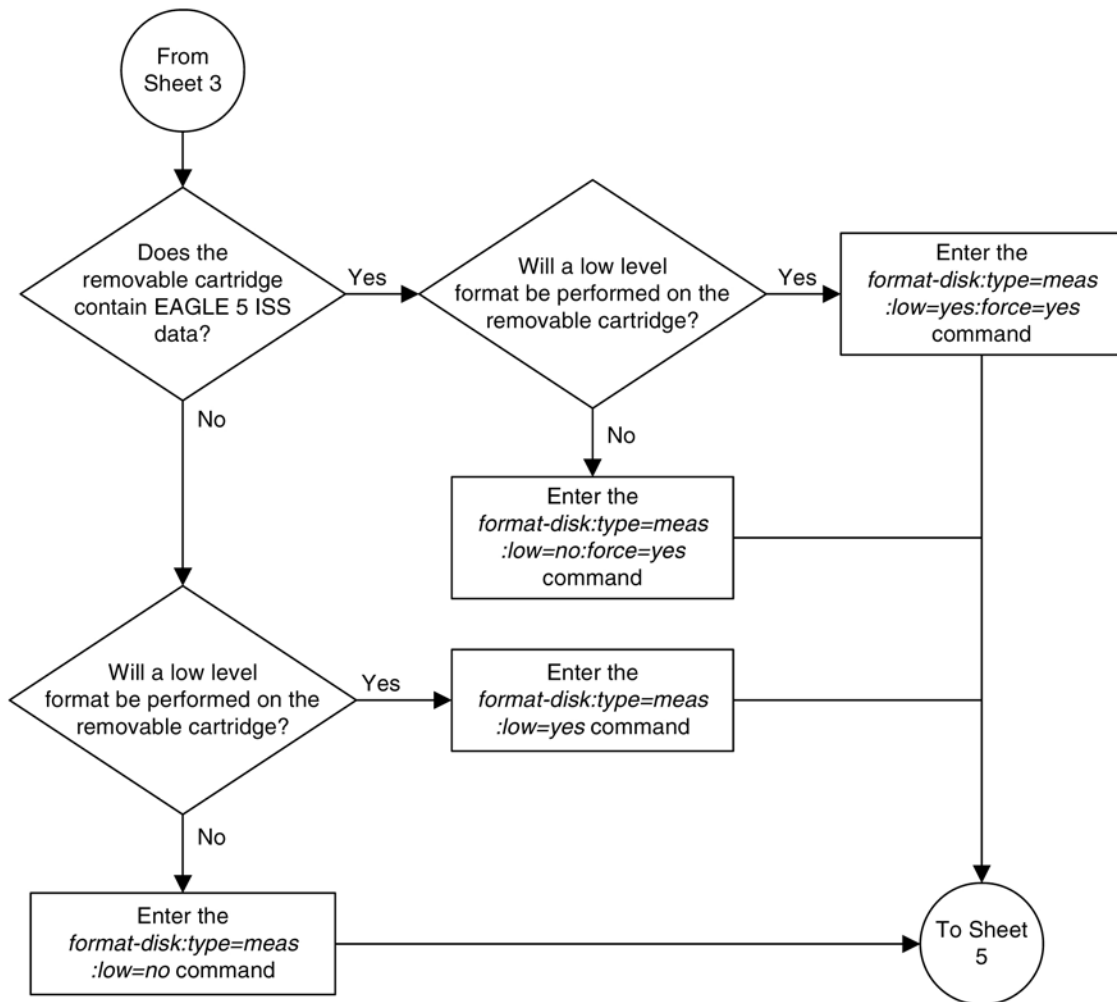
CARD 2111 ALARM STATUS = No Alarms

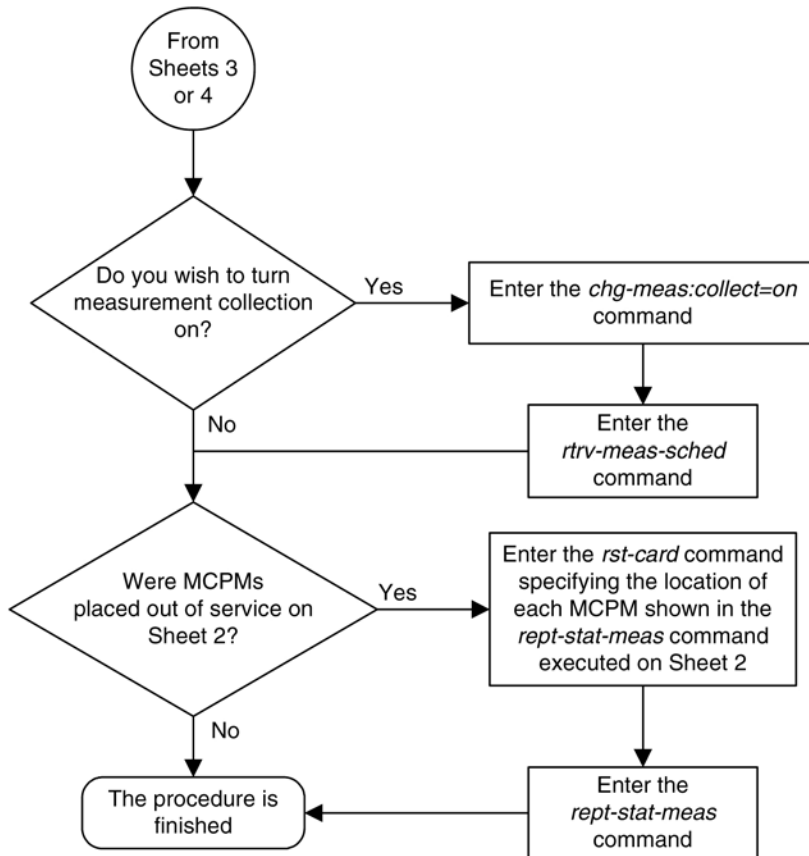
Flowchart 2-9. Formatting the Removable Cartridge











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 being formatted.

- **system** – A removable cartridge containing system data (GPLs and the database). To format a removable cartridge, go to the [Formatting a Removable Cartridge](#) procedure.
- **meas** – A removable cartridge containing measurements data. To format a removable cartridge, go to the [Formatting a Removable Cartridge](#) procedure.
- **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.

: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**.

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](#) 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, see the [Verifying the Database](#) section.

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.

Procedure

1. 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                      Y          106
MDAL 1117
-----
RD BKUP  - - - - -
```

If the current database on the active MASP is not coherent, see the [Verifying the Database](#) section and 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
MTCD-STP     = on
MTCD-LINK    = on
MTCD-STPLAN  = on
MTCD-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: 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
CLLIBASEDNAME = off
-----
SYSTOTSTP = off
SYSTOTTT = off
```

NOTE 1: 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 06-10-01 16:43:42 GMT EAGLE5 36.0.0

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

CARD  VERSION    TYPE    PST      SST      AST
2107 P 101-9-000  MCPM    IS-NR    Active    -----
      IP Link A    IS-NR    Active    Available
2108 101-9-000   MCPM    IS-NR    Active    -----
      IP Link A    IS-NR    Active    Available
2111 101-9-000   MCPM    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:slog=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 low level format of the fixed disk of the standby TDM is not performed.

format-disk:type=fixed:force=yes:low=no

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 low level format of the fixed disk of the standby TDM to be performed. If you wish to perform a low level format of the fixed disk of the standby TDM, 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 low level format of the fixed disk of the standby TDM.

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](#) 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 06-10-01 16:43:42 GMT EAGLE5 36.0.0

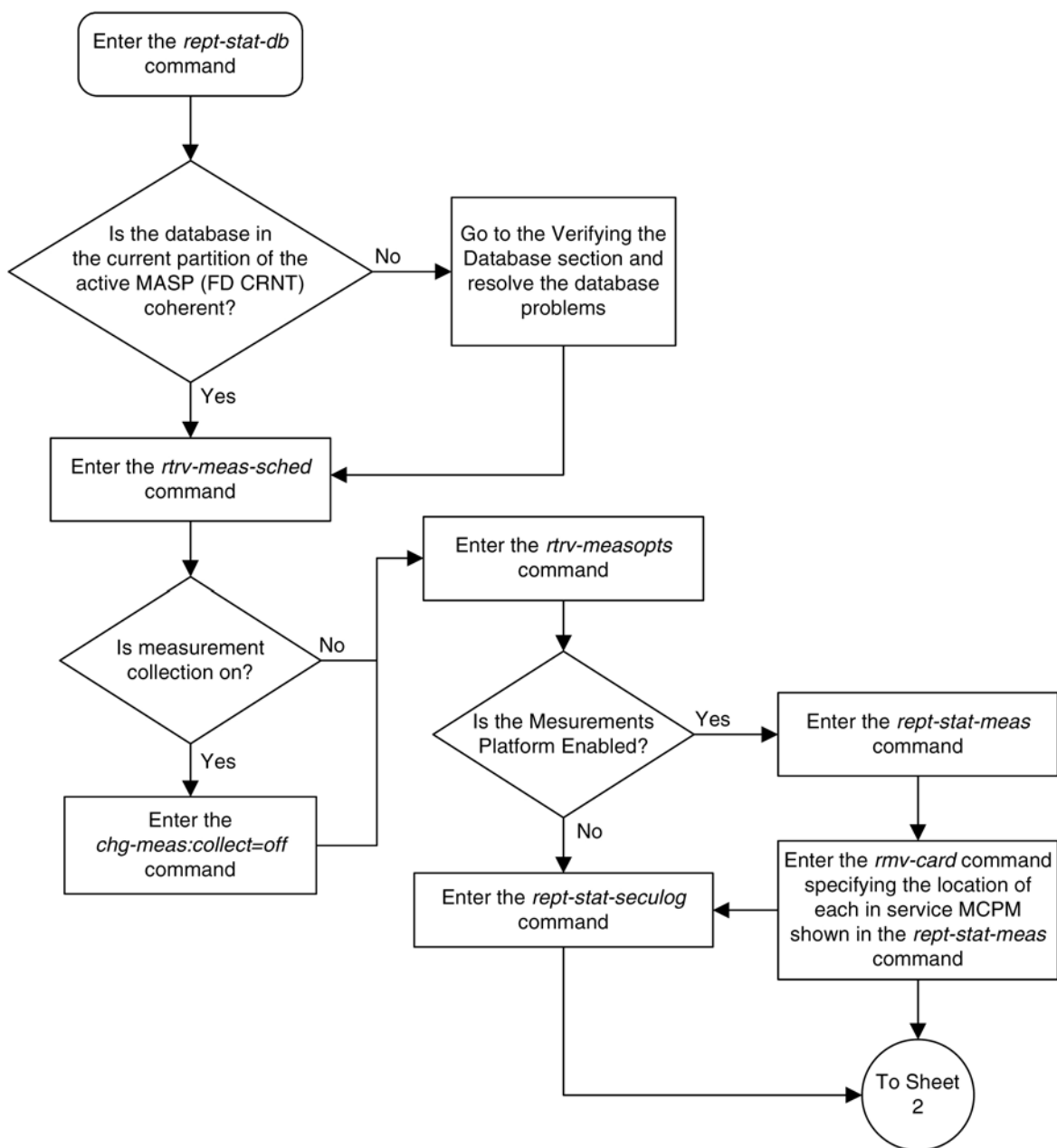
MEAS SS          PST      SST      AST
          IS-NR      Active     -----
          ALARM STATUS = No Alarms

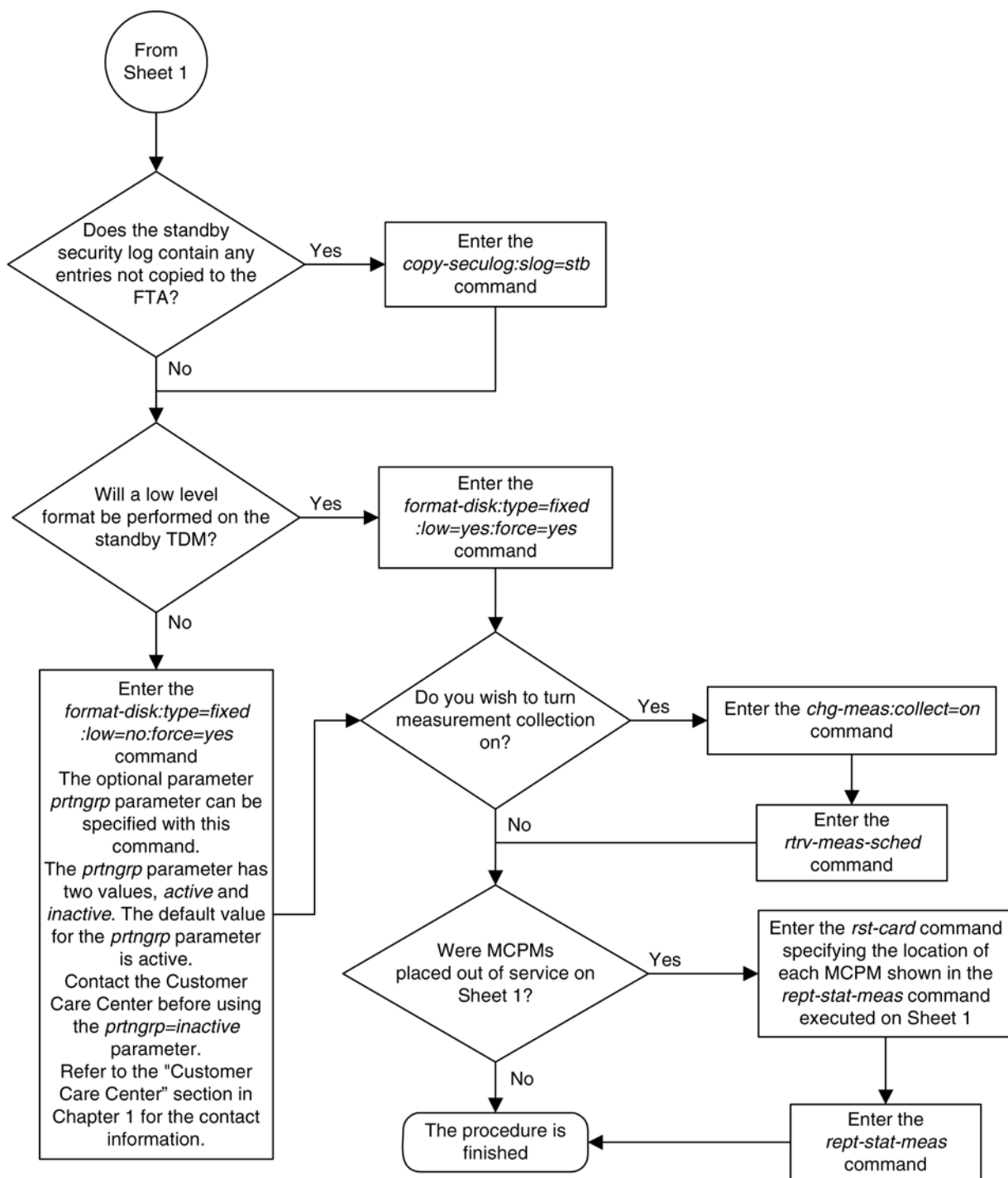
CARD  VERSION      TYPE  PST      SST      AST
2107 P 101-9-000    MCPM  IS-NR    Active     -----
      IP Link A      IS-NR    Active    Available
2108 101-9-000     MCPM  IS-NR    Active     -----
      IP Link A      IS-NR    Active    Available
2111 101-9-000     MCPM  IS-NR    Active     -----
      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

```

Flowchart 2-10. Formatting the Fixed Disk of the Standby TDM





GPL Management Procedures

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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:

- ATMANSI– The application GPL used for high-speed ANSI ATM signaling links.
- ATMITU– The application GPL used for high-speed E1 ATM signaling links.
- 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 , and E5-IPSM cards.
- BLDIAG – A flash GPL containing the diagnostic code on the HC MIMs.
- BLDIAG6 – A flash GPL containing the diagnostic code on E5-E1T1, E5-STC, E5-SLAN, E5-SM4G, E5-ENET , and E5-IPSM cards.
- BLBEPM – A flash GPL containing the BIOS ROM image on E5-E1T1, E5-STC, E5-SLAN, E5-ENET , and E5-IPSM cards.
- BLBSMG – A flash GPL containing the BIOS ROM image on E5-SM4G cards.
- BLVXW – A flash GPL containing the VxWorks operating system on the HC MIMs.
- BLVXW6 – A flash GPL containing the VxWorks operating system on E5-E1T1, E5-STC, E5-SLAN, E5-SM4G, E5-ENET , and E5-IPSM 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.
- BPDPCM – 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).
- 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.
- CCS7ITU – The application GPL used for CCS7ITU signaling links.
- EBDABLM – The application GPL used by the TSM or DSM to store the LNP database downloaded from the LSMS for the Enhanced Bulk Download.
- EBDADCM – The application GPL used by the DCM to transmit the LSMS LNP database at high speed over an Ethernet connection for the Enhanced Bulk Download.
- 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.
- HIPR – The communication GPL used on the High-Speed IMT Packet Router (HIPR) card.

- IMT – The communication GPL that operates the IMT bus on these cards only; ACMENET, TSM, and all LIMs that can contain a maximum of 2 signaling links.
- IMTPCI – The communication GPL that operates the IMT bus on HC MIM, E5-E1T1, E5-STC, E5-SLAN, E5-SM4G, E5-ENET , and E5-IPSM 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.
- IPLIM – The application GPL used for TCP/IP point-to-point ANSI connectivity.
- IPLHC – The application GPL used by the E5-ENET card for TCP/IP point-to-point 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.
- 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.
- 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.
- OAP – The application GPL running on the OAP used for the SEAS feature.
- PLDE1T1 – A flash GPL used on HC MIMs for E1 or T1 signaling links.
- PLDPMC1 – A flash GPL used on HC MIMs for E1 or T1 signaling links.
- SCCP – The application GPL used on TSMs for the global title translation features.
- 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.
- SS7ANSI – The application GPL used for SS7 signaling links.
- SS7EPM – The application GPL used by the E5-E1T1 cards to support E1 and T1 signaling links.
- SS7GX25 – The application GPL used for X.25 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/T1 MIM for E1 and T1 signaling links.
- STPLAN – The application GPL used by the ACM for the STPLAN feature.

- **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, 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.

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 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. To get the GPLs from the removable cartridge 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 disk 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 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.

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 containing the GPL being loaded must be in the removable cartridge drive on the MDAL. The only exception to this is if you are loading either the OAP GPL. The **ver** parameter is not required when loading the OAP GPL.

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 for these:

- OAP
- UTILITY

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 **rtrv-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
SS7ANSI	1201	126-002-000	126-002-000	126-001-000

The example **rept-stat-gpl** output shows that the card in slot 1201 is running the SS7ANSI GPL, version number 126-002-000, which is also the approved version of the SS7ANSI GPL. The trial version number of the SS7ANSI GPL is 126-001-000.

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, BPDCEM, BPMPL, BPMPLT, BPHMUX, 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.

```
r1ghncxa03w 07-05-01 07:01:08 GMT EAGLE5 37.0.0
GPL      CARD      RUNNING      APPROVED      TRIAL
EOAM     1113     126-002-000     126-002-000     -----
EOAM     1115     126-002-000     126-002-000     -----
SCCP     1212     126-001-000     126-001-000     126-001-000
VSCCP    1103     126-001-000     126-001-000     126-001-000
SS7ANSI  1201     126-002-000     126-002-000     126-001-000
```

```

SS7ANSI 1202 126-002-000 126-002-000 126-001-000
SS7ANSI 1203 126-002-000 126-002-000 126-001-000
SS7ML 1204 126-002-000 126-002-000 126-001-000
SS7ANSI 1205 126-002-000 126-002-000 126-001-000
CCS7ITU 1301 126-001-000 126-001-000 126-001-000
CCS7ITU 1302 126-001-000 126-001-000 126-001-000
IPLIM 1303 126-001-000 126-001-000 126-001-000
ATMANSI 1305 126-001-000 126-001-000 126-001-000
SS7IPGW 1307 126-001-000 126-001-000 126-001-000
ATMANSI 1311 126-001-000 126-001-000 126-001-000
SS7IPGW 2101 126-002-000 126-002-000 126-003-000
VXWSLAN 2113 126-002-000 126-002-000 126-003-000
VXWSLAN 2205 126-002-000 126-002-000 126-003-000
VXWSLAN 2207 126-002-000 126-002-000 126-003-000
VXWSLAN 2213 126-002-000 126-002-000 126-003-000
IPLIM 2301 126-002-000 126-002-000 126-003-000
IPLIM 2303 126-002-000 126-002-000 126-003-000
IPLIM 2305 126-002-000 126-002-000 126-003-000
IPLIM 2307 126-002-000 126-002-000 126-003-000
EROUTE 2311 126-002-000 126-002-000 126-003-000
EROUTE 2313 126-002-000 126-002-000 126-003-000
EROUTE 2315 126-002-000 126-002-000 126-003-000
MCP 2317 126-002-000 126-002-000 126-003-000
MCP 3101 126-002-000 126-002-000 126-003-000
MCP 3103 126-002-000 126-002-000 126-003-000
OAP A 028-001-000 028-001-000 -----
OAP B 028-001-000 028-001-000 -----
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=ss7ansi** command is entered, then all cards running the SS7ANSI GPL are displayed as shown in the following example.

```

rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL      CARD      RUNNING      APPROVED      TRIAL
SS7ANSI  1201      126-002-000  126-002-000  126-001-000
SS7ANSI  1202      126-002-000  126-002-000  126-001-000
SS7ANSI  1203      126-002-000  126-002-000  126-001-000
SS7ANSI  1205      126-002-000  126-002-000  126-001-000
Command Completed

```

If a communication GPL (IMT, BPHCAP, BPHCAPT, BPDCM, BPMPL, or BPMPLT) is specified with the **rept-stat-gpl** command, for example, **rept-stat-gpl:gpl=bpdcn**, 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=bpdcn** command.

```

rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL      CARD      RUNNING      APPROVED      TRIAL
BPDCM    1303      126-002-000  126-002-000  126-003-000
BPDCM    1307      126-002-000  126-002-000  126-003-000
BPDCM    2101      126-002-000  126-002-000  126-003-000
BPDCM    2103      126-002-000  126-002-000  126-003-000
BPDCM    2105      126-002-000  126-002-000  126-003-000
BPDCM    2113      126-002-000  126-002-000  126-003-000
BPDCM    2205      126-002-000  126-002-000  126-003-000
BPDCM    2207      126-002-000  126-002-000  126-003-000
BPDCM    2213      126-002-000  126-002-000  126-003-000
BPDCM    2301      126-002-000  126-002-000  126-003-000
BPDCM    2303      126-002-000  126-002-000  126-003-000
BPDCM    2305      126-002-000  126-002-000  126-003-000
BPDCM    2307      126-002-000  126-002-000  126-003-000
BPDCM    2311      126-002-000  126-002-000  126-003-000
BPDCM    2313      126-002-000  126-002-000  126-003-000
BPDCM    2315      126-002-000  126-002-000  126-003-000
BPDCM    2317      126-002-000  126-002-000  126-003-000
BPDCM    3101      126-002-000  126-002-000  126-003-000
BPDCM    3103      126-002-000  126-002-000  126-003-000
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 this example.

```

r\ghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL      CARD      RUNNING      APPROVED      TRIAL
EOAM      1113      126-002-000      126-002-000      126-002-000
      IMT      126-001-000      126-001-000      126-001-003
EOAM      1115      126-002-000      126-002-000      126-002-000
      IMT      126-001-000      126-001-000      126-001-003
SCCP      1212      126-001-000      126-001-000      126-001-000
      IMT      126-001-000      126-001-000      126-001-003
VSCCP     1103      126-001-000      126-001-000      126-001-000
      BPDCM     126-001-000      126-001-000      126-001-003
SS7ANSI   1201      126-002-000      126-002-000      126-001-000
      IMT      126-001-000      126-001-000      126-001-003
SS7ANSI   1202      126-002-000      126-002-000      126-001-000
      IMT      126-001-000      126-001-000      126-001-003
SS7ANSI   1203      126-002-000      126-002-000      126-001-000
      IMT      126-001-000      126-001-000      126-001-003
SS7ML     1204      126-002-000      126-002-000      126-001-000
      BPMP      126-001-000      126-001-000      126-001-003

SS7ANSI   1205      126-002-000      126-002-000      126-001-000
      IMT      126-001-003      ALM      126-001-000      126-001-003
CCS7ITU   1301      126-001-000      126-001-000      126-001-000
      IMT      126-001-000      126-001-000      126-001-003
CCS7ITU   1302      126-001-000      126-001-000      126-001-000
      IMT      126-001-000      126-001-000      126-001-003
IPLIM     1303      126-001-000      126-001-000      126-001-000
      BPDCM     126-001-000      126-001-000      126-001-003
ATMANSI   1305      126-001-000      126-001-000      126-001-000
      BPHCAP     126-001-000      126-001-000      126-001-003
SS7IPGW   1307      126-001-000      126-001-000      126-001-000
      BPDCM     126-001-000      126-001-000      126-001-003
ATMANSI   1311      126-001-000      126-001-000      126-001-000
      BPHCAP     126-001-003      ALM      126-001-000      126-001-003
SS7IPGW   2101      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-003      ALM+      126-001-000      126-001-003
VXWLAN    2113      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
VXWLAN    2205      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
VXWLAN    2207      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
VXWLAN    2213      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
IPLIM     2301      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
IPLIM     2303      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
IPLIM     2305      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
IPLIM     2307      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
EROUTE    2311      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
EROUTE    2313      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
EROUTE    2315      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
MCP        2317      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
MCP        3101      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
MCP        3103      126-002-000      126-002-000      126-003-000
      BPDCM     126-001-000      126-001-000      126-001-003
BPHMUX    1109      118-001-000      118-001-000      118-001-003
BPHMUX    1110      118-001-000      118-001-000      118-001-003
BPHMUX    1209      118-001-000      118-001-000      118-001-003
BPHMUX    1210      118-001-000      118-001-000      118-001-003

```

```

BPHMUX 1309 118-001-000 118-001-000 118-001-003
BPHMUX 1310 118-001-000 118-001-000 118-001-003
BPHMUX 2109 118-001-000 118-001-000 118-001-003
BPHMUX 2110 118-001-000 118-001-000 118-001-003
BPHMUX 2209 118-001-000 118-001-000 118-001-003
BPHMUX 2210 118-001-000 118-001-000 118-001-003
BPHMUX 2309 118-001-000 118-001-000 118-001-003
BPHMUX 2310 118-001-000 118-001-000 118-001-003
BPHMUX 3109 118-001-000 118-001-000 118-001-003
BPHMUX 3110 118-001-000 118-001-000 118-001-003
OAP A 028-001-000 028-001-000 -----
OAP B 028-001-001 ALM 028-001-000 -----
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 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing ON

GPL      CARD      RUNNING      APPROVED      TRIAL
SS7HC    1203      126-001-000    126-001-000    126-001-000
          IMTPCI
          BLBIOS
          BLCPLD
          BLVXW
          BLDIAG
          PLDE1T1
          PLDPMC1
          IMTPCI      126-001-000    126-002-000 * ----- (Note 1)
          BLBIOS      126-001-000    126-001-000    126-003-000 * (Note 2)
          BLCPLD      126-001-000    126-001-000 * -----
          BLVXW      126-002-000ALM    126-002-000 * ----- (Note 3)
          BLDIAG      126-003-000ALM+  126-002-000 * 126-003-000 (Note 4)
          PLDE1T1      126-001-000 +    126-002-000 * 126-001-000 (Note 5)
          PLDPMC1      126-001-000    126-001-000    -----
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 BLVXW GPL has been downloaded with the **init-flash** command. The card has been reset. The BLVXW GPL was activated with the **act-flash** command, but the activated version of the BLVXW GPL is not the approved version of the BLVXW GPL on the TDM.
4. The BLDIAG GPL has been downloaded with the **init-flash** command. The card has been reset so the inactive version is running. This version of the BLDIAG GPL is not the approved version of the GPL, shown with the **ALM** indicator. This version of the BLDIAG 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 BLDIAG GPL.
5. The PLDE1T1 GPL has been downloaded with the **init-flash** command. The card has been reset, but the PLDE1T1 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 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing ON

GPL      CARD      RUNNING      APPROVED      TRIAL
ATMANSI  1217      126-001-000    126-001-000    126-001-000
          BPHCAP      126-001-000    126-001-000    126-001-000
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. 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. If the removable cartridge is not in the removable cartridge drive, dashes are shown in the **REMOVE TRIAL** column. Dashes are also shown in the **REMOVE TRIAL** column for the TDM that is associated with the standby MASP.

The following is an example of the **rtrv-gpl** command output.

```
rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
```

```

SS7ANSI  1114  126-002-000  126-002-000      126-001-000  126-003-000
SS7ANSI  1116  126-002-000  126-002-000      126-001-000  -----

```

The example **rtrv-gpl** output shows that the version number of the SS7ANSI GPL in the system release ID table on both TDMs is 126-002-000, which is also the approved version of the SS7ANSI GPL. The trial version of the SS7ANSI GPL is 126-001-000. A removable cartridge is in the removable cartridge drive on the MDAL containing another version of the SS7ANSI GPL, version number 126-003-000. The GPL auditing function is on. The TDM in card slot 1114 is associated with the active MASP.

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.

```

rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing  ON

```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
EOAM	1114	126-003-000	126-003-000	126-004-000	126-004-000
EOAM	1116	126-003-000	126-003-000	-----	-----
SS7ANSI	1114	126-002-000	126-002-000	126-002-000	126-003-000
SS7ANSI	1116	126-002-000	126-002-000	126-002-000	-----
SCCP	1114	126-002-000	126-002-000	126-002-000	126-003-000
SCCP	1116	126-002-000	126-002-000	126-002-000	-----
GLS	1114	126-002-000	126-002-000	126-002-000	126-003-000
GLS	1116	126-002-000	126-002-000	126-002-000	-----
CDU	1114	153-000-000	153-000-000	153-001-000	153-001-000
CDU	1116	153-000-000	153-000-000	-----	-----
CCS7ITU	1114	126-002-000	126-002-000	126-002-000	126-003-000
CCS7ITU	1116	126-002-000	126-002-000	126-002-000	-----
SS7GX25	1114	126-001-000	126-001-000	126-001-000	126-002-000
SS7GX25	1116	126-001-000	126-001-000	126-001-000	-----
STPLAN	1114	126-001-000	126-001-000	126-001-000	126-002-000
STPLAN	1116	126-001-000	126-001-000	126-001-000	-----
IMT	1114	126-001-000	126-001-000	126-001-000	126-002-000
IMT	1116	126-001-000	126-001-000	126-001-000	-----
ATMANSI	1114	126-002-000	126-002-000	126-001-000	126-002-000
ATMANSI	1116	126-002-000	126-002-000	126-001-000	-----
BPHCAP	1114	126-001-000	126-001-000	126-000-000	126-001-000
BPHCAP	1116	126-001-000	126-001-000	126-000-000	-----
BPDCM	1114	126-001-000	126-001-000	126-000-000	126-001-000
BPDCM	1116	126-001-000	126-001-000	126-000-000	-----
EBDABLM	1114	126-001-000	126-001-000	126-000-000	126-001-000
EBDABLM	1116	126-001-000	126-001-000	126-000-000	-----
EBDADCM	1114	126-001-000	126-001-000	126-000-000	126-001-000
EBDADCM	1116	126-001-000	126-001-000	126-000-000	-----
VXWSLAN	1114	126-001-000	126-001-000	126-000-000	126-001-000
VXWSLAN	1116	126-001-000	126-001-000	126-000-000	-----
IPLIM	1114	126-002-000	126-002-000	126-002-000	126-003-000
IPLIM	1116	126-002-000	126-002-000	126-002-000	-----
IPLIMI	1114	126-002-000	126-002-000	126-002-000	126-003-000
IPLIMI	1116	126-002-000	126-002-000	126-002-000	-----
SS7IPGW	1114	126-002-000	126-002-000	126-002-000	126-003-000
SS7IPGW	1116	126-002-000	126-002-000	126-002-000	-----
VSCCP	1114	126-002-000	126-002-000	126-002-000	126-003-000
VSCCP	1116	126-002-000	126-002-000	126-002-000	-----
ATMITU	1114	126-002-000	126-002-000	126-002-000	126-003-000
ATMITU	1116	126-002-000	126-002-000	126-002-000	-----
VCDU	1114	153-000-000	153-000-000	153-001-000	153-001-000
VCDU	1116	153-000-000	153-000-000	-----	-----
BPMPPL	1114	126-001-000	126-001-000	126-000-000	126-001-000
BPMPPL	1116	126-001-000	126-001-000	126-000-000	-----
SS7ML	1114	126-002-000	126-002-000	126-002-000	126-003-000
SS7ML	1116	126-002-000	126-002-000	126-002-000	-----
BPHMUX	1114	118-001-000	118-001-000	118-000-000	118-001-000
BPHMUX	1116	118-001-000	118-001-000	118-000-000	-----
IPGWI	1114	126-002-000	126-002-000	126-002-000	126-003-000
IPGWI	1116	126-002-000	126-002-000	126-002-000	-----
IPS	1114	126-002-000	126-002-000	126-002-000	126-003-000

IPS	1116	126-002-000	126-002-000	126-002-000	-----
EROUTE	1114	126-001-000	126-001-000	126-000-000	126-001-000
EROUTE	1116	126-001-000	126-001-000	126-000-000	-----
BPMLT	1114	126-001-000	126-001-000	126-000-000	126-001-000
BPMLT	1116	126-001-000	126-001-000	126-000-000	-----
MCP	1114	126-001-000	126-001-000	126-000-000	126-001-000
MCP	1116	126-001-000	126-001-000	126-000-000	-----
BPHCAP	1114	126-001-000	126-001-000	126-000-000	126-001-000
BPHCAP	1116	126-001-000	126-001-000	126-000-000	-----
HIPR	1114	126-001-000	126-001-000	126-000-000	126-001-000
HIPR	1116	126-001-000	126-001-000	126-000-000	-----
SS7HC	1114	126-002-000	126-002-000	126-002-000	126-003-000
SS7HC	1116	126-002-000	126-002-000	126-002-000	-----
BLCPLD	1114	126-001-000	126-001-000	126-000-000	126-001-000
BLCPLD	1116	126-001-000	126-001-000	126-000-000	-----
BLDIAG	1114	126-001-000	126-001-000	126-000-000	126-001-000
BLDIAG	1116	126-001-000	126-001-000	126-000-000	-----
PLDE1T1	1114	126-001-000	126-001-000	126-000-000	126-001-000
PLDE1T1	1116	126-001-000	126-001-000	126-000-000	-----
PLDPMC1	1114	126-001-000	126-001-000	126-000-000	126-001-000
PLDPMC1	1116	126-001-000	126-001-000	126-000-000	-----
BLBIO5	1114	126-001-000	126-001-000	126-000-000	126-001-000
BLBIO5	1116	126-001-000	126-001-000	126-000-000	-----
BLVXW	1114	126-001-000	126-001-000	126-000-000	126-001-000
BLVXW	1116	126-001-000	126-001-000	126-000-000	-----
IMTPCI	1114	126-001-000	126-001-000	126-000-000	126-001-000
IMTPCI	1116	126-001-000	126-001-000	126-000-000	-----
OAP	1114	028-001-000	028-001-000	-----	028-001-000
OAP	1116	028-001-000	028-001-000	-----	-----
IPLHC	1114	126-003-000	126-003-000	126-002-000	126-003-000
IPLHC	1116	126-003-000	126-003-000	126-002-000	-----
IPGHC	1114	126-003-000	126-003-000	126-002-000	126-003-000
IPGHC	1116	126-003-000	126-003-000	126-002-000	-----
SS7EPM	1114	126-003-000	126-003-000	126-002-000	126-003-000
SS7EPM	1116	126-003-000	126-003-000	126-002-000	-----
BLBEPM	1114	126-003-000	126-003-000	126-002-000	126-003-000
BLBEPM	1116	126-003-000	126-003-000	126-002-000	-----
BLVXW6	1114	126-003-000	126-003-000	126-002-000	126-003-000
BLVXW6	1116	126-003-000	126-003-000	126-002-000	-----
BLDIAG6	1114	126-003-000	126-003-000	126-002-000	126-003-000
BLDIAG6	1116	126-003-000	126-003-000	126-002-000	-----
SCCPHC	1114	126-003-000	126-003-000	126-002-000	126-003-000
SCCPHC	1116	126-003-000	126-003-000	126-002-000	-----
BLBSMG	1114	126-003-000	126-003-000	126-002-000	126-003-000
BLBSMG	1116	126-003-000	126-003-000	126-002-000	-----
SLANHC	1114	126-003-000	126-003-000	126-002-000	126-003-000
SLANHC	1116	126-003-000	126-003-000	126-002-000	-----
ERTHC	1114	126-003-000	126-003-000	126-002-000	126-003-000
ERTHC	1116	126-003-000	126-003-000	126-002-000	-----
IPSHC	1114	126-003-000	126-003-000	126-002-000	126-003-000
IPSHC	1116	126-003-000	126-003-000	126-002-000	-----

If a specific GPL is specified, then only that GPL is displayed. For example, if the **rtrv-gpl:gpl=ss7ansi** command is entered, then only the SS7ANSI GPL is displayed as shown in the following example.

```
rlghncxa03w 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
SS7ANSI  1114  126-002-000  126-002-000  126-001-000  126-003-000
SS7ANSI  1116  126-002-000  126-002-000  126-001-000  -----
```

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.

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. If a specific GPL is displayed with the **rtrv-gpl** command, for example the SS7ANSI GPL, the following would be displayed.

```
rlghncxa03w 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
SS7ANSI	1114	126-002-000	126-002-000	126-001-000	126-003-000
SS7ANSI	1116	126-002-000	126-002-000	126-001-000	-----

Displaying the SS7ANSI GPL with the **rept-stat-gpl** command would display all the cards running the SS7ANSI GPL, as shown in this example.

```
rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL CARD RUNNING APPROVED TRIAL
SS7ANSI 1201 126-002-000 126-002-000 126-001-000
SS7ANSI 1202 126-002-000 126-002-000 126-001-000
SS7ANSI 1203 126-002-000 126-002-000 126-001-000
SS7ANSI 1205 126-002-000 126-002-000 126-001-000
Command Completed
```

2. When the **chg-gpl** command is executed, the specific GPL is copied from the removable cartridge to the fixed disks. The specific GPL and the version number of the GPL on the removable cartridge 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=123-003-000** 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=ss7ansi

```
rlghncxa03w 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
SS7ANSI	1114	126-002-000	126-002-000	126-003-000	126-003-000
SS7ANSI	1116	126-002-000	126-002-000	126-003-000	-----

rept-stat-gpl:gpl=ss7ansi

```
rlghncxa03w 06-10-01 11:40:26 GMT EAGLE5 36.0.0
GPL CARD RUNNING APPROVED TRIAL
SS7ANSI 1201 126-002-000 126-002-000 126-003-000
SS7ANSI 1202 126-002-000 126-002-000 126-003-000
SS7ANSI 1203 126-002-000 126-002-000 126-003-000
```

```
SS7ANSI 1205 126-002-000 126-002-000 126-003-000
Command Completed
```

- 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 with the **chg-gpl** command (steps 1 to 3 in the Trial GPL section). 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=ss7ansi

```
rlghncxa03w 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
SS7ANSI	1114	126-003-000	126-003-000	126-002-000	126-003-000
SS7ANSI	1116	126-003-000	126-003-000	126-002-000	-----

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=ss7ansi

```
rlghncxa03w 06-10-01 11:50:11 GMT EAGLE5 36.0.0
GPL CARD RUNNING APPROVED TRIAL
SS7ANSI 1201 126-002-000 ALM 126-003-000 126-002-000
SS7ANSI 1202 126-002-000 ALM 126-003-000 126-002-000
SS7ANSI 1203 126-002-000 ALM 126-003-000 126-002-000
SS7ANSI 1205 126-002-000 ALM 126-003-000 126-002-000
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.

- 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 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
SS7ANSI	1114	126-003-000	126-003-000	126-002-000	126-003-000
SS7ANSI	1116	126-003-000	126-003-000	126-002-000	-----

REPT-STAT-GPL Output

```
rlghncxa03w 06-10-01 11:50:11 GMT EAGLE5 36.0.0
GPL CARD RUNNING APPROVED TRIAL
```

SS7ANSI	1201	126-003-000	126-003-000	126-002-000
SS7ANSI	1202	126-002-000 ALM	126-003-000	126-002-000
SS7ANSI	1203	126-002-000 ALM	126-003-000	126-002-000
SS7ANSI	1205	126-002-000 ALM	126-003-000	126-002-000

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 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
SS7ANSI	1114	126-003-000	126-003-000	126-002-000	126-003-000
SS7ANSI	1116	126-003-000	126-003-000	126-002-000	-----

REPT-STAT-GPL Output

```
rlghncxa03w 06-10-01 11:50:11 GMT EAGLE5 36.0.0
GPL CARD RUNNING APPROVED TRIAL
SS7ANSI 1201 126-002-000 ALM 126-003-000 126-002-000
SS7ANSI 1202 126-002-000 ALM 126-003-000 126-002-000
SS7ANSI 1203 126-002-000 ALM 126-003-000 126-002-000
SS7ANSI 1205 126-002-000 ALM 126-003-000 126-002-000
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 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
SS7ANSI	1114	126-002-000	126-002-000	126-003-000	126-003-000
SS7ANSI	1116	126-002-000	126-002-000	126-003-000	-----

REPT-STAT-GPL Output

```

rlghncxa03w 06-10-01 11:50:11 GMT EAGLE5 36.0.0
GPL      CARD  RUNNING      APPROVED      TRIAL
SS7ANSI 1201   126-003-000 ALM   126-002-000   126-003-000
SS7ANSI 1202   126-002-000      126-002-000   126-003-000
SS7ANSI 1203   126-002-000      126-002-000   126-003-000
SS7ANSI 1205   126-002-000      126-002-000   126-003-000
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 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
SS7ANSI 1114   126-002-000   126-002-000   126-003-000   126-003-000
SS7ANSI 1116   126-002-000   126-002-000   126-003-000   -----

```

REPT-STAT-GPL Output

```

rlghncxa03w 06-10-01 11:50:11 GMT EAGLE5 36.0.0
GPL      CARD  RUNNING      APPROVED      TRIAL
SS7ANSI 1201   126-002-000      126-002-000   126-003-000
SS7ANSI 1202   126-002-000      126-002-000   126-003-000
SS7ANSI 1203   126-002-000      126-002-000   126-003-000
SS7ANSI 1205   126-002-000      126-002-000   126-003-000
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 on the removable cartridge serves as the trial GPL.

The **imt** GPL can be loaded on these cards only: all LIMS that can contain a maximum of 2 signaling links.

The removable cartridge that contains the **imt** GPL to be loaded on to the EAGLE 5 ISS is required.

Procedure

1. 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 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
IMT      1114   126-001-000   126-001-000   -----   -----
IMT      1116   126-001-000   126-001-000   126-000-000   126-002-000

```

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 go to step 2. For more information on

removing the removable cartridge from the removable cartridge drive, see [Removing the Removable Cartridge](#) .

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, skip steps 2 and 3, and go to step 4.

2. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled). To write protect a removable cartridge, see [Write Protecting the Removable Cartridge](#) .
3. 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, see [Inserting the Removable Cartridge](#) . After the removable cartridge has been inserted into the removable cartridge drive, repeat the **rtrv-gpl** command in step 1 and verify the version of the **imt** GPL on the removable cartridge.

4. 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 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL      CARD      RUNNING      APPROVED      TRIAL
IMT      1113      126-001-000      126-001-000      126-000-000
IMT      1115      126-001-000      126-001-000      126-000-000
IMT      1201      126-001-000      126-001-000      126-000-000
IMT      1202      126-001-000      126-001-000      126-000-000
IMT      1203      126-001-000      126-001-000      126-000-000
IMT      1205      126-001-000      126-001-000      126-000-000
IMT      1207      126-001-000      126-001-000      126-000-000
IMT      1211      126-001-000      126-001-000      126-000-000
IMT      1212      126-001-000      126-001-000      126-000-000
Command Completed.
```

5. 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 1.

For this example, enter this command.

chg-gpl:gpl=imt:ver=123-002-000

These messages should appear.

```
rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
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
```

6. Activate the trial GPL, using the **act-gpl** command and specifying the value for the trial **imt** GPL shown in step 5.

For this example, enter the **act-gpl:gpl=imt:ver=123-002-000** command. These messages should appear.

```
rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
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 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 06-10-01 07:01:08 GMT EAGLE5 36.0.0
0191.1105    SYSTEM          INFO    REPT EVT:IMT GPL reloading
           cards    loaded:    1 of 25
           Report Date: 05-03-01   Time: 07:01:08
;

rlghncxa03w 06-10-01 07:01:09 GMT EAGLE5 36.0.0
0192.0014    CARD 1201 SS7ANSI      Card is present
;

rlghncxa03w 06-10-01 07:01:10 GMT EAGLE5 36.0.0
0193.0014    CARD 1202 SS7ANSI      Card is present
;

rlghncxa03w 06-10-01 07:01:11 GMT EAGLE5 36.0.0
0194.0014    CARD 1203 SS7ANSI      Card is present
;

rlghncxa03w 06-10-01 07:01:12 GMT EAGLE5 36.0.0
0195.0014    CARD 1204 SS7ANSI      Card is present
;

rlghncxa03w 06-10-01 07:01:12 GMT EAGLE5 36.0.0
0196.0014    CARD 1205 SS7ANSI      Card is present
;

rlghncxa03w 06-10-01 07:01:14 GMT EAGLE5 36.0.0
0197.1106    SYSTEM          INFO    REPT COND:IMT GPL reloading
           cards    loaded:    5 of 25
           Report Date: 05-03-01   Time: 07:01:14
;
```

7. 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 4.

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 06-10-01 07:01:08 GMT EAGLE5 36.0.0
Initializing IMT GPL for card 1201.
;

rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
* 0192.0013 * CARD 1201 SS7ANSI      Card is isolated from the system
;

rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
0193.0014      CARD 1201 SS7ANSI      Card is present
;

rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
0194.0096      CARD 1201 SS7ANSI      Card has been reloaded
;
```

8. 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 6, 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.

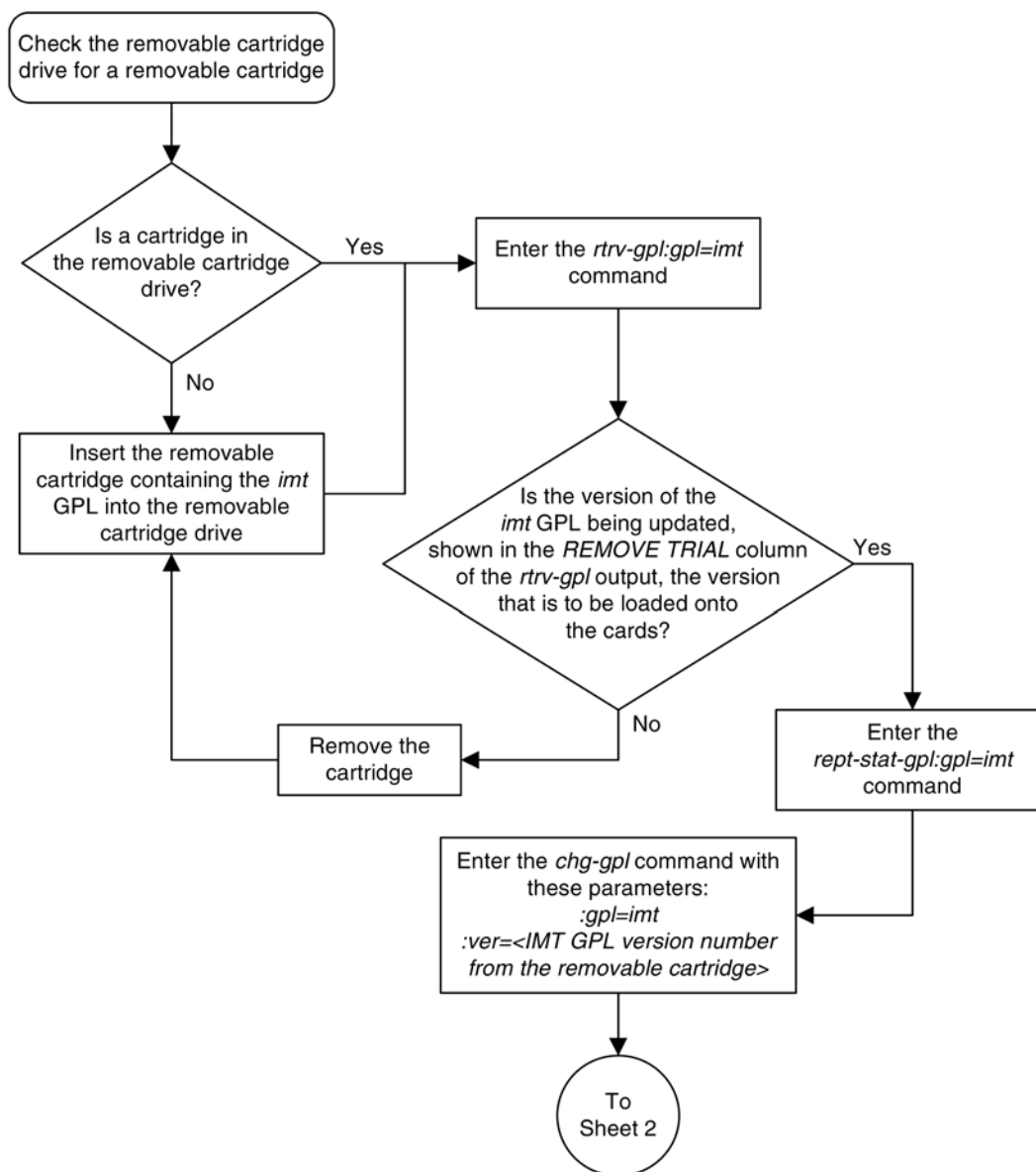
```
rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL      CARD      RUNNING      APPROVED      TRIAL
IMT      1113      126-001-000 ALM      126-002-000      126-001-000
IMT      1115      126-001-000 ALM      126-002-000      126-001-000
IMT      1201      126-002-000      126-002-000      126-001-000
IMT      1202      126-001-000 ALM      126-002-000      126-001-000
IMT      1203      126-001-000 ALM      126-002-000      126-001-000
IMT      1205      126-001-000 ALM      126-002-000      126-001-000
IMT      1207      126-001-000 ALM      126-002-000      126-001-000
IMT      1211      126-001-000 ALM      126-002-000      126-001-000
IMT      1212      126-001-000 ALM      126-002-000      126-001-000
Command Completed.
```

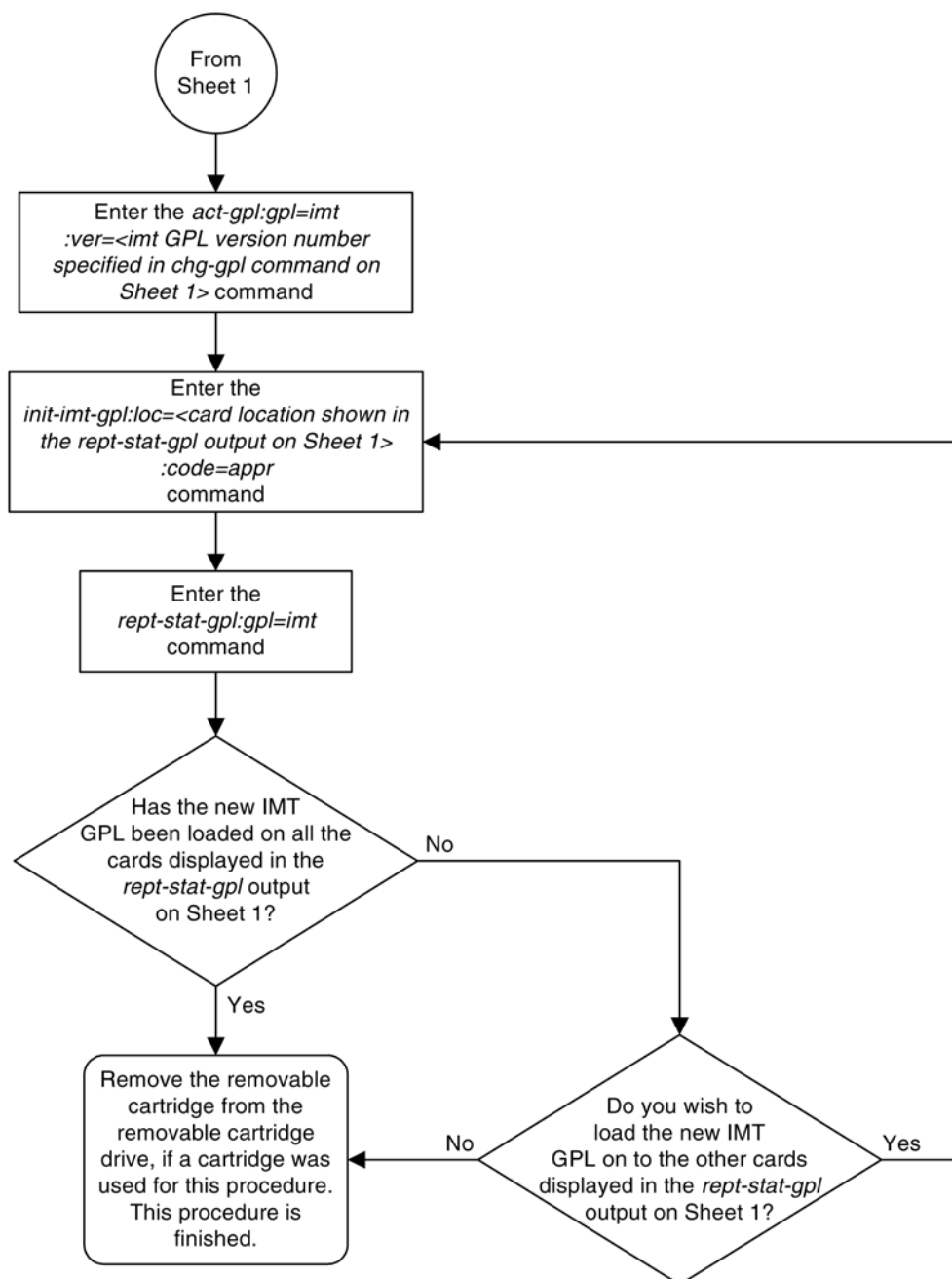
9. If the new IMT GPL has been loaded onto all the cards shown in step 4, or if you do not wish to load the new IMT GPL onto other cards, this procedure is finished.

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, see [Removing the Removable Cartridge](#).

If you wish to load the new IMT GPL onto the other cards shown in step 4, repeat this procedure from step 7 for each card shown in step 4.

Flowchart 3-1. 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).

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.

Procedure

1. 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 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
EOAM	1114	126-002-000	126-002-000	126-001-000	126-003-000
EOAM	1116	126-002-000	126-002-000	126-001-000	-----

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 go to step 2. For more information on removing the removable cartridge from the removable cartridge drive, see the [Removing the Removable Cartridge](#) section.

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, skip steps 2 and 3, and go to step 4.

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, see the [Removing the Removable Cartridge](#) section.

3. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).

To write protect a removable cartridge, see the [Write Protecting the Removable Cartridge](#) section.

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 1.

For this example, enter this command.

```
chg-gpl:gpl=eoam:ver=123-003-000
```

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

```

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
EOAM     1114  126-003-000  126-003-000  126-002-000  126-003-000
EOAM     1116  126-003-000  126-003-000  126-002-000  -----

```

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 06-10-01 11:40:26 GMT EAGLE5 36.0.0
GPL      CARD  RUNNING      APPROVED      TRIAL
EOAM     1113  126-002-000 ALM  126-003-000  126-002-000
EOAM     1115  126-002-000 ALM  126-003-000  126-002-000
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 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 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.

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, go to step 12.

```

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   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

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	YES	YES	YES	YES	YES	YES	YES
7	YES	YES	YES	YES	YES	YES	YES
8	NO	NO	NO	NO	YES	NO	YES
9	YES	YES	YES	YES	YES	YES	YES
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	APP	SERV	SS	CARD	CLK	DBG	GTT	GWS	MEAS	MON	MPS	SEAS	SLAN

1	YES	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	YES	NO	NO
3	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
4	YES	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	YES	NO	NO
6	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

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	NO
12	NO	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	NO
14	NO	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	NO
16	NO	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	NO
18	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
19	NO	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	NO
21	NO	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	NO
23	NO	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	NO
25	NO	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	NO
27	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
28	NO	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	NO
30	NO	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	NO
32	NO	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	NO
34	NO	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	NO
36	NO	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	NO
38	NO	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	NO
40	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

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, 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 8, 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.
```

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 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 8, 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, 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 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.
```

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.

If OAP terminals are shown in the **rtrv-trm** output in step 8, 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, 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
CHG-TRM: MASP B - COMPLTD
```

12. Using the outputs of steps 6 and 7 as a guide, place the GPSPM-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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Card has been inhibited.
```

13. Put the card that was inhibited in step 12 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
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, 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 06-10-01 11:40:26 GMT EAGLE5 36.0.0
GPL      CARD  RUNNING      APPROVED      TRIAL
EOAM     1113   126-003-000    126-003-000    126-002-000
EOAM     1115   126-002-000 ALM  126-003-000    126-002-000
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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
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 steps 16 or 18 based on the following conditions:

- If OAP and SEAS terminals were not shown in the **rtrv-trm** command output in step 8, skip steps 16 and 17, and go to step 18.
- If OAP and SEAS terminals were shown in the **rtrv-trm** command output in step 8, go to step 16.

16. Change the terminal type of the terminals that were changed to **NONE** in step 11 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.

If OAP terminals were changed in step 11, 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, 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0  
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.

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.

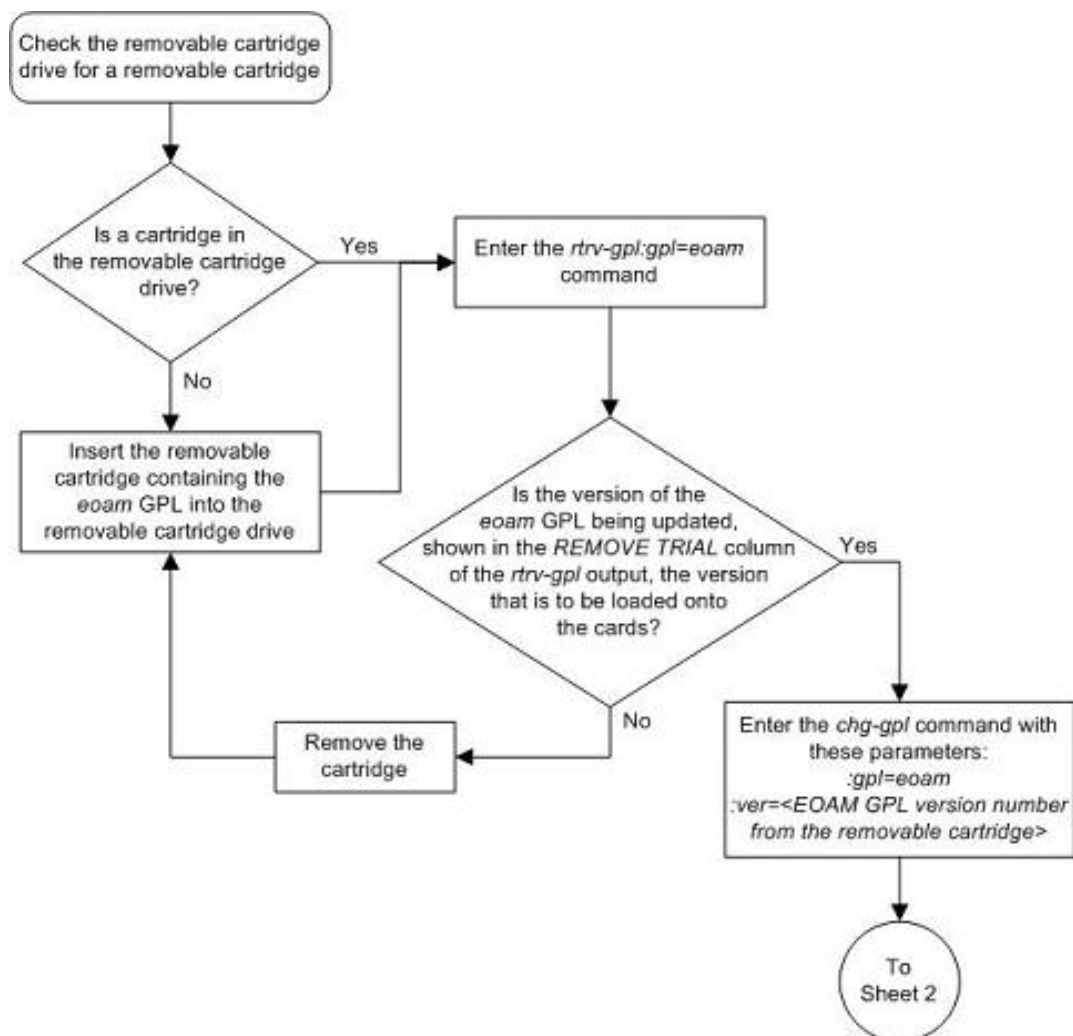
```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0  
Allow message sent to terminal
```

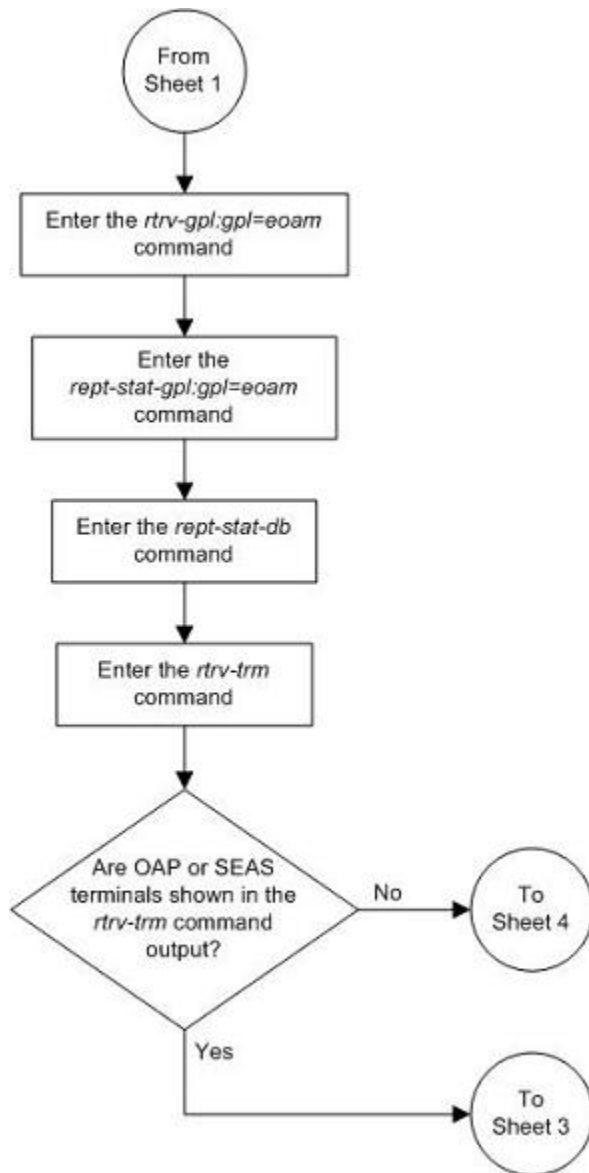
```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0  
Command Completed.
```

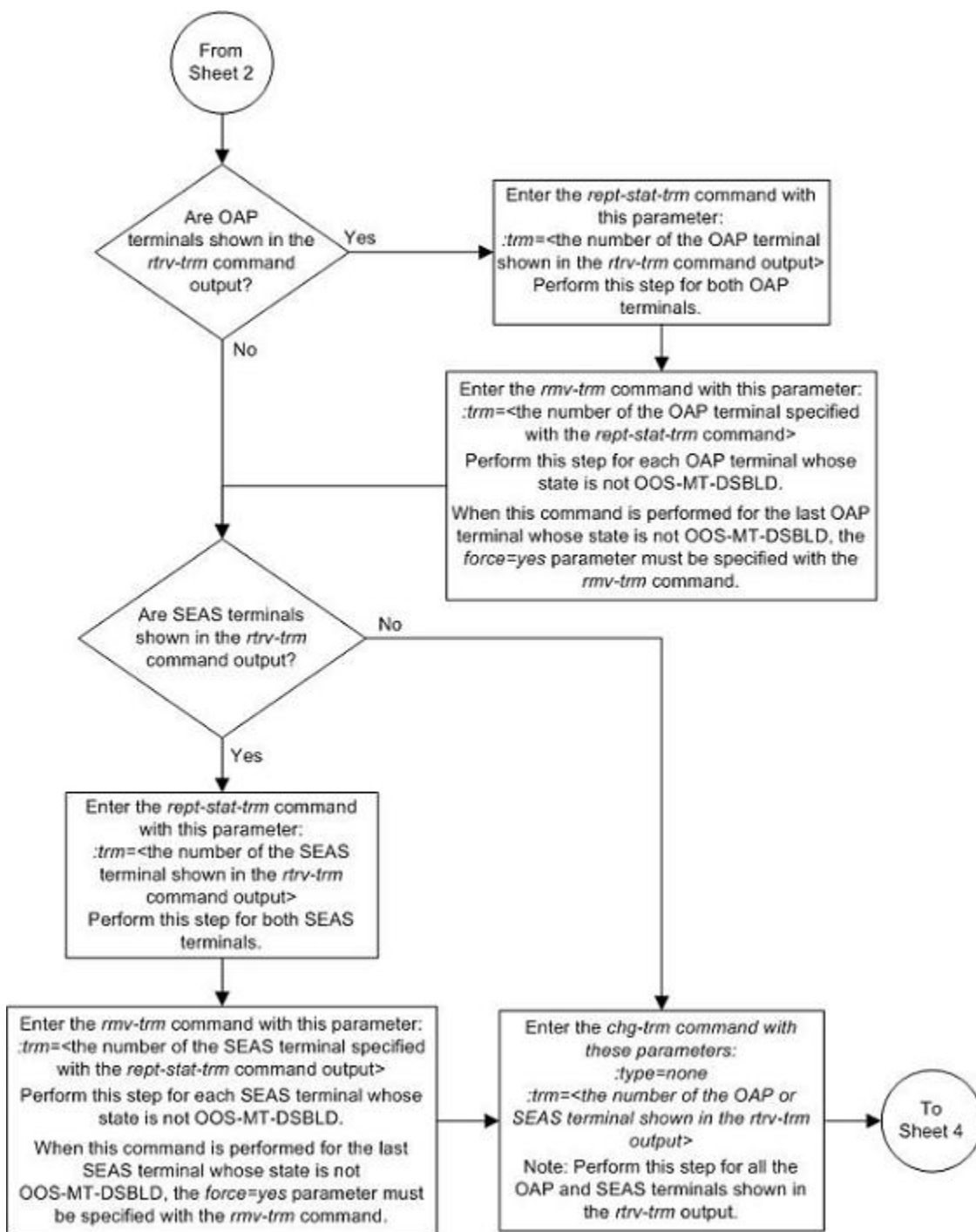
18. Remove the removable cartridge from the removable cartridge drive on the MDAL card.

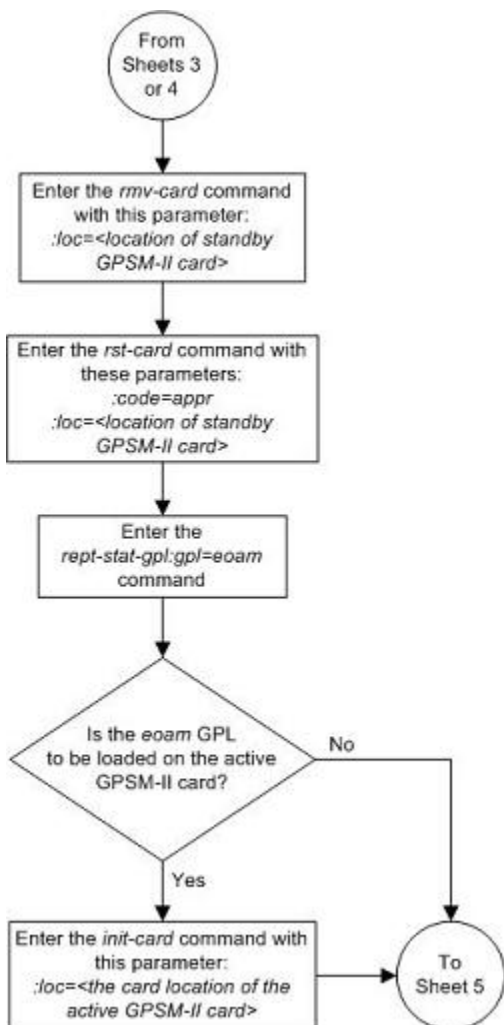
For more information on removing the removable cartridge from the removable cartridge drive, see the [Removing the Removable Cartridge](#) section.

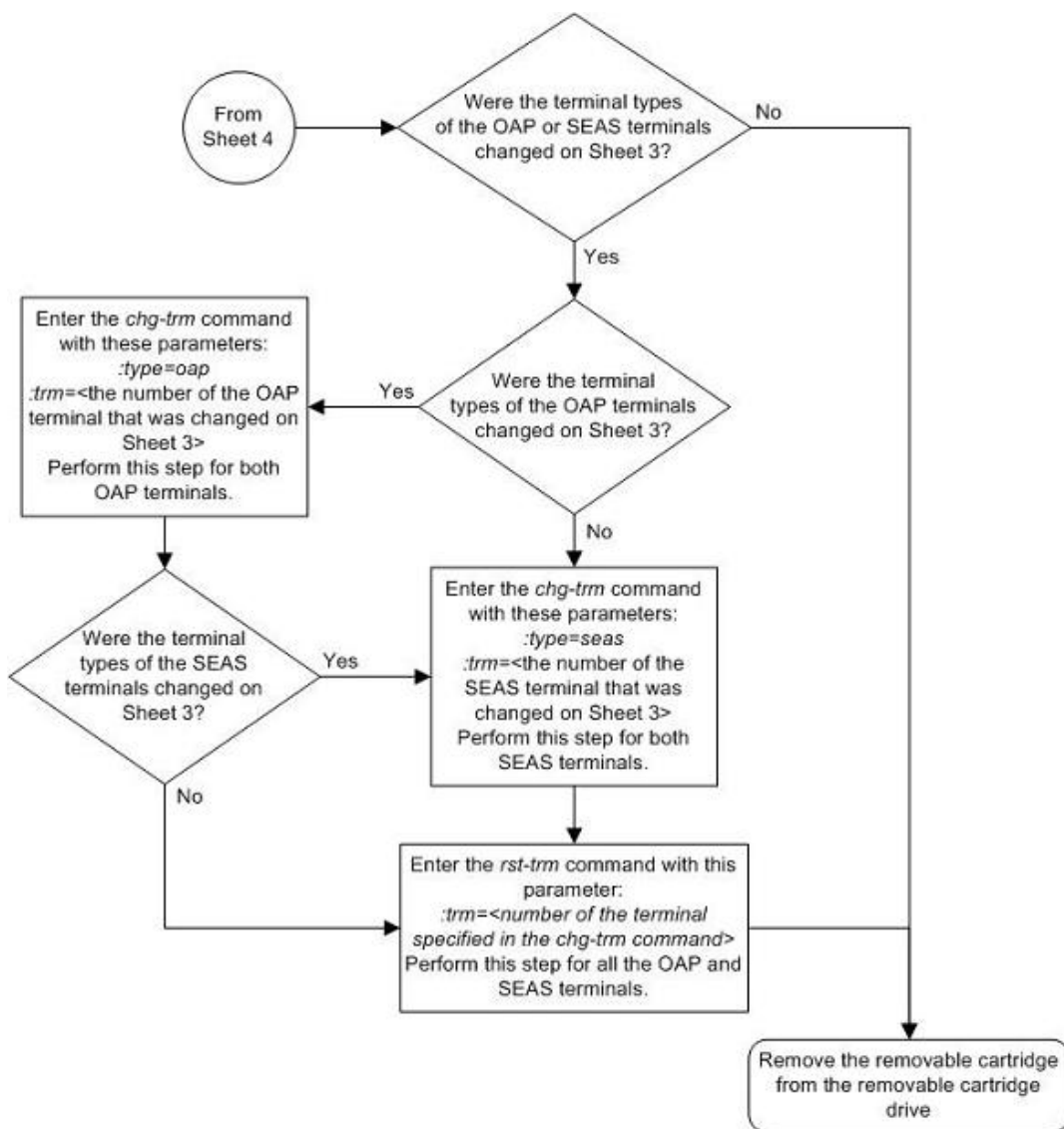
Flowchart 3-2. Updating the EOAM GPL











Updating the Signaling Link and Data Link GPLs

This procedure is used to update these GPLs: **ss7ansi**, **ss7gx25**, **ccs7itu**, **ss7ml**, **ss7ipgw**, **iplim**, **iplimi**, **ipgwi**, **atmansi**, **atmitu**, **stplan**, **vxwslan**, **slanhc**, **ss7hc**, **ss7epm**, **iplhc**, and **ipghc**. 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: **ss7ansi**, **ss7gx25**, **ccs7itu**, **ss7ml**, **ss7ipgw**, **iplim**, **iplimi**, **ipgwi**, **atmansi**, **atmitu**, **ss7hc**, **ss7epm**, **iplhc**, **ipghc**. The signaling link GPLs are assigned to the card types shown in [Table 3-1](#).

Table 3-1. SS7 LIM Card Types

GPL	Card Type
ss7ansi, ccs7itu, & ss7ml	limds0, limocu, limv35, lime1, limch, limt1
ss7gx25	limds0, limocu, limv35
atmansi	limatm
atmitu	lime1atm
ss7ipgw, iplim, iplimi, ipgwi, iplhc, ipghc	dcm (cards running the iplhc and ipghc 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**, **slanhc**, or **stplan** GPLs. The data link GPLs are assigned to the card types shown in [Table 3-2](#).

Table 3-2. Data Link Card Types

GPL	Card Type
stplan	acmenet
vxwslan	dcm

These cards must be slanhc E5-SLAN cards.

These GPLs do not support 24-bit ITU-N point codes: **ss7gx25**, **stplan**, **vxwslan**.

The card types shown in [Table 3-1](#) and [Table 3-2](#) 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 **ss7hc** 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 **stplan**, **vxwslan**, and **slanhc** GPLs are the STPLAN cards supporting the STPLAN feature. ACMs run the **stplan** GPL; 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 **stplan**, **vxwslan**, or **slanhc** GPLs.

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.

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*.

Procedure

1. 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 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
SS7ML	1114	126-002-000	126-002-000	126-001-000	126-003-000
SS7ML	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=vxwslan

```
rlghncxa03w 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL

VXWSLAN	1114	126-002-000	126-002-000	126-001-000	126-003-000
VXWSLAN	1116	126-002-000	126-002-000	126-001-000	-----

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 2. For more information on removing the removable cartridge from the removable cartridge drive, see [Removing the Removable Cartridge](#).

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, skip steps 2 and 3, and go to step 4.

2. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).

To write protect a removable cartridge, see [Write Protecting the Removable Cartridge](#).

3. 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, see [Inserting the Removable Cartridge](#). After the removable cartridge has been inserted into the removable cartridge drive, repeat the **rtrv-gpl** command in step 1 and verify the version of the GPL on the removable cartridge that you wish to update.

4. 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 1.

For this example, enter these commands.

chg-gpl:gpl=ss7ml:ver=123-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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=vxwslan:ver=123-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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
```

5. Activate the trial GPL, using the **act-gpl** command and specifying the value for the trial GPL shown in step 4.

For this example, enter this command.

act-gpl:gpl=ss7ml:ver=123-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
SS7ML activate on 1114 completed
SS7ML activate on 1116 completed
```

act-gpl:gpl=vxwslan:ver=123-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
VXWSLAN activate on 1114 completed
VXWSLAN activate on 1116 completed
```

6. Verify that the trial GPL has been made the approved GPL using the **rtrv-gpl** command with the **gpl** parameter value specified in steps 4 and 5.

For this example, enter these commands.

rtrv-gpl:gpl=ss7ml

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
SS7ML	1114	126-003-000	126-003-000	126-002-000	126-003-000
SS7ML	1116	126-003-000	126-003-000	126-002-000	-----

rtrv-gpl:gpl=vxwslan

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
VXWSLAN	1114	126-003-000	126-003-000	126-002-000	126-003-000
VXWSLAN	1116	126-003-000	126-003-000	126-002-000	-----

7. Verify which cards are running the GPL using the **rept-stat-gpl** command with the **gpl** parameter value specified in step 6.

For this example, enter these commands.

rept-stat-gpl:gpl=ss7ml

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
SS7ML    1201   126-002-000 ALM  126-003-000  126-002-000
SS7ML    1204   126-002-000 ALM  126-003-000  126-002-000
SS7ML    1211   126-002-000 ALM  126-003-000  126-002-000
SS7ML    1215   126-002-000 ALM  126-003-000  126-002-000
SS7ML    1307   126-002-000 ALM  126-003-000  126-002-000
SS7ML    2111   126-002-000 ALM  126-003-000  126-002-000
SS7ML    2112   126-002-000 ALM  126-003-000  126-002-000
SS7ML    2115   126-002-000 ALM  126-003-000  126-002-000
SS7ML    2116   126-002-000 ALM  126-003-000  126-002-000
Command Completed
```

rept-stat-gpl:gpl=vxwslan

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
VXWSLAN  2105   126-002-000 ALM  126-003-000  126-002-000
VXWSLAN  2113   126-002-000 ALM  126-003-000  126-002-000
```

VXWSLAN 2301 126-002-000 ALM 126-003-000 126-002-000
Command Completed

NOTE: If the GPL being updated is either STPLAN, VXWSLAN, or SLANHC, skip steps 8 and 9, and go to step 10.

8. Display the signaling links associated with the cards shown in step 7.

Enter the **rtrv-slk** command. 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  BPS  L1  TSET  ECM  PCR  PCR
      SET              MODE          N1  N2
1201 A  lsnmpl1       0 LIMDS0    2  56000 --- --- BASIC --- ----
1201 B  lsnmpl2       0 LIMDS0    3  56000 --- --- PCR  76  3800
1201 A1 lsnmpl3       0 LIMDS0    2  56000 --- --- PCR  120 5034
1201 B1 lsnmpl4       0 LIMDS0    1  56000 --- --- BASIC --- ----
1204 A  lsnmpl1       1 LIMDS0    2  56000 --- --- BASIC --- ----
1204 B  lsnmpl2       1 LIMDS0    3  56000 --- --- PCR  76  3800
1204 A2 lsnmpl3       1 LIMDS0    2  56000 --- --- PCR  120 5034
1204 B2 lsnmpl5       0 LIMDS0    3  56000 --- --- PCR  76  3800
1211 A  lsnmpl1       2 LIMDS0    2  56000 --- --- BASIC --- ----
1211 B  lsnmpl3       2 LIMDS0    2  56000 --- --- PCR  120 5034
1211 A3 lsnmpl5       1 LIMDS0    3  56000 --- --- PCR  76  3800
1211 B3 lsnmpl6       0 LIMDS0    1  56000 --- --- PCR  120 5034
1215 A1 lsnmpl7       0 LIMDS0    1  56000 --- --- BASIC --- ----
1215 B2 lsnmpl1       3 LIMDS0    2  56000 --- --- BASIC --- ----
1215 A3 lsnmpl6       1 LIMDS0    1  56000 --- --- PCR  120 5034
1215 B3 lsnmpl7       1 LIMDS0    1  56000 --- --- BASIC --- ----
1307 A  lsnmpl6       2 LIMDS0    1  56000 --- --- PCR  120 5034
1307 B2 lsnmpl7       2 LIMDS0    1  56000 --- --- BASIC --- ----
1307 A3 lsnmpl6       3 LIMDS0    1  56000 --- --- PCR  120 5034
1307 B3 lsnmpl7       3 LIMDS0    1  56000 --- --- BASIC --- ----

LOC LINK LSN          SLC TYPE      LP  ATM  TSEL  VCI  VPI  LL
      SET              LINE          5    0    2
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  ATM  TSEL  VCI  VPI  CRC4 SI SN
      SET              LINE          35  15  ON  1  20
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      IPLIML2

No Links Set up.

LOC LINK LSN          SLC TYPE

No Links Set up.

LOC LINK LSN          SLC TYPE      L2T  BPS  ECM  PCR  PCR  E1  E1
      SET              MODE          N1  N2  LOC 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  BPS  ECM  PCR  PCR  T1  T1
      SET              MODE          N1  N2  LOC 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.

9. Using the outputs of steps 7 and 8 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-sl k: loc=1201: link=b
```

```
dact-sl k: loc=1201: link=a1
```

```
dact-sl k: loc=1201: link=b1
```



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 06-10-01 11:45:18 GMT EAGLE5 36.0.0
Deactivate SLK message sent to card
```

NOTE: If the GPL being updated is not VXWSLAN, STPLAN, or SLANHC, skip steps 10 and 11, and go to step 12.

10. Display the data links, and their status, associated with the cards shown in step 7.

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
2105   IS-NR     Avail     ---
2113   IS-NR     Avail     ---
2301   IS-NR     Avail     ---
Command Completed.
```

11. Deactivate the TCP/IP data link on the card (shown in step 10) 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: 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 06-10-01 11:45:18 GMT EAGLE5 36.0.0
Deactivate Link message sent to card.
Command Completed.
```

12. Place the card specified in either steps 9 or 11 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Card has been inhibited.
```

13. Put the cards that were inhibited in step 12 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Card has been allowed.
```

14. Verify the GPLs on the cards using the **rept-stat-gpl** command with the **gpl** parameter value specified in step 7.

If any card is not running the release version of the GPL, shown in the **RELEASE** column of the **rtrv-gpl** output in step 6, 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 06-10-01 11:40:26 GMT EAGLE5 36.0.0
GPL      CARD      RUNNING      APPROVED      TRIAL
SS7ML    1201      126-003-000      126-003-000      126-002-000
SS7ML    1204      126-002-000 ALM      126-003-000      126-002-000
SS7ML    1211      126-002-000 ALM      126-003-000      126-002-000
SS7ML    1215      126-002-000 ALM      126-003-000      126-002-000
SS7ML    1307      126-002-000 ALM      126-003-000      126-002-000
SS7ML    2111      126-002-000 ALM      126-003-000      126-002-000
SS7ML    2112      126-002-000 ALM      126-003-000      126-002-000
SS7ML    2115      126-002-000 ALM      126-003-000      126-002-000
SS7ML    2116      126-002-000 ALM      126-003-000      126-002-000
Command Completed
```

```
rept-stat-gpl:gpl=vxwslan
```

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
VXWSLAN  2105      126-003-000      126-003-000      126-002-000
VXWSLAN  2113      126-002-000 ALM      126-003-000      126-002-000
VXWSLAN  2301      126-002-000 ALM      126-003-000      126-002-000
Command Completed
```

NOTE: If the GPL being updated is either **VXWSLAN** or **STPLAN**, skip steps 15 and 16, and go to step 17.

15. Place the signaling links that were deactivated in step 9 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
```

16. Verify that the signaling links activated in step 15 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 GPL being updated is not VXWSLAN, STPLAN, or SLANHC, skip steps 17 and 18, and go to step 19.

17. Place the TCP/IP data link that was deactivated in step 11 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.
```

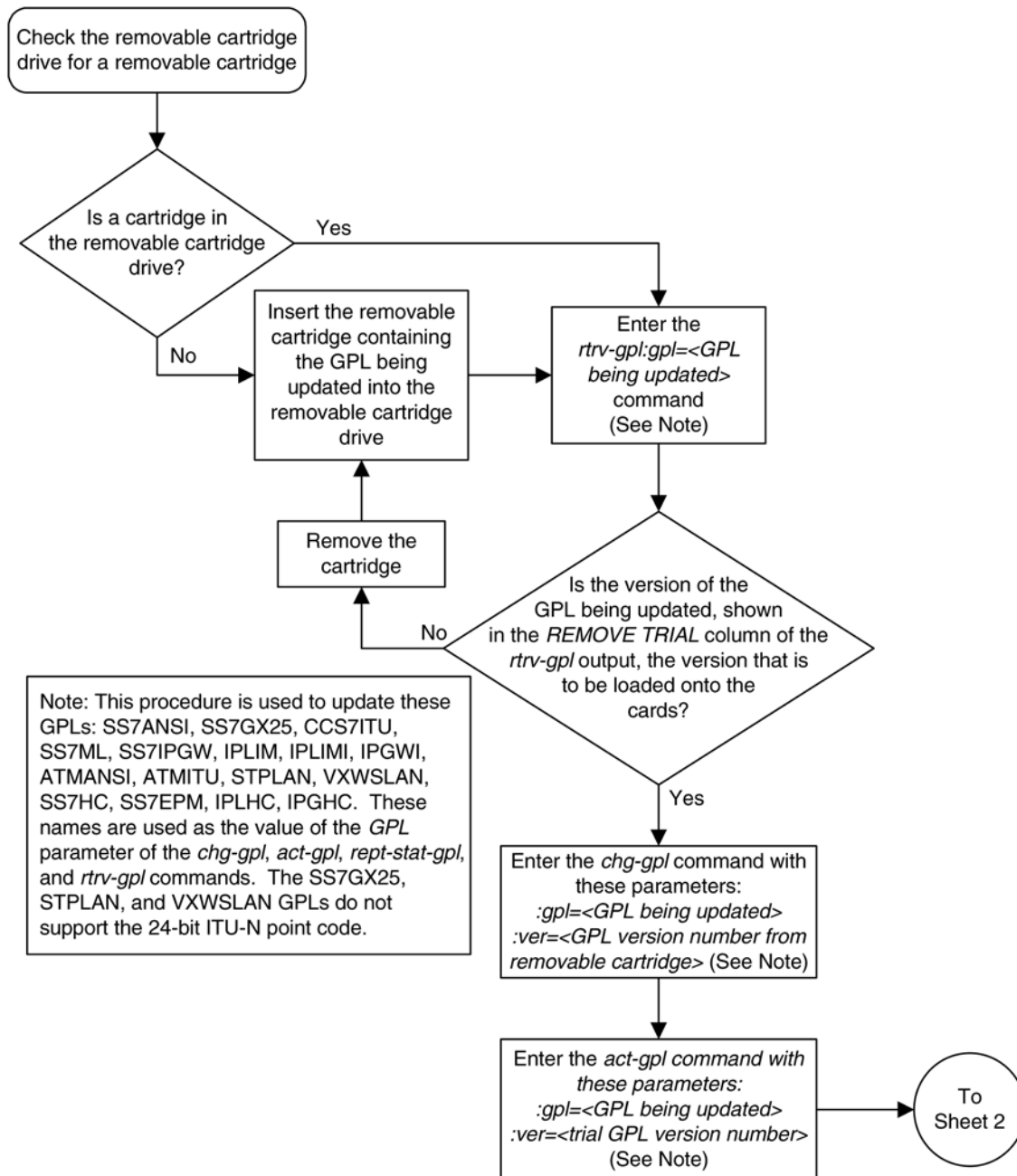
18. Verify that the TCP/IP data links activated in step 17 are back in service with the **rept-stat-dlk** command.

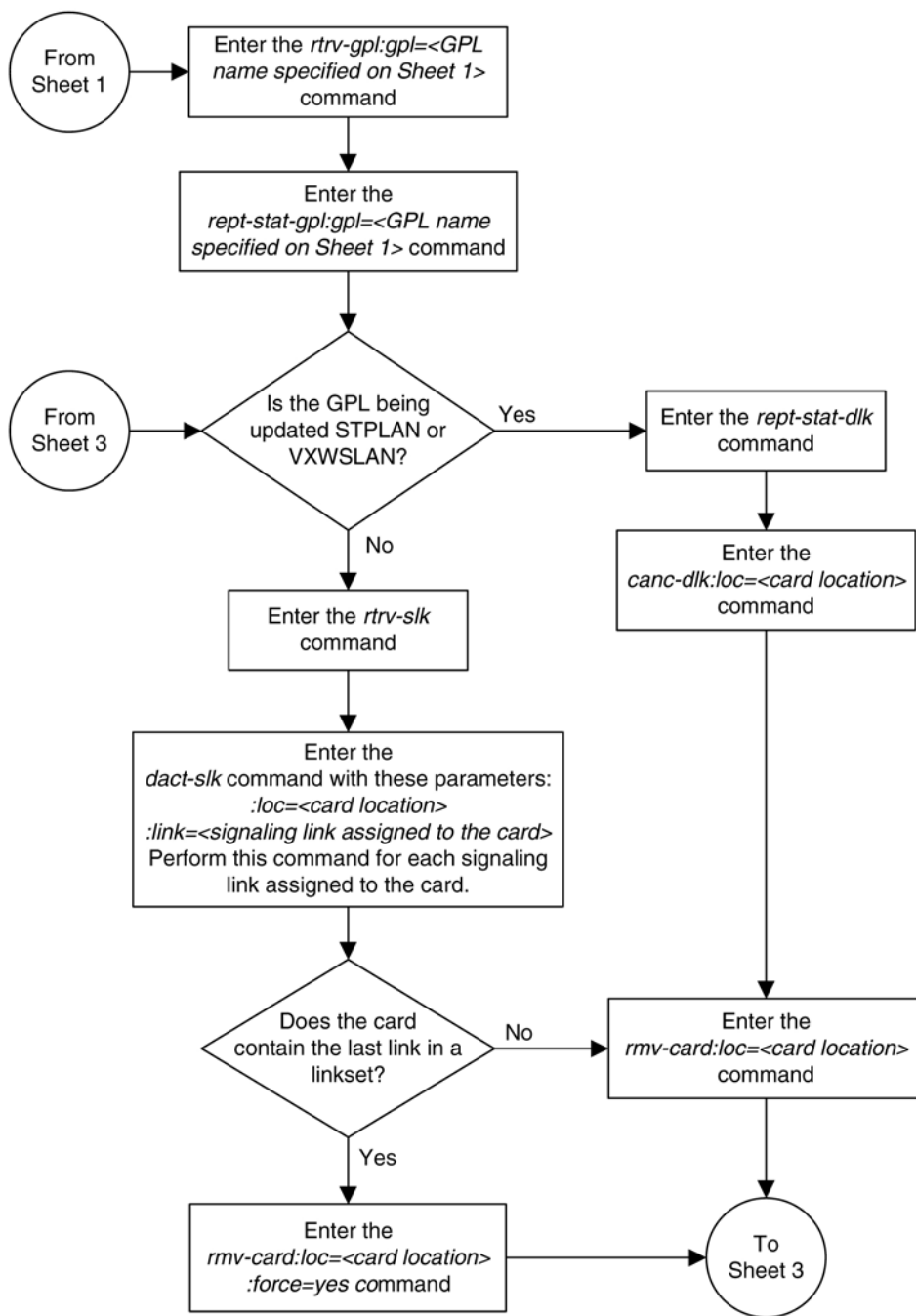
This is an example of the possible output.

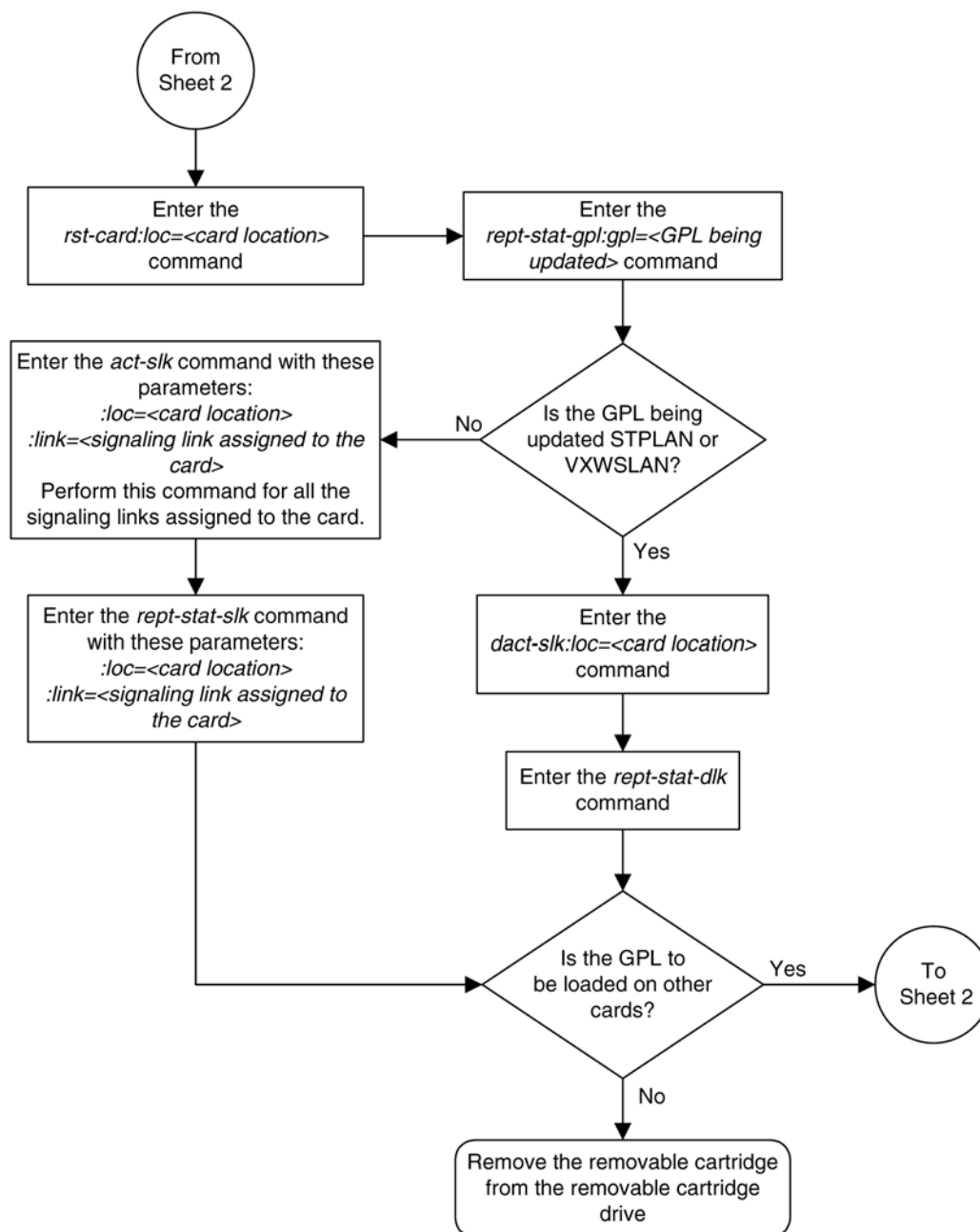
```
rlghncxa03w 06-10-01 12:57:50 GMT EAGLE5 36.0.0
DLK   PST           SST       AST
2105  IS-NR         Avail     ---
2113  IS-NR         Avail     ---
2301  IS-NR         Avail     ---
Command Completed.
```

19. If you wish to load the new GPL onto the other cards shown in step 7, repeat this procedure from either steps 9 or 11 for each card shown in step 7.
20. 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, see [Removing the Removable Cartridge](#) .

Flowchart 3-3. Updating the Signaling Link and Data Link GPLs





Updating the Service GPLs

This procedure is used to update these GPLs: **sccp**, **vsccp**, **gls**, **ebdadcm**, **ebdablm**, **eroute**, **mcp**, **ips**, **sccphc**, **erthc**, 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 3-3](#) .

Table 3-3. Service GPL Card Types

GPL	Card Type
sccp, gls, ebdablm	tsm
vsccp	dsm (these cards must be DSMs)
ebdadcm, edmc	dcm
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)

The card types shown in [Table 3-3](#) 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.

Procedure

1. 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=vsccp

```
rlghncxa03w 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
VSCCP	1114	126-002-000	126-002-000	126-001-000	126-003-000
VSCCP	1116	126-002-000	126-002-000	126-001-000	-----

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 2. For more information on removing the removable cartridge from the removable cartridge drive, see the [Removing the Removable Cartridge](#) section.

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, skip steps 2 and 3, and go to step 4.

2. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).
To write protect a removable cartridge, see the [Write Protecting the Removable Cartridge](#) section.
3. 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, see the [Inserting the Removable Cartridge](#) section. After the removable cartridge has been inserted into the removable

cartridge drive, repeat the **rtrv-gpl** command in step 1 and verify the version of the GPL on the removable cartridge that you wish to update.

4. 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 1.

For this example, enter this command.

chg-gpl:gpl=vscdp:ver=123-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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
```

5. Activate the trial GPL, using the **act-gpl** command and specifying the value for the trial GPL shown in step 4.

For this example, enter this command.

act-gpl:gpl=vscdp:ver=123-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
VSCCP activate on 1114 completed
VSCCP activate on 1116 completed
```

6. Verify that the trial GPL has been made the approved GPL using the **rtrv-gpl** command with the **gpl** parameter value specified in steps 4 and 5.

For this example, enter this command.

rtrv-gpl:gpl=vscdp

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
VSCCP	1114	126-003-000	126-003-000	126-002-000	126-003-000
VSCCP	1116	126-003-000	126-003-000	126-002-000	-----

7. Verify which cards are running the GPL using the **rept-stat-gpl** command with the **gpl** parameter value specified in step 6.

For this example, enter this command.

rept-stat-gpl:gpl=vscdp

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
VSCCP    1101  126-002-000 ALM  126-003-000  126-002-000
VSCCP    1102  126-002-000 ALM  126-003-000  126-002-000
VSCCP    1103  126-002-000 ALM  126-003-000  126-002-000
Command Completed
```

8. Steps 9 through 15 are performed based on the GPL being updated (shown in the **rept-stat-gpl** output in step 7).

The following list shows the steps that are performed for the GPL being updated.

- SCCP, VSCCP, SCCPHC – Perform step 9, then go to step 16. Skip steps 10 through 15
- MCP – Perform step 10, then go to step 16. Skip step 9 and steps 11 through 15.
- EROUTE, ERTHC – Perform step 11, then go to step 16. Skip steps 10 through 12 and 15 through 15.
- EBDABLM, EBDADCM – Perform step 13, then go to step 16. Skip steps 9 through 12 and 14 and 15.
- IPS, IPSHC – Perform steps 12 through 15, then go to step 16. Skip steps 9 through 11.

9. Display the status of the SCCP cards 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
-----
1101 126-002-001 IS-NR          Active      -----      47%         81%
1102 126-002-001 IS-NR          Active      -----      34%         50%
1103 126-002-001 IS-NR          Active      -----      21%         29%
-----
SCCP Service Average MSU Capacity = 36%      Average CPU Capacity = 56%
Command Completed.
```

Skip steps 10 through 15, and go to step 16.

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*.**

10. Display the status of the MCPMs in the by entering the **rept-stat-meas** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:43:42 GMT EAGLE5 36.0.0

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

CARD  VERSION      TYPE  PST          SST          AST
2107 P 126-002-000  MPCM  IS-NR        Active      -----
      IP Link A      IS-NR        Active      Available
2108 123-200-000   MPCM  IS-NR        Active      -----
      IP Link A      IS-NR        Active      Available
2111 126-002-000   MPCM  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
```

Skip steps 11 through 15, and go to step 16.

11. Display the status of the STC cards using the **rept-stat-eroute** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
```

```
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 USAGE	CPU USAGE
1105	126-002-000	IS-NR	Active	-----	35%	52%
1205	126-002-000	IS-NR	Active	-----	35%	52%
1211	126-002-000	IS-NR	Active	-----	35%	52%
1303	126-002-000	IS-NR	Active	-----	35%	52%
1311	126-002-000	IS-NR	Active	-----	35%	52%
1313	126-002-000	IS-NR	Active	-----	35%	52%
2211	126-002-000	IS-NR	Active	-----	35%	52%
2213	126-002-000	IS-NR	Active	-----	35%	52%

```
EROUTE Service Average TVG Capacity = 35% Average CPU Capacity = 52%
```

Skip steps 12 through 15, and go to step 16.

12. Display the status of the IPSMs (if the IPS or IPSHC GPL is being updated), or the cards running the EBDADCM or EBDABLM GPL using the **rept-stat-card** command and specifying the location of the card shown in the **rept-stat-gpl** output in step 7.

For this example, enter this command.

rept-stat-card:loc=2301

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION  TYPE  APPL  PST  SST  AST
2301  126-001-000 DCM   EBDADCM  IS-NR  Active  -----

ALARM STATUS      = No Alarms.
BPDCM GPL         = 126-002-000
IMT BUS A         = Conn
IMT BUS B         = Conn
Command Completed.
```

If the EBDABLM or EBDADCM GPLs are being updated, skip steps 13 through 15, and go to step 16.

13. 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 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    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

TRM	TRAF	LINK	SA	SYS	PU	DB
1	NO	YES	NO	YES	NO	YES
2	NO	NO	NO	NO	NO	NO

.

.

39	NO	NO	NO	NO	NO	NO
40	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

.

.

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

14. 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.

- 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: 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 14 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 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.
```

16. 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 steps 7, 9, 10, 11, 12 or 13, out of service using the **rmv-card** command. If there is only one of these cards running these GPLs in service (**sccp**, **vsccp**, **gls**, **mcp**), the **force=yes** parameter must be specified with the **rmv-card** command.

For this example, enter this command.

```
rmv-card: loc=1101
```



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: 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Card has been inhibited.
```

17. Put the card that was inhibited in step 17 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Card has been allowed.
```

18. 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 7.

If any card is not running the release version of the GPL, shown in the **RELEASE** column of the **rtrv-gpl** output in step 6, 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=vsccp
```

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
VSCCP    1101    126-003-000    126-003-000    126-002-000
VSCCP    1102    126-002-000 ALM    126-003-000    126-002-000
VSCCP    1103    126-002-000 ALM    126-003-000    126-002-000
Command Completed
```

NOTE: If the IPS or IPSHC GPL is not being updated in this procedure, skip steps 19 and 20, and go to step 21.

19. Put the terminals that were placed out of service in step 17 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 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.
```

20. 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	-----

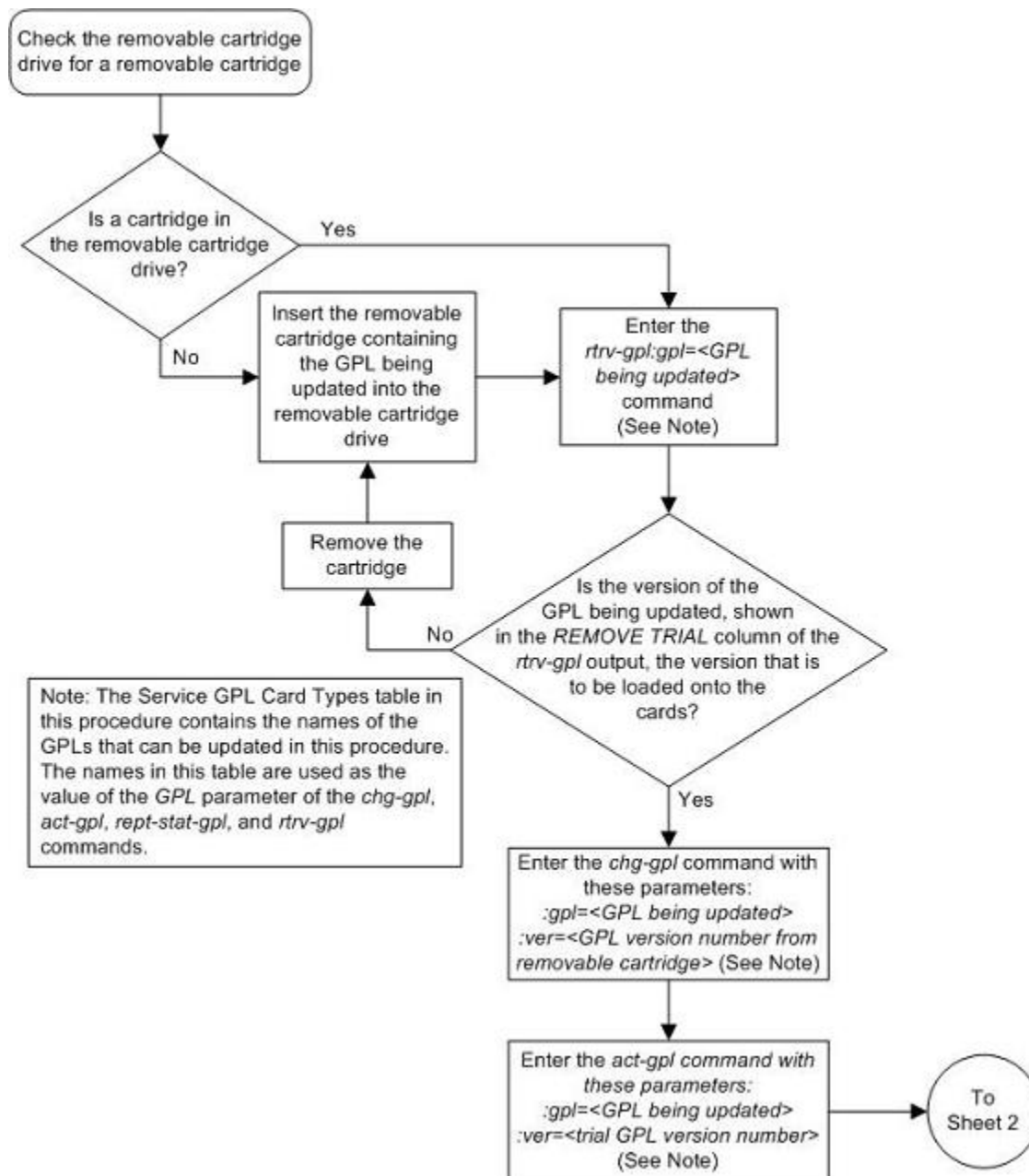
40 IS-NR Active -----

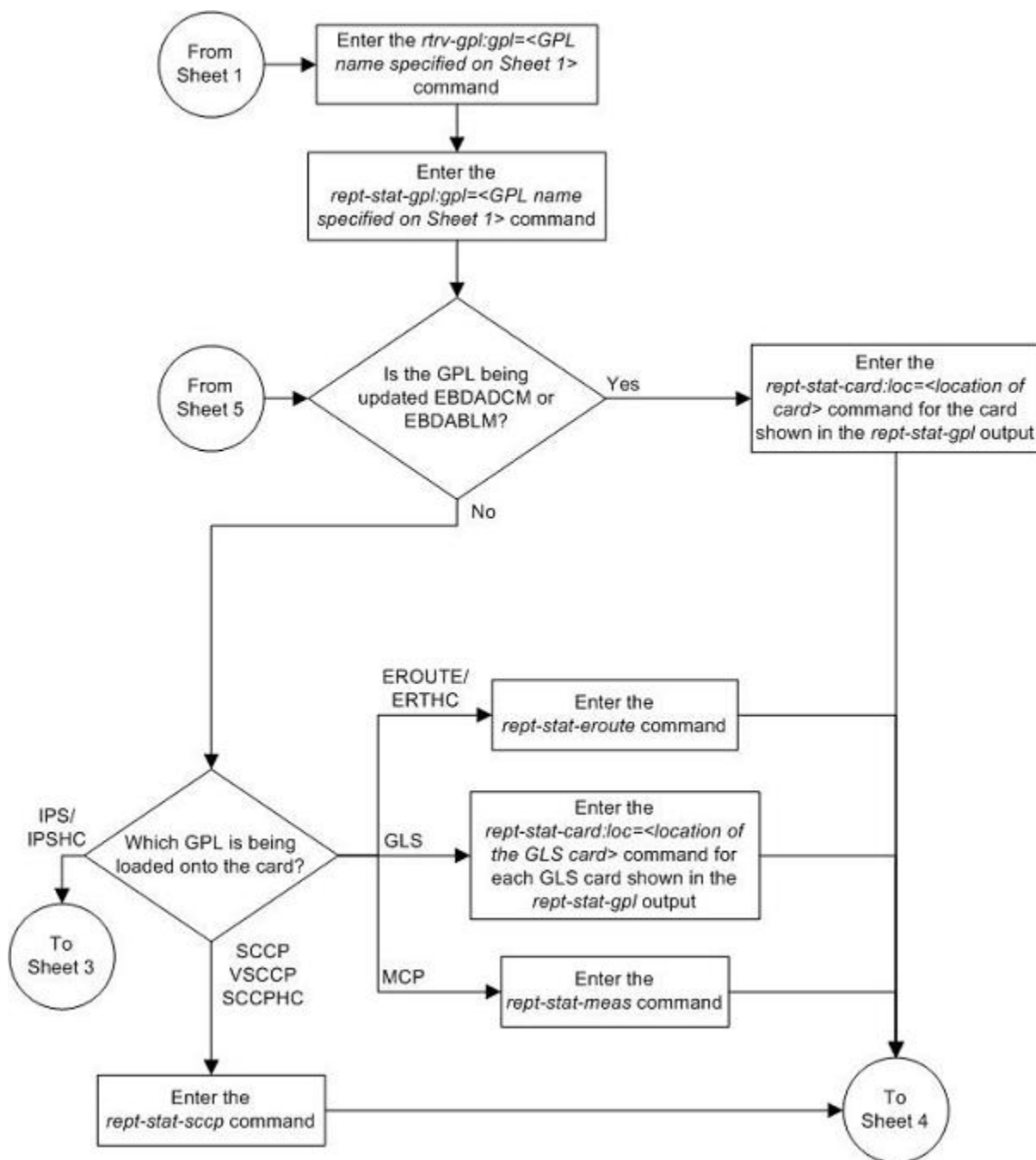
Command Completed.

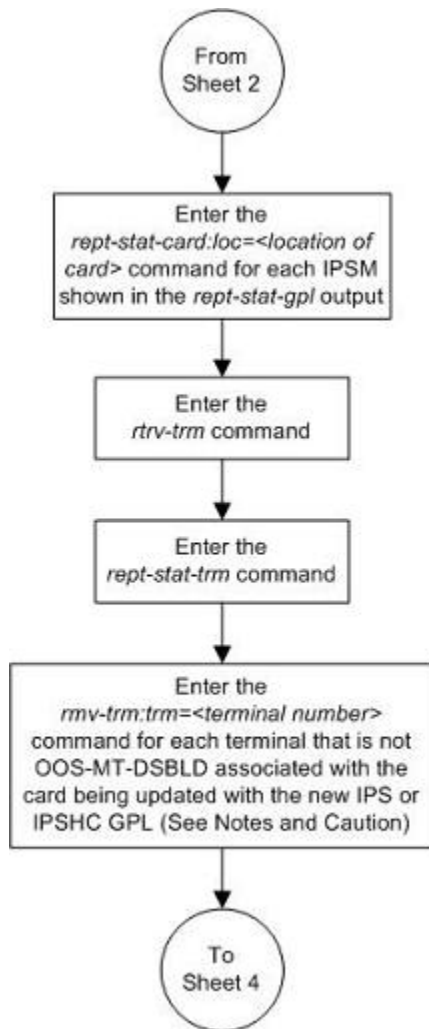
21. If you wish to load the new GPL onto the other cards shown in step 7, repeat this procedure from step 8 for each card shown in step 7.
22. Remove the removable cartridge from the removable cartridge drive on the MDAL card.

For more information on removing the removable cartridge from the removable cartridge drive, see the [Removing the Removable Cartridge](#) section.

Flowchart 3-4. Updating the Service GPLs



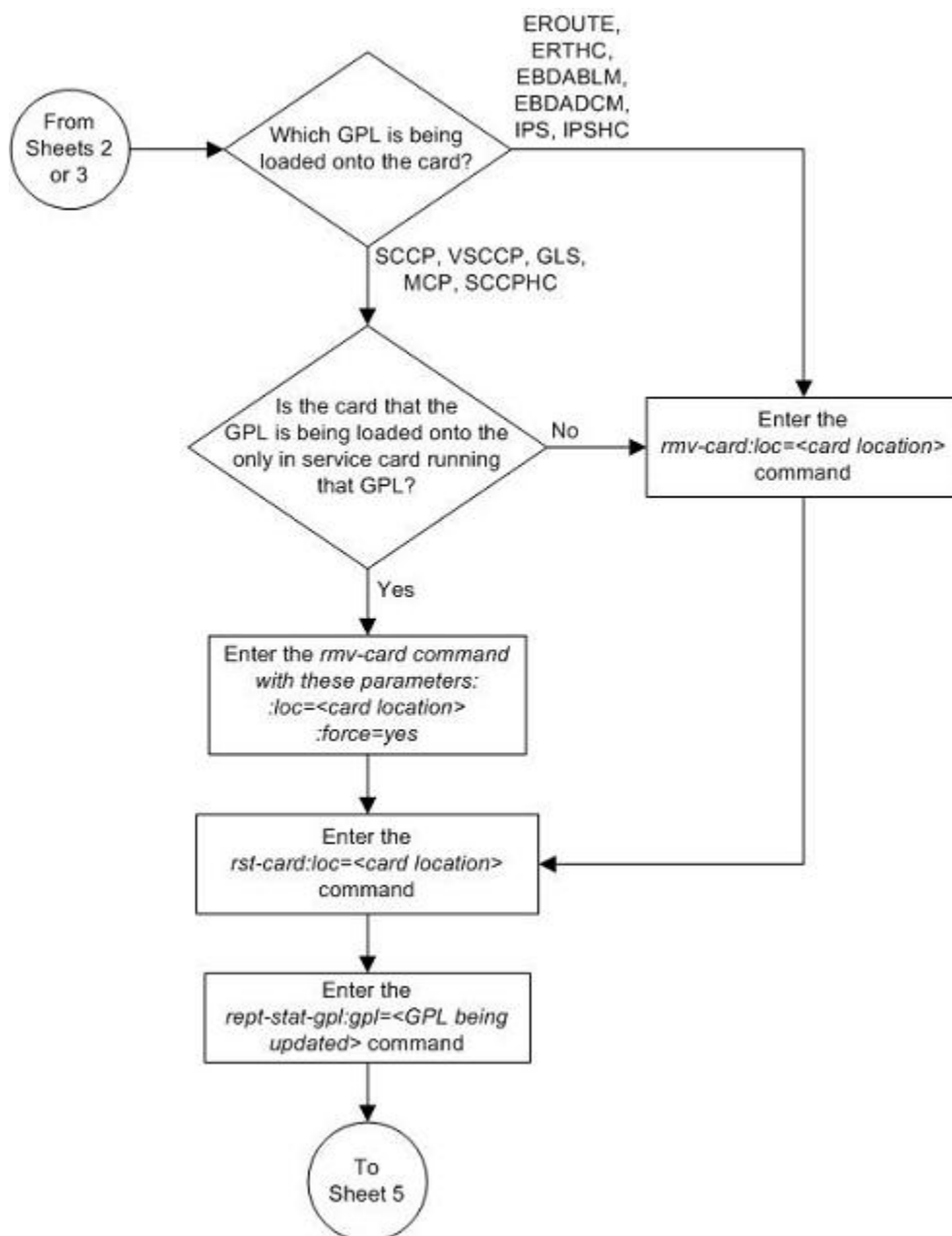


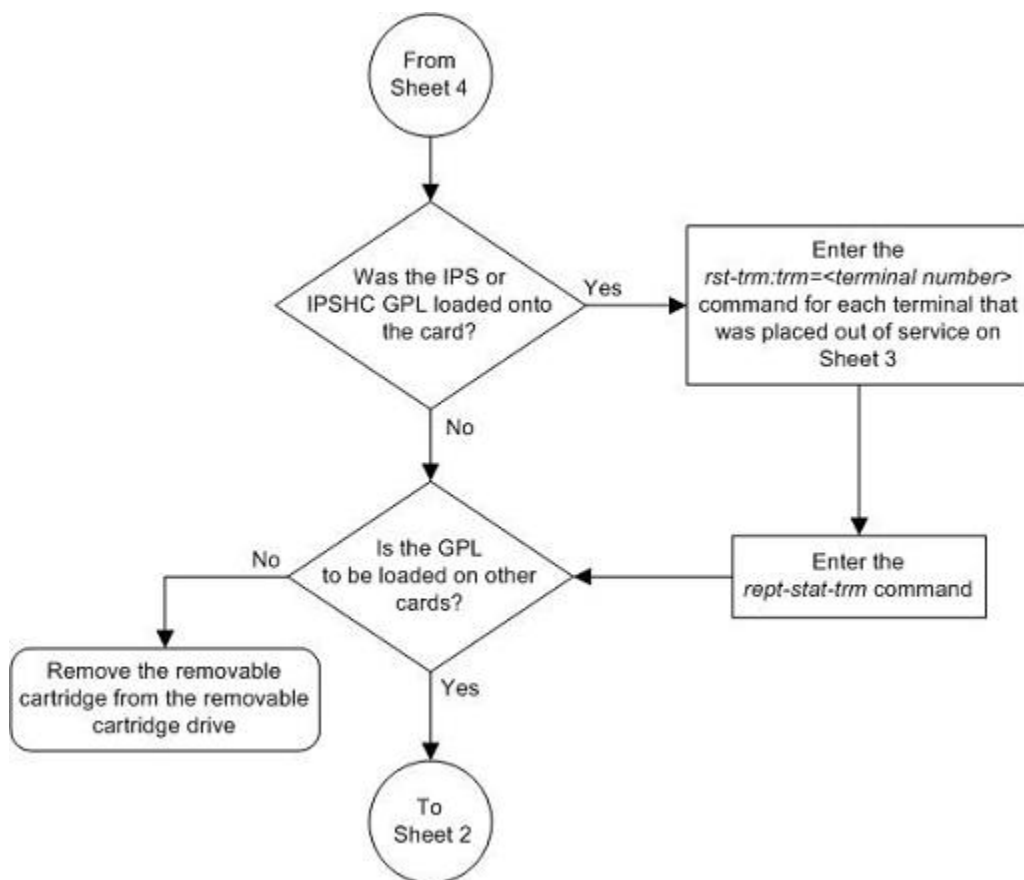


Caution: Placing these terminals out of service will disable all the sessions supported by the terminals associated with the card.

Notes:

1. Each card has 8 terminals associated with it. The *rtrv-trm* output shows the terminals that are associated with each card.
2. If the last in service SEAS terminal is assigned to the card containing the terminals that are being inhibited, the *force=yes* parameter must be specified for that terminal.





Updating the Flash GPLs

This procedure is used to update these GPLs: **bphcap**, **bphcapt**, **bpmp1**, **bpmp1t**, **bpdcm**. 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 3-4](#).

Table 3-4. High-Capacity Card Flash GPLs

HC MIM	ES-E1T1 ES-ENET	ES-STC ES-SLAN E5-IPSM	ES-SM4G
BLCPLD	BLCPLD	BLCPLD	BLCPLD
IMTPCI	IMTPCI	IMTPCI	IMTPCI
BLVXW	BLVXW6	BLVXW6	BLVXW6
BLBIOS	BLBEPM	BLBEPM	BLBSMG
BLDIAG	BLDIAG6	BLDIAG6	BLDIAG6
PLDE1T1	PDLPMC1		
PDLMPC1			
To update the GPLs on these cards, perform one of these procedures. Updating One of the Flash GPLs on the High-Capacity Cards .			

HC MIM	ES-E1T1 ES-ENET	ES-STC ES-SLAN E5-IPSM	ES-SM4G
Updating All the Flash GPLs on the High-Capacity Cards .			

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, go to the [Updating the BPHMUX GPL](#) procedure. The hipr flash GPL runs only on the HIPR cards. To update the hipr GPL, go to the [Updating the HIPR GPL](#) procedure.

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:
 - STPLAN – Used to support the STPLAN feature
 - EBDADCM – Used to support the Enhanced Bulk Download 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 with 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.

If the GPL is being updated to a new version, a removable cartridge 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 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*.

Procedure

1. 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=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	126-002-000	126-002-000	126-001-000	126-003-000
BPDCM	1116	126-002-000	126-002-000	126-001-000	-----

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 go to step 2. For more information on removing the removable cartridge from the removable cartridge drive, see the [Removing the Removable Cartridge](#) section.

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, skip steps 2 and 3, and go to step 4.

2. Make sure the removable cartridge containing the new software is "write protected" (NOT write enabled).

To write protect a removable cartridge, see the [Write Protecting the Removable Cartridge](#) section.

3. Insert the removable cartridge containing the flash 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, see the [Inserting the Removable Cartridge](#) section. After the removable cartridge has been inserted into the removable cartridge drive, repeat the **rtrv-gpl** command in step 1 and verify the version of the flash GPL on the removable cartridge that you wish to update.

4. 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 1.

For this example, enter this command.

```
chg-gpl:gpl=bpdc: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
```

5. Activate the trial flash GPL, using the **act-gpl** command and specifying the name and version of the trial flash GPL specified in step 4.

For this example, enter this command.

```
act-gpl:gpl=bpdcmlver=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
```

6. Verify that the flash GPL on the removable cartridge is the approved flash GPL on the fixed disk using the **rtrv-gpl** command with the **gpl** parameter value specified in step 5.

For this example, enter this command.

```
rtrv-gpl:gpl=bpdcml
```

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	APPROVED	TRIAL	REMOVE	TRIAL
BPDCM	1114	126-003-000	126-003-000	126-002-000	126-003-000
BPDCM	1116	126-003-000	126-003-000	126-002-000	-----

7. 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 6.

For this example, enter this command.

```
rept-stat-gpl:gpl=bpdcml
```

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 126-002-000 ALM 126-003-000 126-002-000
BPDCM 1115 126-002-000 ALM 126-003-000 126-002-000
BPDCM 1303 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2101 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2103 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2105 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2107 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2111 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2113 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2115 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2205 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2207 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2213 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2301 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2303 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2305 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2307 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2311 126-002-000 ALM 126-003-000 126-002-000
BPDCM 3103 126-002-000 ALM 126-003-000 126-002-000
```

```

BPDCM    3105    126-002-000 ALM    126-003-000    126-002-000
BPDCM    3107    126-002-000 ALM    126-003-000    126-002-000
Command Completed

```

NOTE: If the flash GPL being displayed by the **rept-stat-gpl** command is the bpdcm 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.

8. Display the status of the card, shown in the **rept-stat-gpl** output in step 7, 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  APPL  PST      SST      AST
2105  126-003-000  DCM   VXWSLAN  IS-NR      Active    -----
ALARM STATUS      = No Alarms.
BPDCM GPL         = 126-002-000
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.

```

9. Steps 10 through 20 are performed based on the application GPL running on the card shown in the **GPL** column in the **rept-stat-card** output in step 8.

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, EBDABLM, EBDADCM – Step 8 shows the status of these cards.
Skip steps 10 through 20 and go to step 21.
- ATMANSI, ATMITU, SS7ML, IPLIM, IPLIMI, SS7IPGW, IPGWI – Perform steps 10 and 11, then go to step 21.
Skip steps 12 through 20.
- VXWSLAN – Perform steps 12 and 13, then go to step 21.
Skip steps 10 and 11, and steps 14 through 20.
- VSCCP – Perform step 14, then go to step 21.
Skip steps 10 through 13, and steps 15 through 20.
- MCP – Perform step 15, then go to step 21.
Skip the steps 10 through 14, and steps 16 through 20.
- EOAM – Perform steps 16 through 20, then go to step 21.
Skip steps 10 through 15.
- IPS – Perform steps 17, 18, and 19, then go to step 21.
Skip steps 10 through 16 and step 20.

10. Display the signaling links associated with the card shown in step 8.

Enter the **rtrv-slk** command with the card location specified in step 8. 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 SET	BPS	L1 MODE	TSET	ECM	PCR N1	PCR 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	---	-----

11. 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: 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: 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
```

Skip steps 12 through 20, and go to step 21.

12. Display the TCP/IP data links, and their status, associated with the cards shown in steps 7 and 8.

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.
```

13. Deactivate the TCP/IP data link on the card that you wish to load the flash GPL onto, shown in step 12, using the **canc-dlk** command.

For this example, enter this command.

```
canc-dlk:loc=2105
```



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.
```

Skip steps 14 through 20, and go to step 21.

14. Display the status of the SCCP cards **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 126-002-001 IS-NR          Active      -----    47%      81%
3101 126-002-001 IS-NR          Active      -----    34%      50%
3103 126-002-001 IS-NR          Active      -----    21%      29%
-----
SCCP Service Average MSU Capacity = 34%      Average CPU Capacity = 54%
Command Completed.
```

Skip steps 15 through 20, and go to step 21.

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*.

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

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:43:42 GMT EAGLE5 36.0.0

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

CARD  VERSION      TYPE  PST          SST          AST
2107 P 126-002-000  MCPM  IS-NR        Active      -----
      IP Link A      IS-NR        Active      Available
2111 126-002-000  MCPM  IS-NR        Active      -----
      IP Link A      IS-NR        Active      Available
2115 126-002-000  MCPM  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
```

Skip steps 16 through 20, and go to step 21.

NOTE: Step 16 is performed only if the application GPL running on the card shown in the `rept-stat-card` output in step 8 is EOAM. If the application running on the card is IPS, skip step 16 and go to step 17.

16. To load the **bpdcm** 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                      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.

17. 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, skip steps 18 through 20 and go to step 21.

If the application GPL running on the card is IPS, the Telnet terminals associated with the card shown in step 8 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 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   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

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	YES	YES	YES	YES	YES	YES	YES
7	YES	YES	YES	YES	YES	YES	YES
8	NO	NO	NO	NO	YES	NO	YES
9	YES	YES	YES	YES	YES	YES	YES
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	APP	SERV	SS	CARD	CLK	DBG	GTT	GWS	MEAS	MON	MPS	SEAS	SLAN

1	YES	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	YES	NO	NO
3	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
4	YES	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	YES	NO	NO
6	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

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	NO
12	NO	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	NO
14	NO	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	NO
16	NO	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	NO
18	NO	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	NO
20	NO	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	NO
22	NO	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	NO
24	NO	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	NO
26	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
27	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
28	NO	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	NO
30	NO	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	NO
32	NO	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	NO
34	NO	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	NO
36	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
37	NO	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	NO
39	NO	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	NO

18. Display the status of the terminals with the **rept-stat-trm** command.

This is an example of the possible output.

```

r1ghncxa03w 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.

19. 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.

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: 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 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 20 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, skip step 20 and go to step 21.
 - If the OAP or SEAS terminals were placed out of service in this step, go to step 20.
20. 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 19.

If OAP terminals are shown in the **rtrv-trm** output in step 17, 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 17, 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
```

21. Place the card shown in step 8 out of service using the **rmv-card** command.



CAUTION: Multiple cards running the same flash GPL can be updated at the same time with the **init-flash** command (step 24). This requires that the cards in the locations specified with the **init-flash** command in step 24 are out of service. All the cards running a 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**, **ccs7itu**, **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 8, 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 24, 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**, **ccs7itu**, **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, skip steps 22 and 23, and go to step 24.

22. Verify the status of the high-speed clocks by entering the **rept-stat-clk** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 11:34:04 GMT EAGLE5 36.0.0
CARD LOC = 1114 (Standby ) CARD LOC = 1116 (Active )
PRIMARY BITS = Active PRIMARY BITS = Active
SECONDARY BITS = Idle SECONDARY BITS = Idle
HS PRIMARY CLK = Active HS PRIMARY CLK = Active
HS SECONDARY CLK = Idle HS SECONDARY CLK = Idle
HS CLK TYPE = RS422 HS CLK TYPE = RS422
HS CLK LINELEN = LONGHAUL HS CLK LINELEN = LONGHAUL

SYSTEM CLOCK PST SST AST
ALARM STATUS IS-NR Active -----
= No Alarms.
# Cards using CLK A = 009 # Cards with bad CLK A = 000
# Cards using CLK B = 000 # Cards with bad CLK B = 000
# Cards using CLK I = 000

HS SYSTEM CLOCK PST SST AST
ALARM STATUS IS-NR Active -----
= No Alarms.
# Cards using HS CLK A = 002 # Cards with bad HS CLK A = 000
# Cards using HS CLK B = 000 # Cards with bad HS CLK B = 000
# Cards using HS CLK I = 000

Command Completed.
```

If the **rept-stat-clk** output does not show any high-speed clocks (**HS SYSTEM CLOCK**, **HS PRIMARY CLK**, **HS SECONDARY 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 1 are set to the system default values (HS CLK TYPE = RS422 and HS CLK LINELEN = LONGHAUL), skip step 23 and go to step 24.

23. 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, go to step 25.

If the TDM part numbers are not 870-0774-15 or later, the TDMs must be replaced with TDM part numbers 870-0743-15 or later. Contact the Customer Care Center before replacing the TDMs. Refer to [Customer Care Center](#) for the contact information. If the older TDMs are not replaced, this procedure cannot be performed.

24. Load the flash GPL onto the card inhibited in step 21 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 21 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: 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 22, 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=bpdcm

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.

25. Put the cards that were inhibited in step 21 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.

```

26. Verify that the flash GPL from step 24 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  APPL  PST      SST      AST
2105  126-003-000  DCM   VXWSLAN  IS-NR      Active    -----
ALARM STATUS      = No Alarms.
BPDCM GPL         = 126-003-000 +
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 GPL shown in the **rept-stat-card** command output is different than the version specified in step 8, contact the Customer Care Center. Refer to [Customer Care Center](#) for the contact information.

27. Activate the approved flash GPL loaded onto the cards in step 24 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 24, 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=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 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.
```

28. Verify the flash GPLs on the cards using the **rept-stat-gpl** command with the **gpl** parameter value specified in step 5.

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 6, 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=bpdcn

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 126-002-000 ALM 126-003-000 126-002-000
BPDCM 1115 126-002-000 ALM 126-003-000 126-002-000
BPDCM 1303 126-002-000 ALM 126-003-000 126-002-000
BPDCM 1307 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2101 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2103 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2105 126-003-000 126-003-000 126-002-000
BPDCM 2113 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2205 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2207 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2213 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2301 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2303 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2305 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2307 126-002-000 ALM 126-003-000 126-002-000
BPDCM 2311 126-002-000 ALM 126-003-000 126-002-000
BPDCM 3101 126-002-000 ALM 126-003-000 126-002-000
BPDCM 3103 126-002-000 ALM 126-003-000 126-002-000
BPDCM 3105 126-002-000 ALM 126-003-000 126-002-000
BPDCM 3107 126-002-000 ALM 126-003-000 126-002-000
Command Completed

```

NOTE 1: If the flash GPL being displayed by the **rept-stat-gpl** command is the **bpdcm** 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 8, is **ss7ml**, **atmansl**, **atmitu**, **iplim**, **iplimi**, **ss7ipgw**, or **ipgwi**, perform steps 29 and 30, then go to step 38. Skip steps 31 through 37.

29. Place the signaling links that were deactivated in step 11 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
```

30. Verify that the signaling links activated in step 29 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 8, is **vxwslan**, perform steps 31 and 32, then go to step 38. Skip steps 33 through 37.

31. Place the TCP/IP data link that was deactivated in step 14 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.
```

32. Verify that the TCP/IP data links activated in step 31 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 1: If the application GPL running on the card is not EOAM, skip steps 33 through 37, and go to step 38.

NOTE: If the application GPL running on the card is IPS, perform steps 35 and 36, then go to step 38. Skip steps 33, 34, and 37.

33. 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 21, specifying the card location used in the **init-card** command.

If you did not wish to load the new version of the **bpdcn** GPL onto the other GPSM-II card running the EOAM application, continue this procedure with either steps 34 or 37 based on the following conditions:

- If OAP and SEAS terminals were not shown in the **rtrv-trm** command output in step 17, skip steps 34 through 36, and go to step 37.
 - If OAP and SEAS terminals were shown in the **rtrv-trm** command output in step 17, go to step 34.
34. Change the terminal type of the terminals that were changed to **NONE** in step 20 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 17.

If OAP terminals were changed in step 20, 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 20, 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
```

35. Put the required terminals back into service with the **rst-trm** command.

If OAP terminals were placed out of service in step 19, for this example, enter these commands.

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

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

If SEAS terminals were placed out of service in step 19, for this example, enter these commands.

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

```
rst-trm:trm=36
```

If Telnet terminals were placed out of service in step 19, 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.
```

36. 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.

37. This procedure is finished.

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, see the [Removing the Removable Cartridge](#) section.

If you wish to update one of the other flash GPLs, remove the removable cartridge from the removable cartridge drive on the MDAL card, and repeat this procedure from step 1.

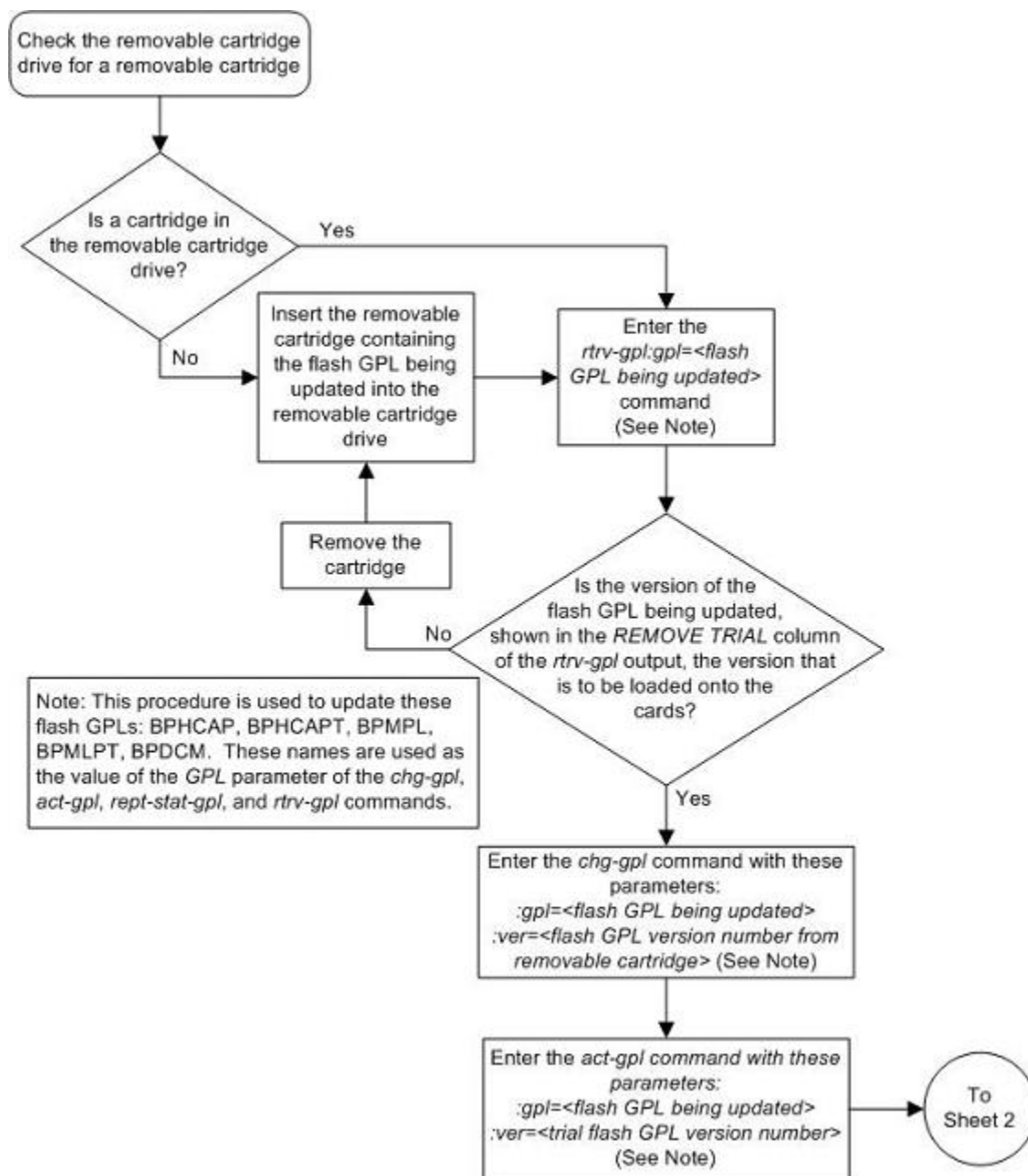
NOTE: If the application GPL running on the card is EOAM, do not perform step 38. This procedure is finished.

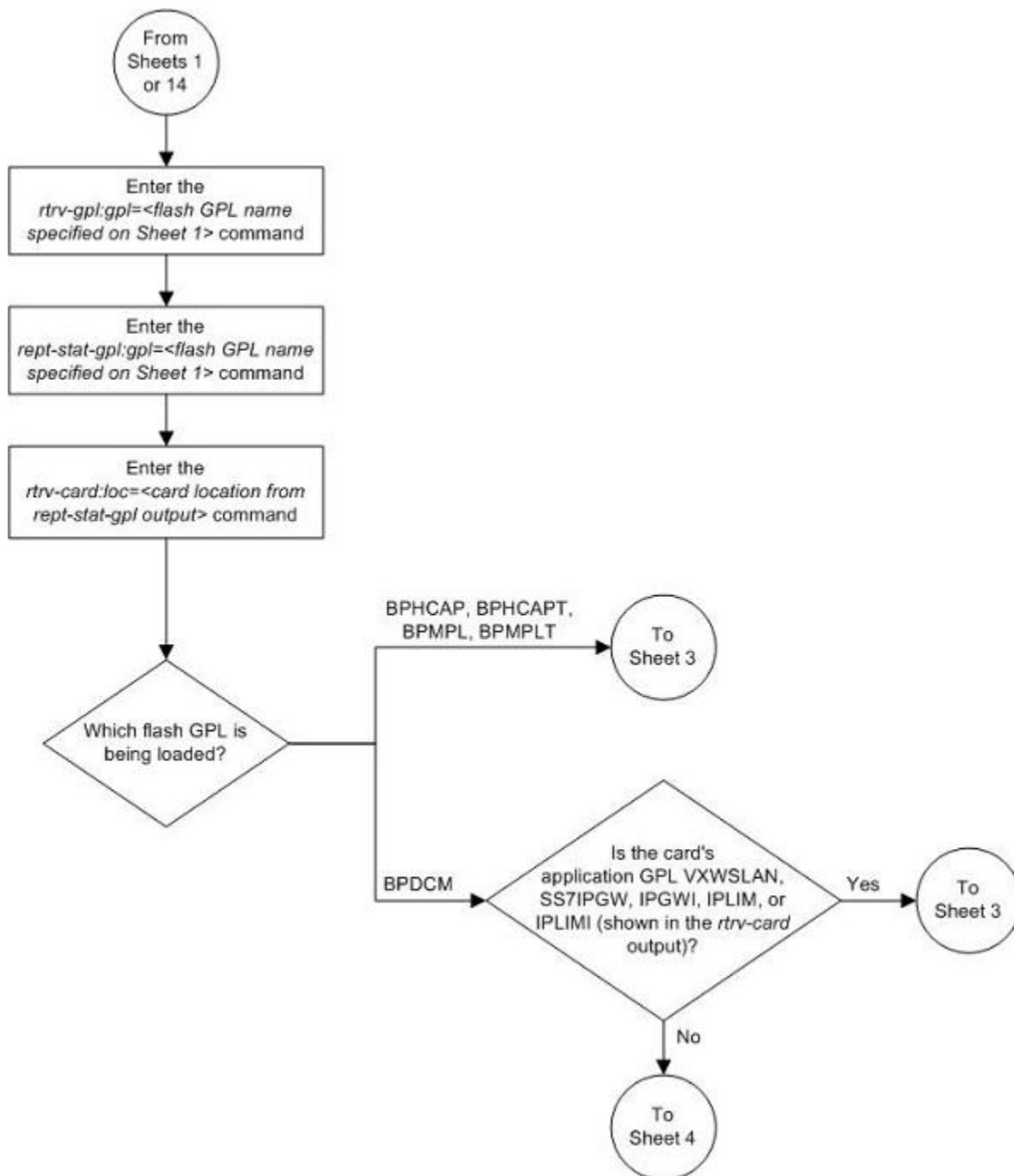
38. If you wish to load the new GPL onto the other cards, other than the GPSM-II, shown in step 7, repeat this procedure from step 8 for each card.

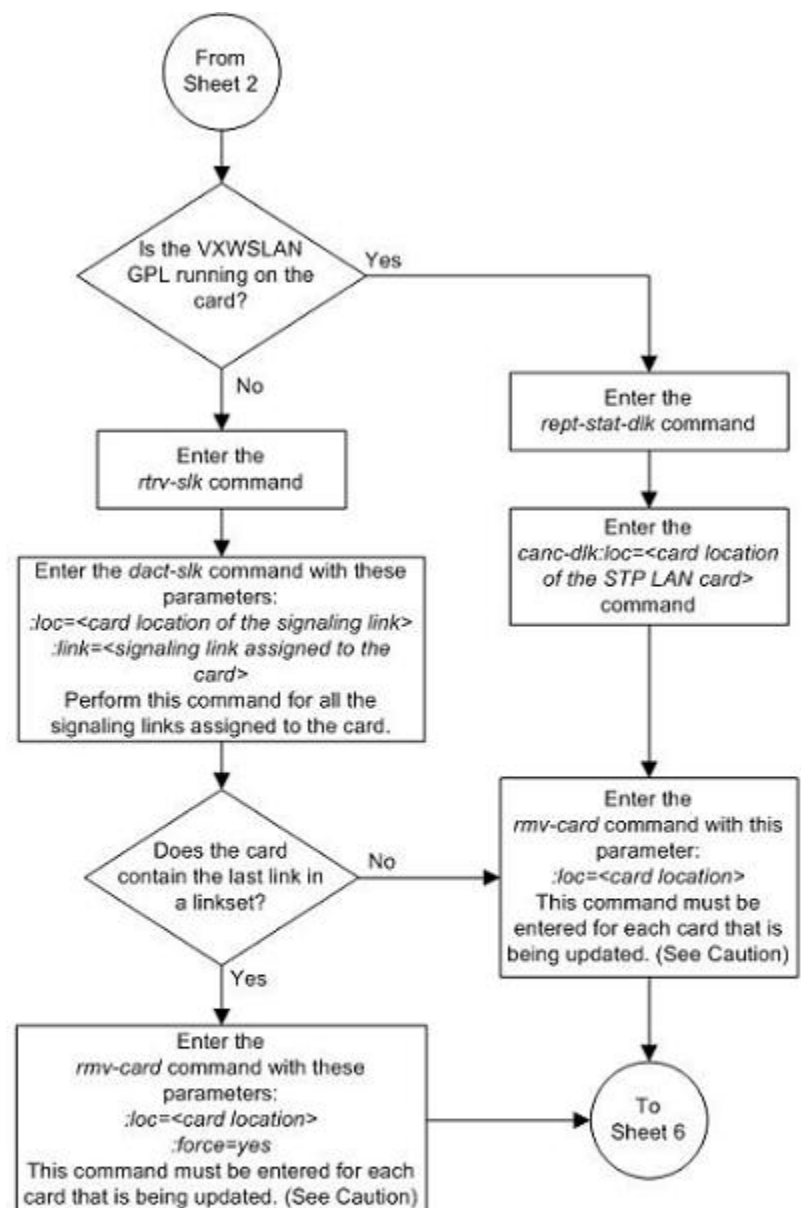
If the new GPL updated in this procedure is not being loaded on the other cards in the EAGLE 5 ISS, this procedure is finished. Remove the removable cartridge from the removable cartridge drive on the MDAL card. For more information on removing the removable cartridge from the removable cartridge drive, see the [Removing the Removable Cartridge](#) section.

If you wish to update one of the other flash GPLs, repeat this procedure from step 1.

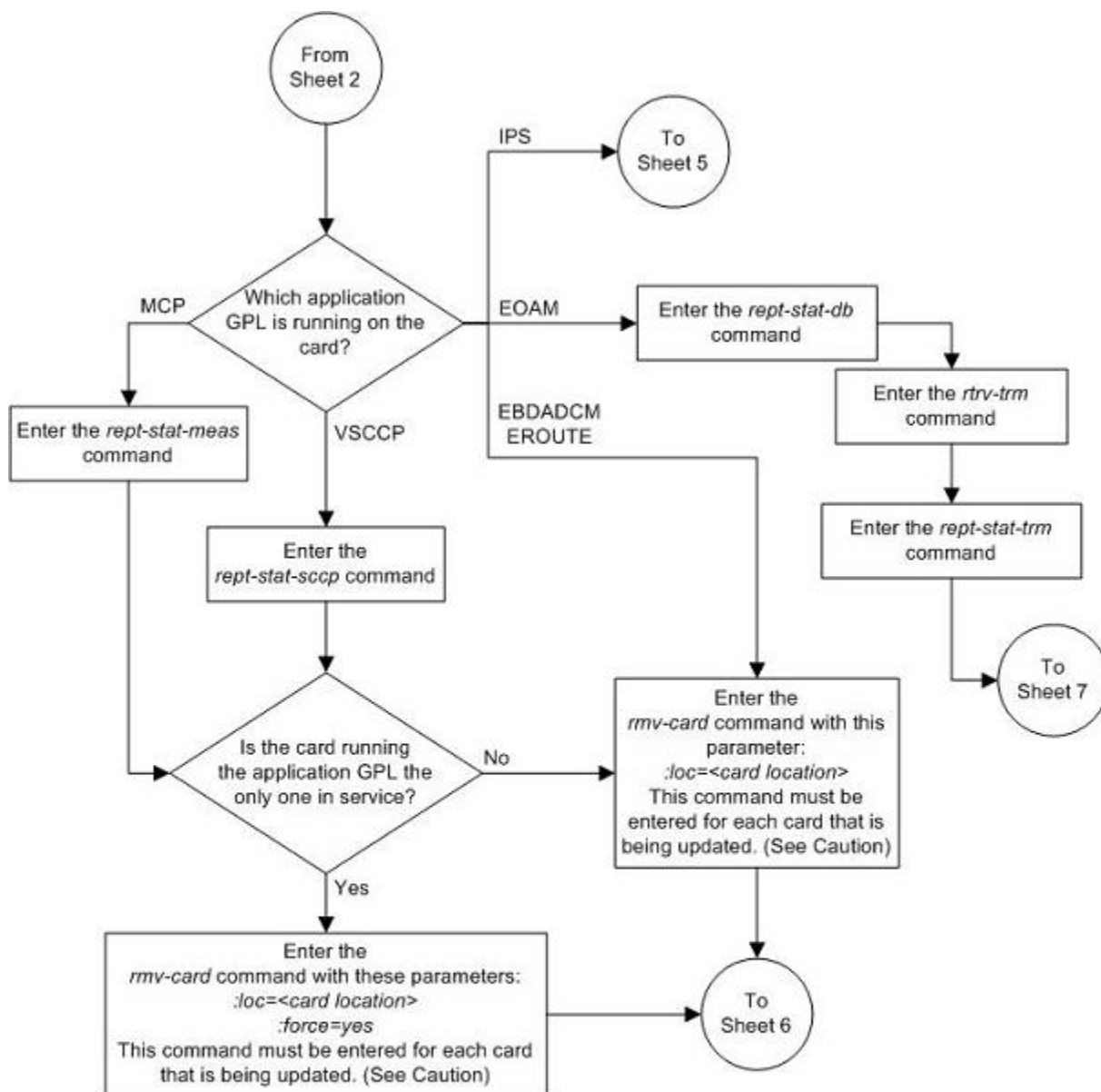
Flowchart 3-5. Updating the Flash GPLs



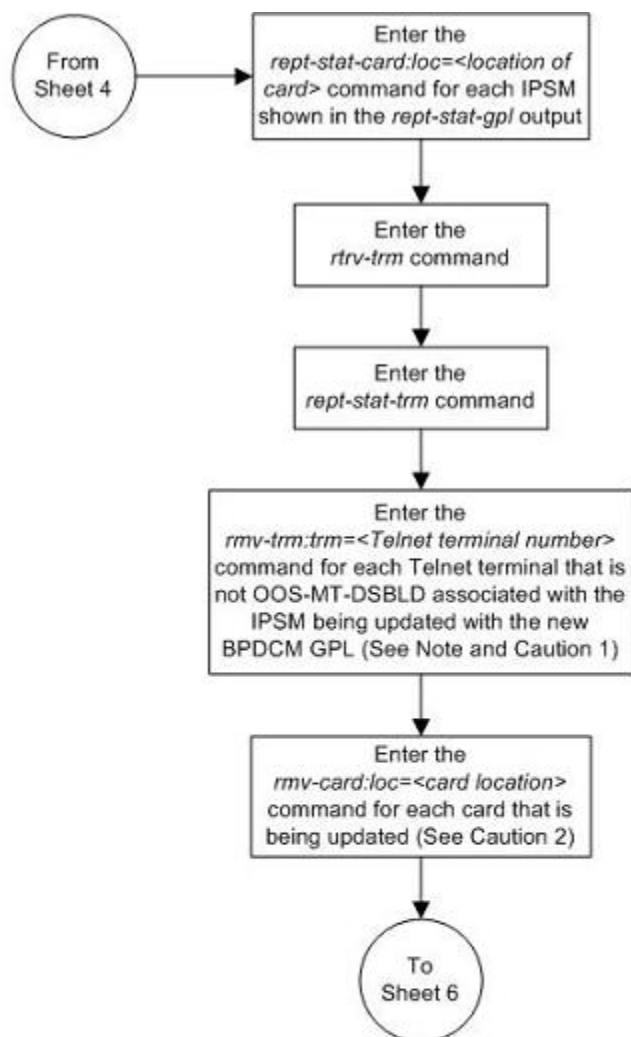




Caution: Multiple cards running the same flash GPL can be updated at the same time with the *init-flash* command. This requires that the cards in the locations specified with the *init-flash* command are out of service. All the cards running one of these application GPLs (ss7ml, atmansi, atmitu, iplim, 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.



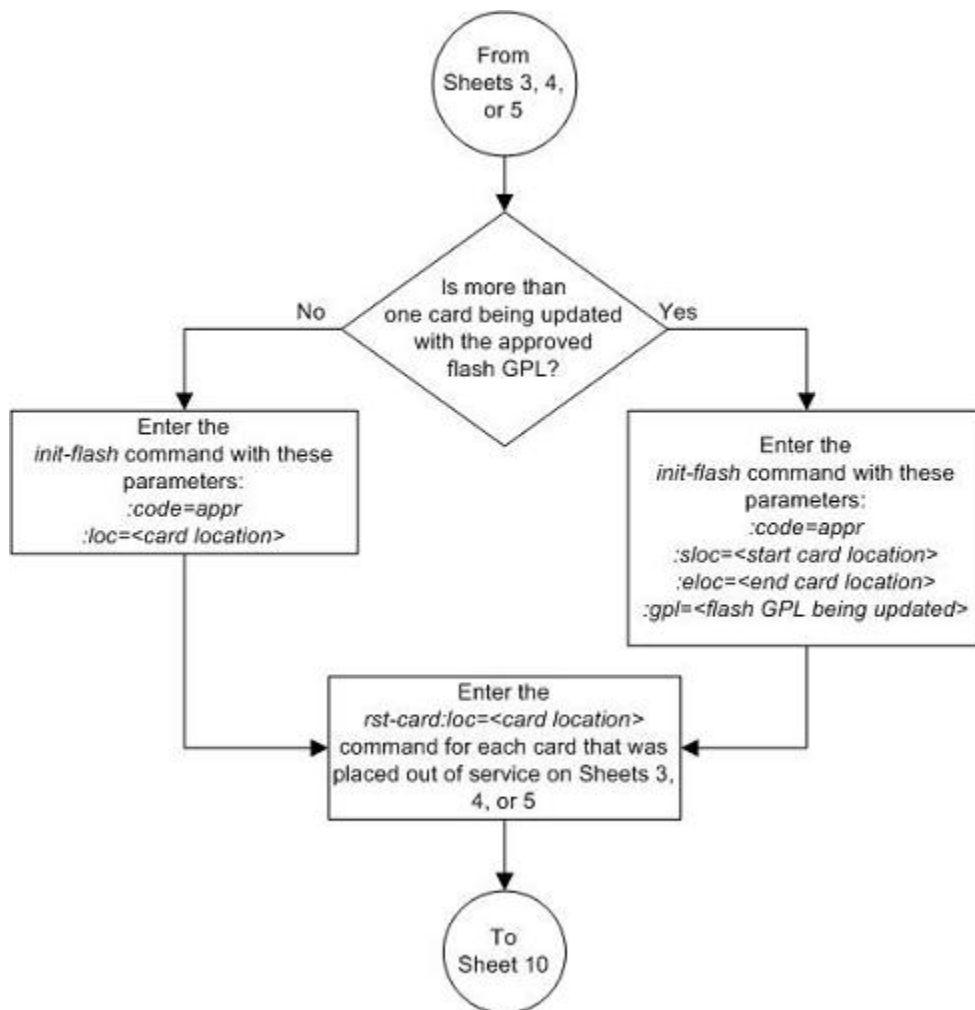
Caution: Multiple cards running the same flash GPL can be updated at the same time with the *init-flash* command. This requires that the cards in the locations specified with the *init-flash* command are out of service. All the cards running a one of these application GPLs (vsccp, mcp, emdc, eroute) 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.

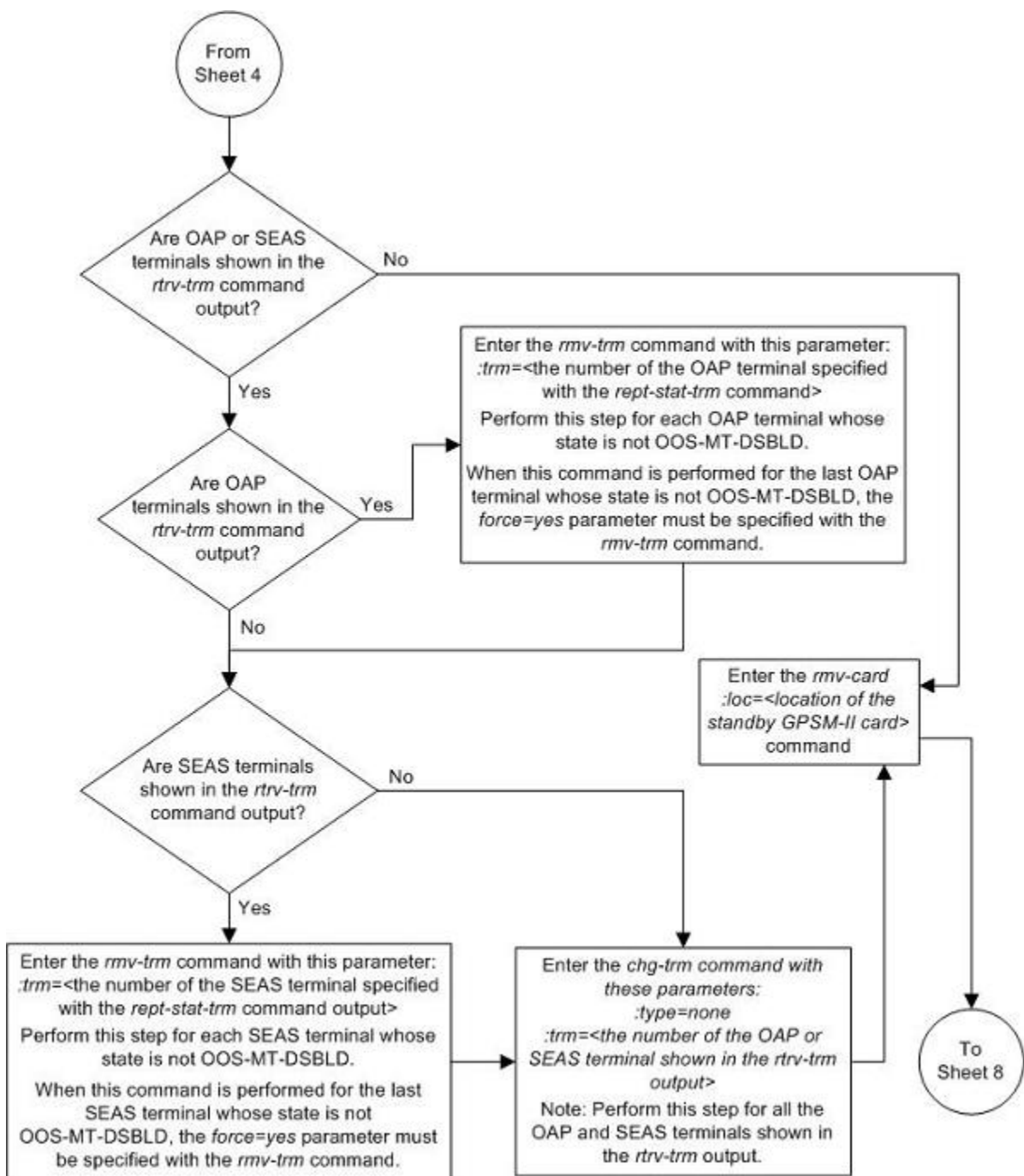


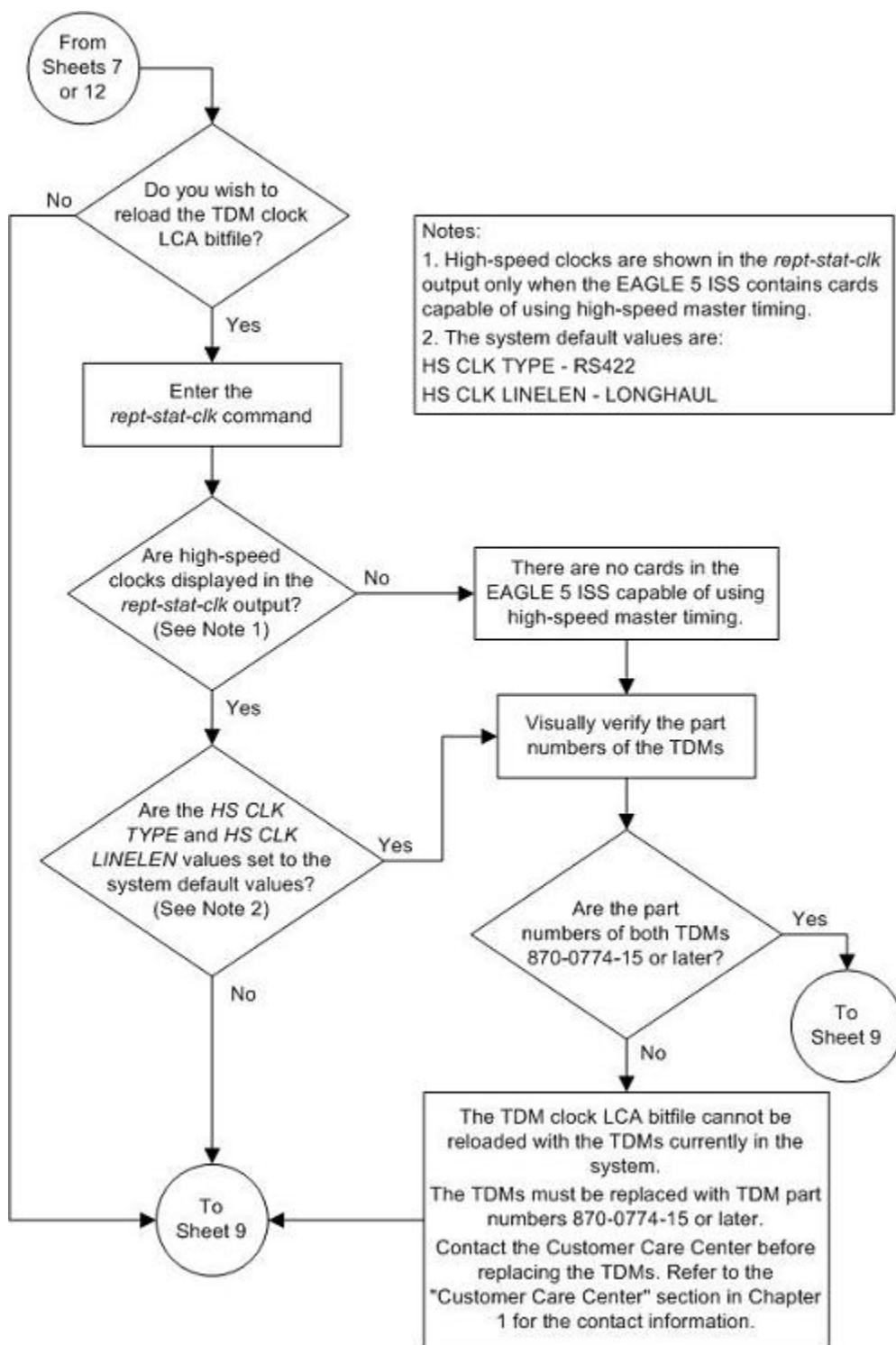
Note: Each IPSM has 8 Telnet terminals associated with it. The *rtv-trm* output shows the Telnet terminals that are associated with each IPSM.

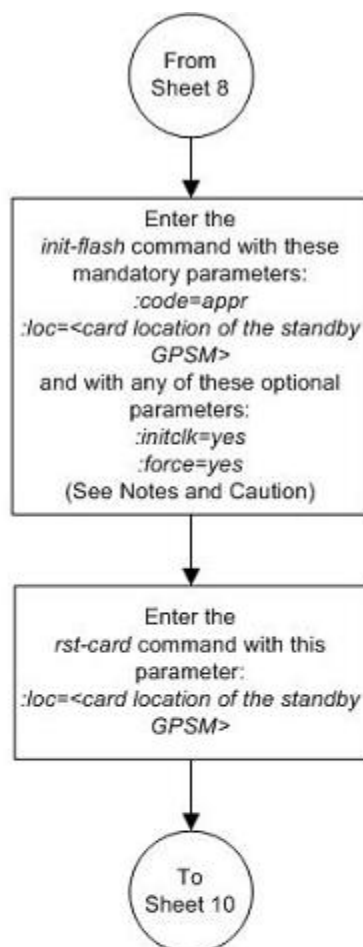
Cautions:

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.



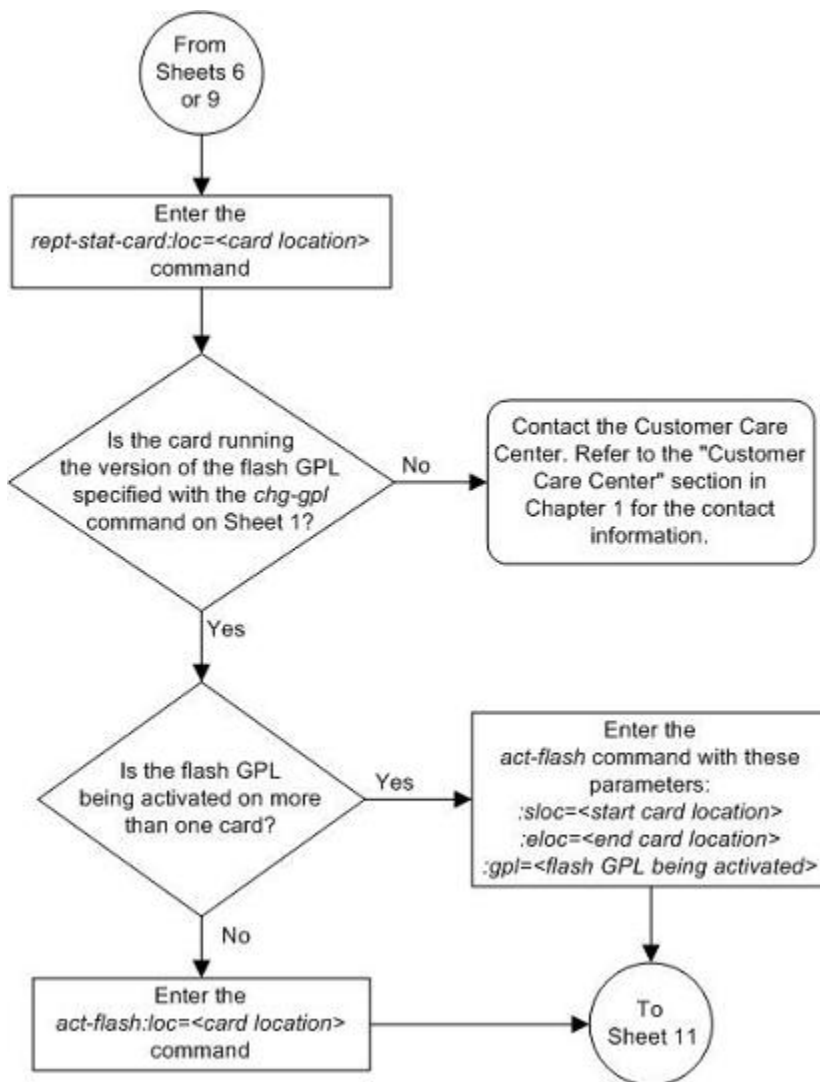


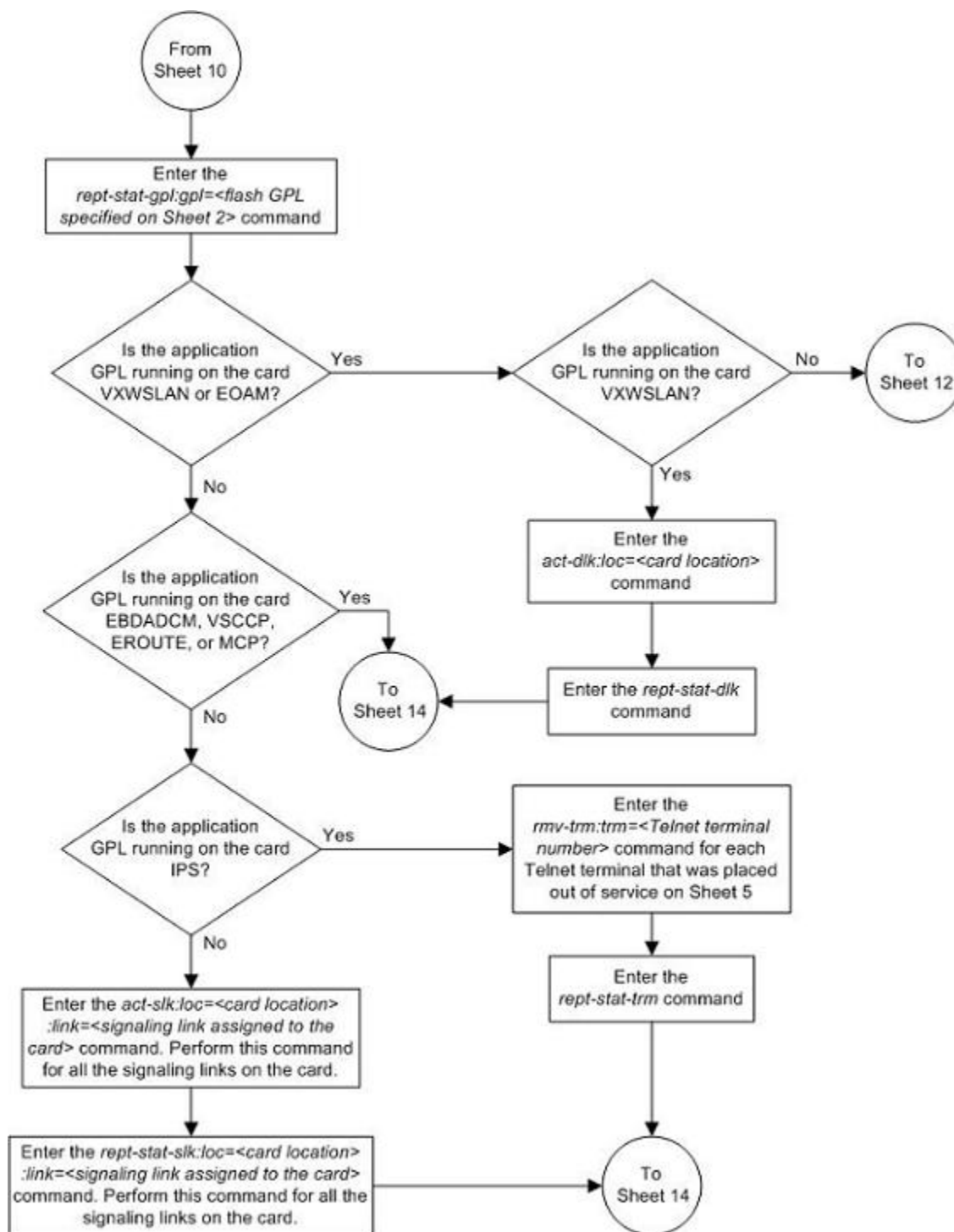


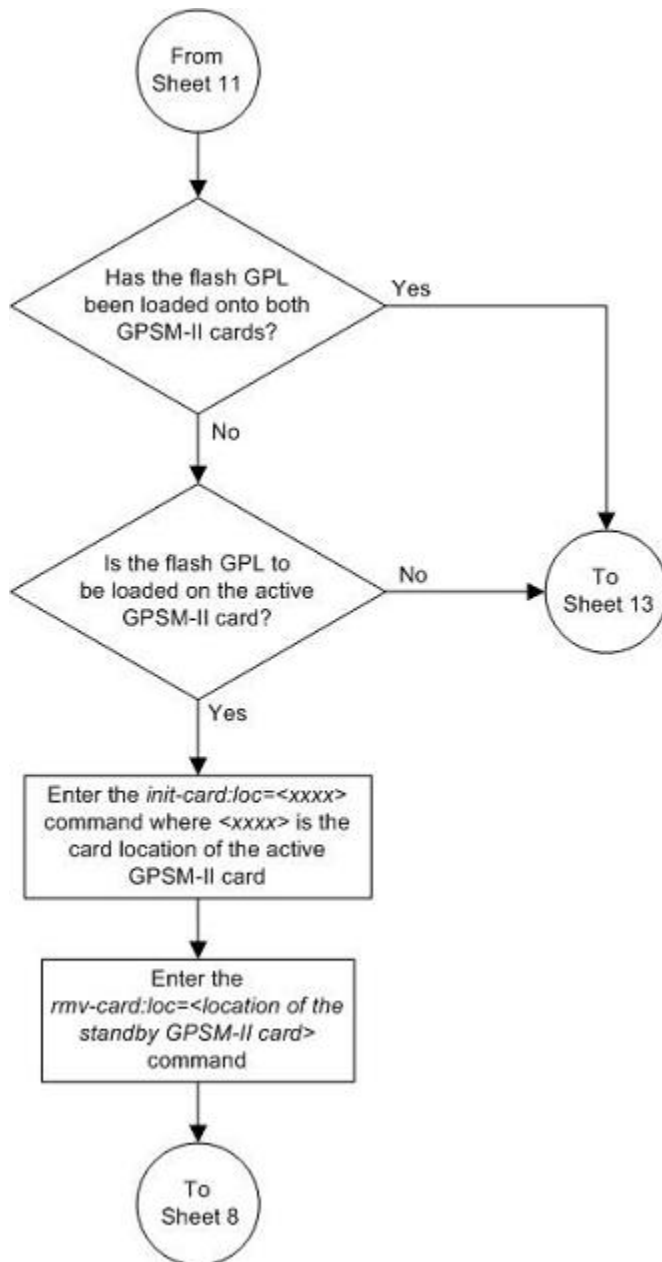
**Notes:**

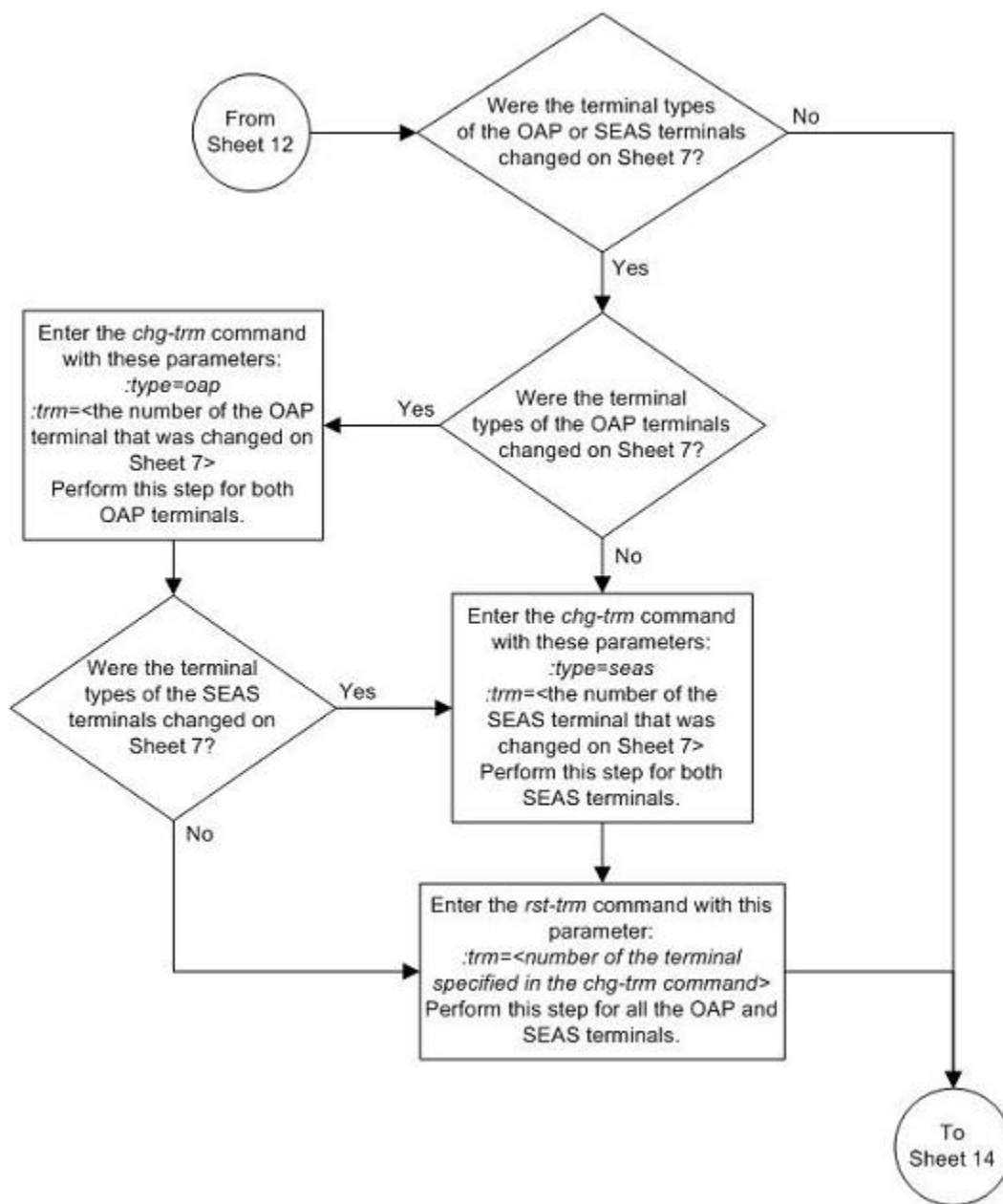
1. The *initclk=yes* parameter can be specified only if the part numbers of the TDMs in the system are 870-0774-15 or later. See Sheet 8.
2. The *force=yes* parameter can be specified only if the *initclk=yes* parameter is specified.
3. The *force=yes* parameter should be used only if the TDM clock LCA 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.

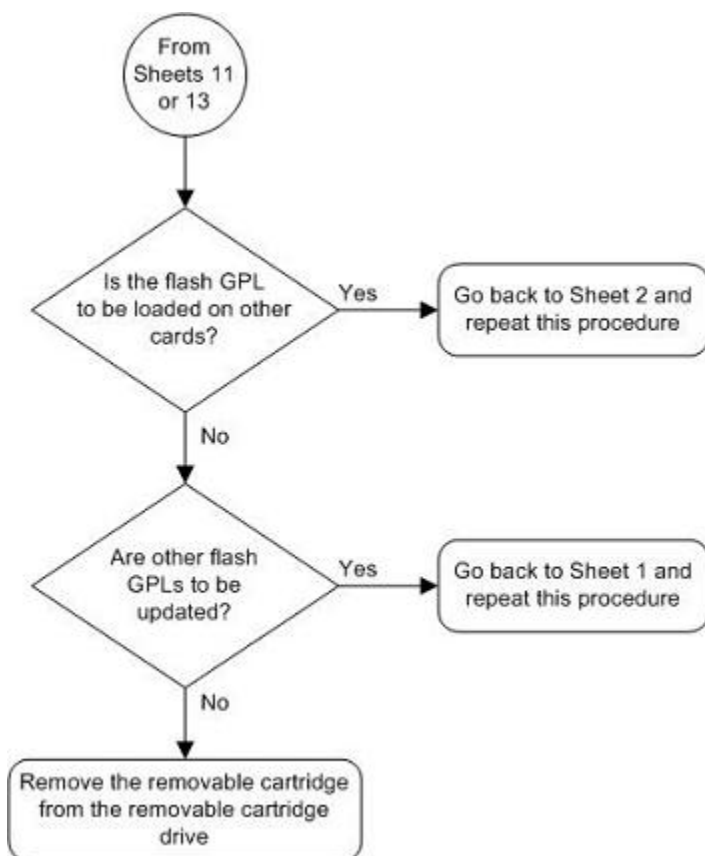
Caution: A clock outage will result in a loss of traffic on some or all signaling links.











Updating One of the Flash GPLs on the High-Capacity Cards

The high-capacity cards and their flash GPLs are shown in [Table 3-5](#).

Table 3-5. High-Capacity Card Flash GPLs

HC MIM	E5-E1T1 E5-ENET	E5-STC E5-SLAN E5-IPSM	E5-SM4G
BLCPLD	BLCPLD	BLCPLD	BLCPLD
IMTPCI	IMTPCI	IMTPCI	IMTPCI
BLVXW	BLVXW6	BLVXW6	BLVXW6
BLBIOS	BLBEPM	BLBEPM	BLBSMG
BLDIAG	BLDIAG6	BLDIAG6	BLDIAG6
PLDE1T1	PDLPMC1		
PDLPMC1			

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 the [Updating All the Flash GPLs on the High-Capacity Cards](#) procedure.

The flash GPL names shown in [Table 3-5](#) 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 3-6](#).

Table 3-6. 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	SS71PGW, IPLIM, IPLIMI, IPGWI	IPLHC, IPGHC	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 the SEAS over IP feature

A removable cartridge containing the high-capacity flash GPLs that are being updated is required.



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 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*.

Procedure

1. 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 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
IMTPCI	1114	126-002-000	126-002-000	126-001-000	126-003-000
IMTPCI	1116	126-002-000	126-002-000	126-001-000	-----

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 2. For more information on removing the removable cartridge from the removable cartridge drive, see the [Removing the Removable Cartridge](#) section.

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, skip steps 2 and 3, and go to step 4.

2. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).

To write protect a removable cartridge, see the [Write Protecting the Removable Cartridge](#) section.

3. 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, see the [Inserting the Removable Cartridge](#) section. After the removable cartridge has been inserted into the removable cartridge drive, repeat the **rtrv-gpl** command in step 1 and verify the version of the GPL on the removable cartridge that you wish to update.

4. 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 1.

For this example, enter this command.

chg-gpl:gpl=imtpci:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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
```

5. Activate the trial GPL, using the **act-gpl** command and specifying the name and version of the trial GPL specified in step 4.

For this example, enter this command.

act-gpl:gpl=imtpci:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
IMTPCI activate on 1114 completed
IMTPCI activate on 1116 completed
```

6. Verify that the GPL on the removable cartridge is the trial GPL on the fixed disk using the **rtrv-gpl** command with the **gpl** parameter value specified in step 5.

For this example, enter this command.

rtrv-gpl:gpl=imtpci

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
IMTPCI   1114  126-003-000  126-003-000      126-002-000  126-003-000
IMTPCI   1116  126-003-000  126-003-000      126-002-000  -----
```

- Verify the GPLs on the fixed disk and the cards that are running the GPLs using the **rept-stat-gpl** command with the **gpl** parameter value equal to the **gpl** parameter value specified in step 6.

For this example, enter this command.

rept-stat-gpl:gpl=imtpci

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
IMTPCI   1303  126-002-000 ALM  126-003-000  126-002-000
IMTPCI   2101  126-002-000 ALM  126-003-000  126-002-000
IMTPCI   2103  126-002-000 ALM  126-003-000  126-002-000
IMTPCI   2205  126-002-000 ALM  126-003-000  126-002-000
IMTPCI   2207  126-002-000 ALM  126-003-000  126-002-000
IMTPCI   2211  126-002-000 ALM  126-003-000  126-002-000
Command Completed
```

- Display the status of the card, shown in the **rept-stat-gpl** output in step 7, 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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      GPL      PST      SST      AST
1303  126-003-000  LIME1    SS7HC    IS-NR    Active    -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-002-000
BLCPLD  GPL version = 126-002-000
BLDIAG  GPL version = 126-002-000
BLBIOS  GPL version = 126-002-000
BLVXW   GPL version = 126-002-000
PLDE1T1 GPL version = 126-002-000
PLDPMC1 GPL version = 126-002-000
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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
```

```

CARD   VERSION   TYPE      GPL      PST      SST      AST
1303   126-003-000 LIME1     SS7EPM   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
PLDPMC1 GPL version = 126-002-000
BLCPLD  GPL version = 126-002-000
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.

```

r1ghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD   VERSION   TYPE      APPL     PST      SST      AST
1303   126-003-000 DCM       IPLHC    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
PLDPMC1 GPL version = 126-002-000
BLCPLD  GPL version = 126-002-000
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.

```

r1ghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD   VERSION   TYPE      APPL     PST      SST      AST
1303   126-003-000 STC       ERTHC    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 = 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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      APPL      PST      SST      AST
1303  126-003-000  DCM      SLANHC    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 = 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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      APPL      PST      SST      AST
1303  126-003-000  DSM      SCCPHC    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
BLBSMG  GPL version = 126-002-000
BLCPLD  GPL version = 126-002-000
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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      APPL      PST      SST      AST
1303  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.

```

Continue the procedure by performing one of these actions:

- If the application GPL running on the card is SS7HC, SS7EPM, IPLHC, or IPGHC (shown in the **GPL** column in the **rept-stat-card** output in step 8), continue the procedure with step 9.
- If the application GPL running on the card is ERTHC or SCCPHC), skip steps 9 through 15, and go to step 16.
- If the application GPL running on the card is SLANHC, skip steps 9 and 10, and go to step 11.
- If the application GPL running on the card is IPSHC, skip steps 9 through 12, and go to step 13.

9. Display the signaling links associated with the card shown in step 8.

Enter the **rtrv-sl** command with the card location specified in step 8. For this example, enter this command.

rtrv-sl:loc=1303

This is an example of the possible output for an HC MIM or E5-E1T1 card.

rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0

LOC	LINK	LSN	SLC	TYPE	L2T SET	BPS	ECM	PCR N1	PCR N2	E1 LOC	E1 PORT	TS
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 06-10-01 21:16:37 GMT EAGLE5 36.0.0

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

- Deactivate the SS7 signaling links on the card using the **dact-sl** command.

For this example, enter these commands.

dact-sl:loc=1303:link=a

dact-sl:loc=1303:link=b

dact-sl:loc=1303:link=a1

dact-sl:loc=1303:link=b3



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: Do not deactivate all the E1 or T1 assigned to the HC MIMs or E5-E1T1 cards, or the IP signaling links assigned to the E5-ENET cards in the EAGLE 5 ISS at the same time. Doing so will take all the E1, T1, or IP signaling links out of service and the traffic on these signaling links could be lost.



CAUTION: If the EAGLE 5 ISS contains only signaling links assigned to E5-ENET or E5-E1T1 cards, 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 06-10-01 11:45:18 GMT EAGLE5 36.0.0
Deactivate SLK message sent to card

After step 10 has been performed, skip steps 11 through 15, and go to step 16.

- Display the data link, and its status, associated with the card shown in step 8. Enter the **rept-stat-dlk** command with the card location specified in step 8.

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 37.0.0
DLK      PST      SST      AST
1303     IS-NR     Avail    ---
Command Completed.
```

12. 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: 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: 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 07-05-01 11:45:18 GMT EAGLE5 37.0.0
Deactivate Link message sent to card.
Command Completed.
```

After step 12 has been performed, skip steps 13 through 15, and go to step 16.

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

The Telnet terminals associated with the card shown in step 8 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 07-05-01 16:02:08 GMT EAGLE5 37.0.0
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
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

TRM	TRAF	LINK	SA	SYS	PU	DB
1	NO	YES	NO	YES	NO	YES
2	NO	NO	NO	NO	NO	NO
.						
.						
.						
39	NO	NO	NO	NO	NO	NO
40	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
.												
.												
.												
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

14. Display the status of the terminals with the **rept-stat-trm** command. This is an example of the possible output.

```
rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
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.

- 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: 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 14 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 07-05-01 15:08:45 GMT EAGLE5 37.0.0
Inhibit message sent to terminal
```

```
rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
Command Completed.
```

- Place the card shown in step 8 out of service using the **rmv-card** command.

CAUTION: Multiple cards running the same flash GPL can be updated at the same time with the **init-flash** command (step 17). This requires that the cards in the lcoations specified wiht the **init-flash** command in step 17 are out of service. All the high-capacity cards running the same flash GPL being updated can be placed out ofservice. However it is 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 case all traffic hosted by high-capacity cards to be lost.

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 17, repeat this step for those cards.

When this command has succesfully completed, this message should appear.

If the HC MIM, E5-E1T1, or E5-ENET card contains the last signaling link in a linkset, the **force=yes** parameter must be specified.

17. Load the approved version of the flash GPL onto the card inhibited in step 16 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, or E5-IPSM 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 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 - the BLCPLD or BLDIAG GPLs

E5-ENET, E5-E1T1, E5-STC, E5-SLAN, E5-SM4G,, or E5-IPSM 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 07-05-01 11:11:28 GMT EAGLE5 37.0.0
FLASH Memory Downloading for card 1303 Started.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
IMTPCI Downloading for card 1303 Complete.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
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 07-05-01 11:11:28 GMT EAGLE5 37.0.0
FLASH Memory Download for cards 1303 - 2103 Started.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
FLASH Memory Download for cards 1303 - 2103 Completed.
LOC 1303 : PASSED
LOC 2101 : PASSED
LOC 2103 : PASSED

ALL CARD RESULTS PASSED
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Command Completed.
```

See the third note in step 17..

18. Put the cards that were inhibited in step 16 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Card has been allowed.
```

19. Verify that the GPL from step 17 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
CARD  VERSION  TYPE      APPL      PST      SST      AST
1303  126-003-000 LIME1    SS7HC     IS-NR     Active   -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-002-000 +
BLCPLD  GPL version = 126-002-000
BLDIAG  GPL version = 126-002-000
BLBIOS  GPL version = 126-002-000
BLVXW   GPL version = 126-002-000
PLDE1T1 GPL version = 126-002-000
PLDPMC1 GPL version = 126-002-000
IMT BUS A          = Conn
IMT BUS B          = Conn
SIGNALING LINK STATUS
SLK      PST          LS          CLLI
A        00S-MT-DSBLD  e11303a   -----
B        00S-MT-DSBLD  e11303b   -----
A1       00S-MT-DSBLD  e11303a   -----
B3       00S-MT-DSBLD  e11303b   -----
Command Completed.
```

For an E5-E1T1 card, this is an example of the possible output.

```

rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      APPL      PST          SST          AST
1303  126-003-000  IPLIM    SS7EPM    IS-NR        Active       -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-003-000 +
BLVXW6  GPL version = 126-002-000
BLDIAG6 GPL version = 126-002-000
BLBEPM  GPL version = 126-002-000
PLDPMC1 GPL version = 126-002-000
BLCPLD  GPL version = 126-002-000
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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      APPL      PST          SST          AST
1303  126-003-000  DCM      IPLHC     IS-NR        Active       -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-003-000 +
BLVXW6  GPL version = 126-002-000
BLDIAG6 GPL version = 126-002-000
BLBEPM  GPL version = 126-002-000
PLDPMC1 GPL version = 126-002-000
BLCPLD  GPL version = 126-002-000
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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      APPL      PST          SST          AST
1303  126-003-000  STC      ERTHC     IS-NR        Active       -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-003-000 +
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 = 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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      APPL      PST      SST      AST
1303  126-003-000  DCM      SLANHC    IS-NR    Active   -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-003-000 +
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 = 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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      APPL      PST      SST      AST
1303  126-003-000  DSM      SCCPHC    IS-NR    Active   -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-003-000 +
BLVXW6  GPL version = 126-002-000
BLDIAG6 GPL version = 126-002-000
BLBSMG  GPL version = 126-002-000
BLCPLD  GPL version = 126-002-000
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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      APPL      PST      SST      AST
1303  126-003-000  IPSM     IPSHC     IS-NR    Active   -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-003-000 +
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.
```

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 4, contact the Customer Care Center. Refer to [Customer Care Center](#) for the contact information.

20. Activate the flash GPL loaded onto the cards specified in step 17 using the **act-flash** command with the card location and the name of the flash GPL specified in step 17.

For this example, enter this command.

act-flash:loc=1303:gpl=imtpci

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 1303 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 17, 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Activation for cards 1303 - 2103 Started.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Activation for cards 1303 - 2103 Completed.
LOC 1303 : PASSED
LOC 2101 : PASSED
LOC 2103 : PASSED

ALL CARD RESULTS PASSED
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.
```

21. Verify the flash GPLs on the cards using the **rept-stat-gpl** command with the **gpl** parameter value specified in step 20.

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 6, 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 06-10-01 11:40:26 GMT EAGLE5 36.0.0
GPL      CARD  RUNNING      APPROVED      TRIAL
IMTPCI   1303   126-003-000  126-003-000  126-002-000
IMTPCI   2101   126-002-000 ALM  126-003-000  126-002-000
IMTPCI   2103   126-002-000 ALM  126-003-000  126-002-000
IMTPCI   2205   126-002-000 ALM  126-003-000  126-002-000
IMTPCI   2207   126-002-000 ALM  126-003-000  126-002-000
IMTPCI   2211   126-002-000 ALM  126-003-000  126-002-000
Command Completed
```

Continue the procedure by performing one of these actions:

- If the application GPL running on the card is SS7HC, SS7EPM, IPLHC, or IPGHC (shown in the **GPL** column in the **rept-stat-card** output in step 19), continue the procedure with step 22.
- If the application GPL running on the card is ERTHC or SCCPHC card (shown in the GPL column in the rept-stat-card output in step 19), skip steps 22 through 27, and go to step 28.
- If the application GPL running on the card is SLANHC, skip steps 22 and 23, and go to step 24.
- If the application GPL running on the card is IPSHC, skip steps 22 through 25, and go to step 26.

22. Place the signaling links that were deactivated in step 10 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 06-10-01 11:55:49 GMT EAGLE5 36.0.0
Activate SLK message sent to card
```

23. Verify that the signaling links activated in step 22 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 06-10-01 13:06:25 GMT EAGLE5 36.0.0
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 06-10-01 13:06:25 GMT EAGLE5 36.0.0
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 06-10-01 13:06:25 GMT EAGLE5 36.0.0
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 06-10-01 13:06:25 GMT EAGLE5 36.0.0
SLK      LSN      CLLI      PST      SST      AST
1303,B3  e11303b  ----- IS-NR      Avail      ----
  ALARM STATUS      = No Alarms.
  UNAVAIL REASON    = --
Command Completed.
```

After step 23 has been performed, skip steps 24 through 27, and go to step 28.

24. Place the TCP/IP data link that was deactivated in step 12 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 07-07-01 11:55:49 GMT EAGLE5 37.0.0
Activate Link message sent to card.
```

25. Verify that the TCP/IP data link activated in step 24 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 07-05-01 17:00:36 GMT EAGLE5 37.0.0
DLK      PST      SST      AST
1303     IS-NR     Avail     ---
```

Command Completed.

After step 25 has been performed, skip steps 26 and 27, and go to step 28.

26. 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 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.
```

27. Verify that the terminals are in service with the **rept-stat-trm** command. This is an example of the possible output.

```
rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
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	-----

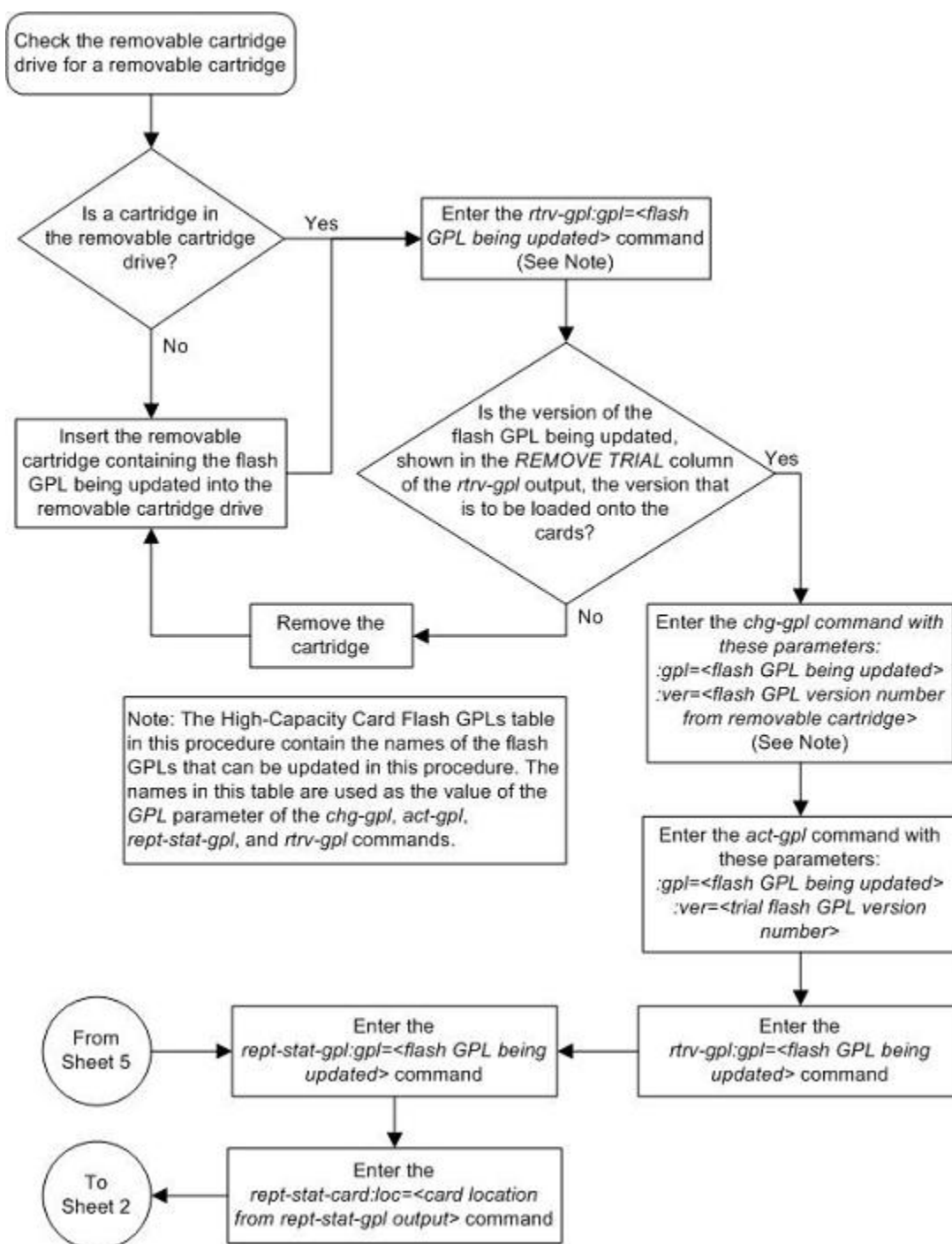
Command Completed.

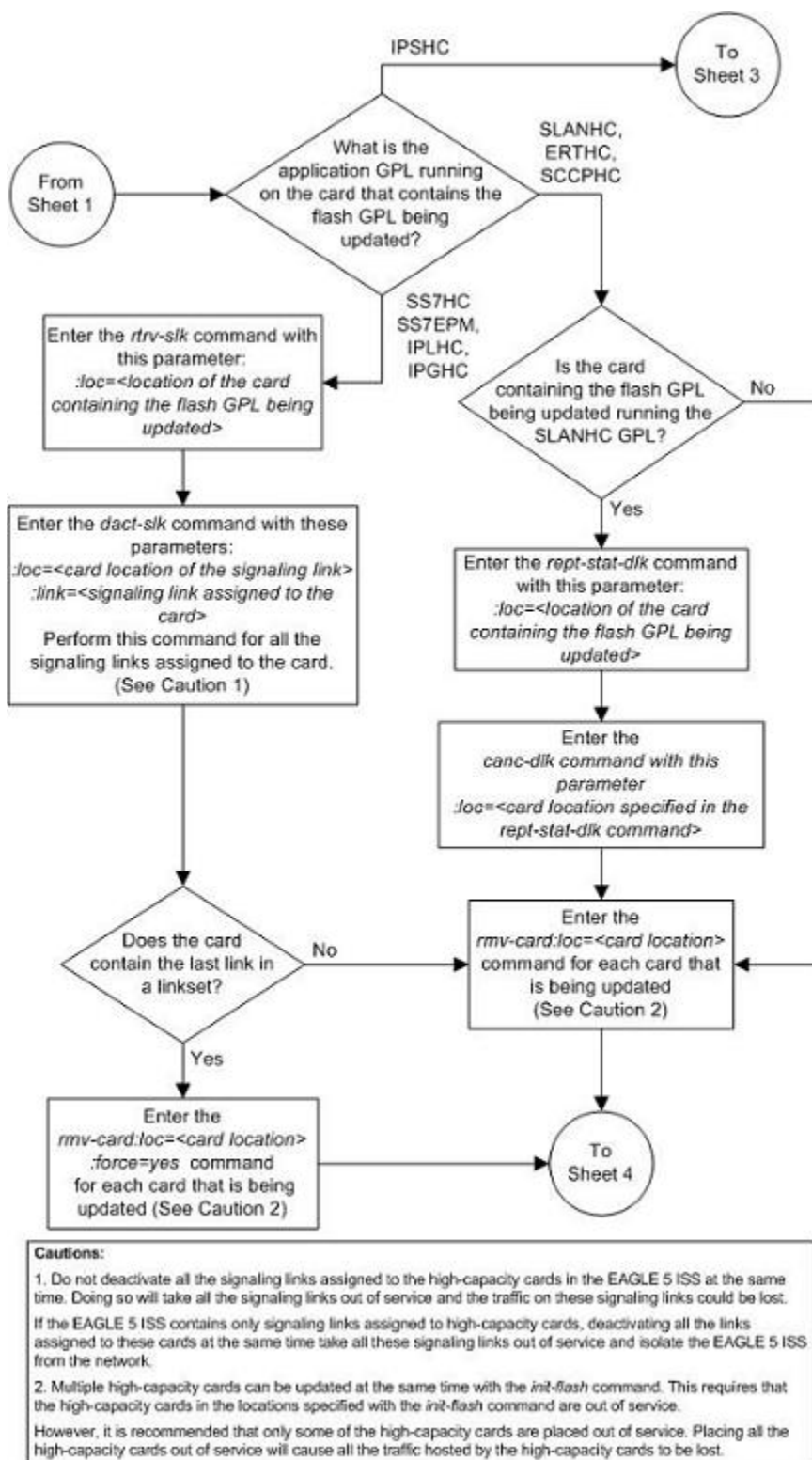
28. If you wish to load the new approved GPL onto the other cards repeat this procedure from step 8 for each card.

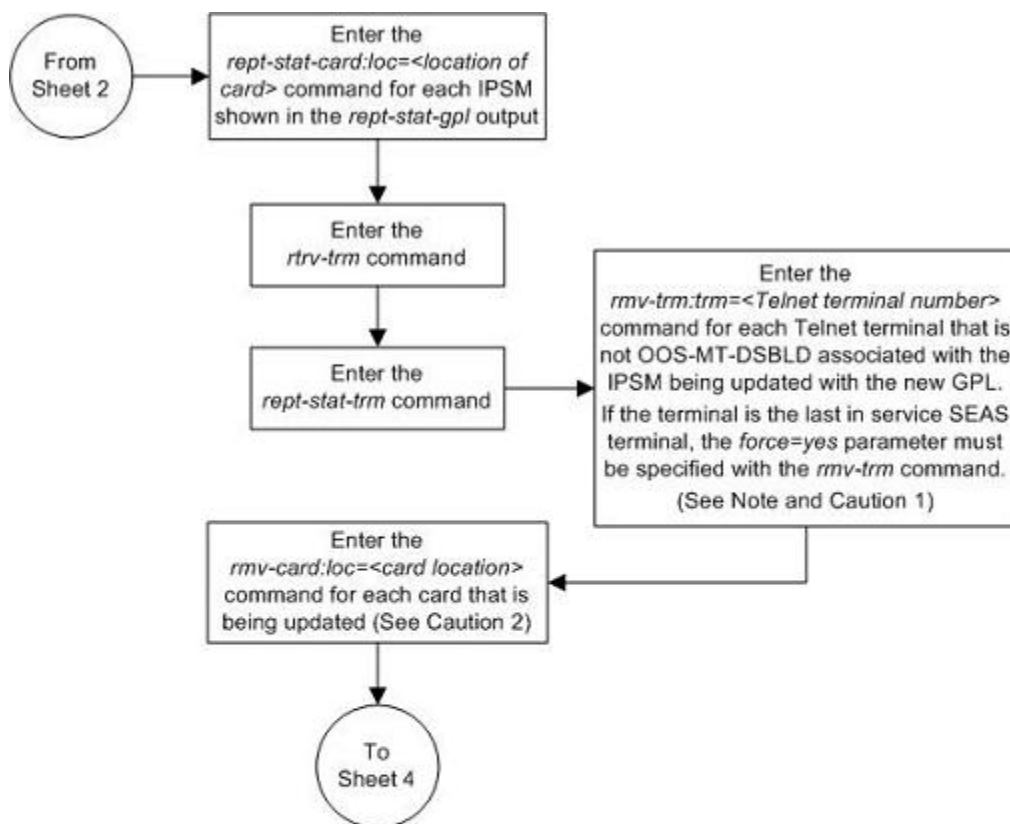
If the new GPL updated in this procedure is not being loaded on the other cards in the EAGLE 5 ISS, this procedure is finished. Remove the removable cartridge from the removable cartridge drive on the MDAL card. For more information on removing the removable cartridge from the removable cartridge drive, see the [Removing the Removable Cartridge](#) section.

If you wish to update one of the other flash GPLs, repeat this procedure from step 1.

Flowchart 3-6. Updating One of the Flash GPLs on the High-Capacity Cards



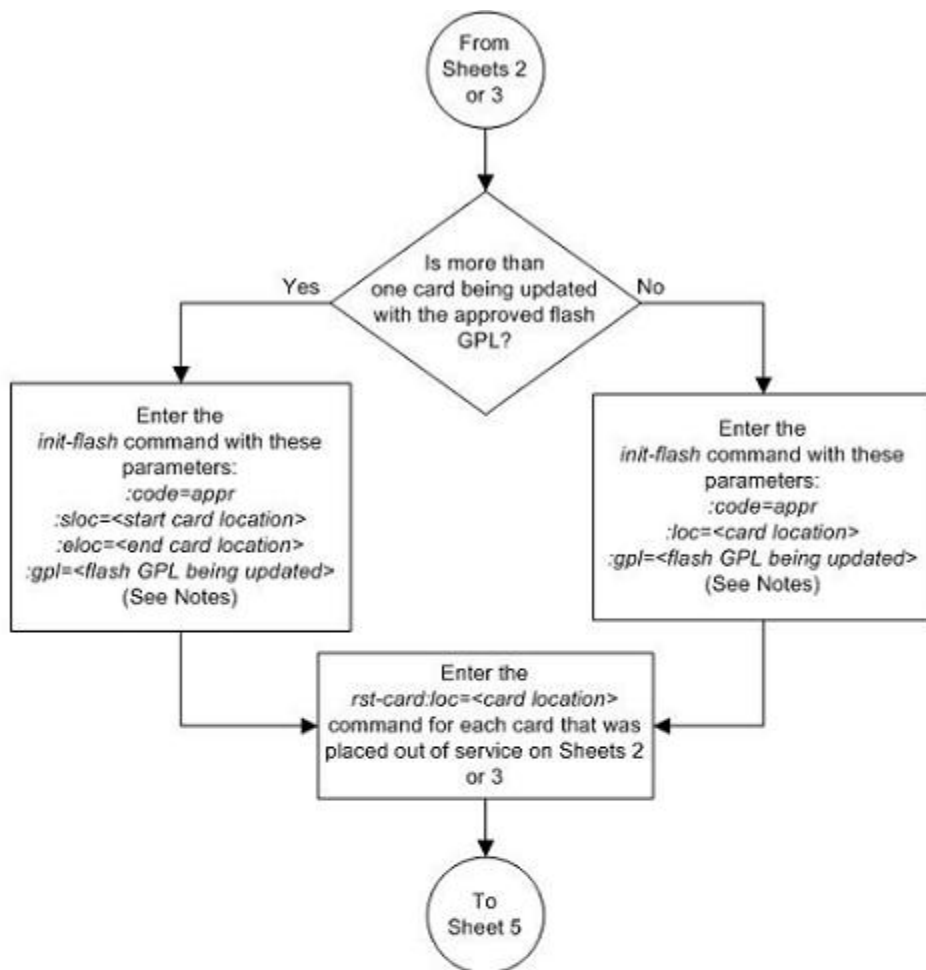




Note: Each IPSM has 8 Telnet terminals associated with it. The *rtrv-trm* output shows the Telnet terminals that are associated with each IPSM.

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.

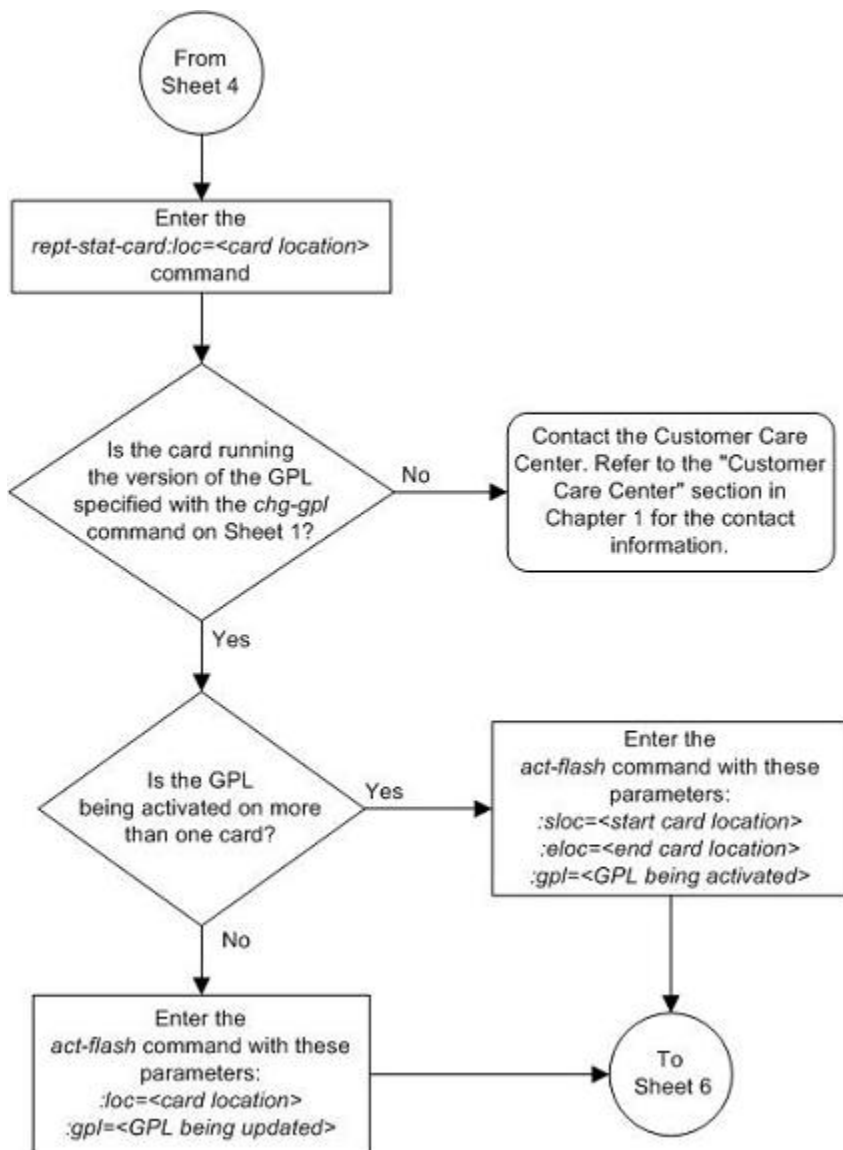


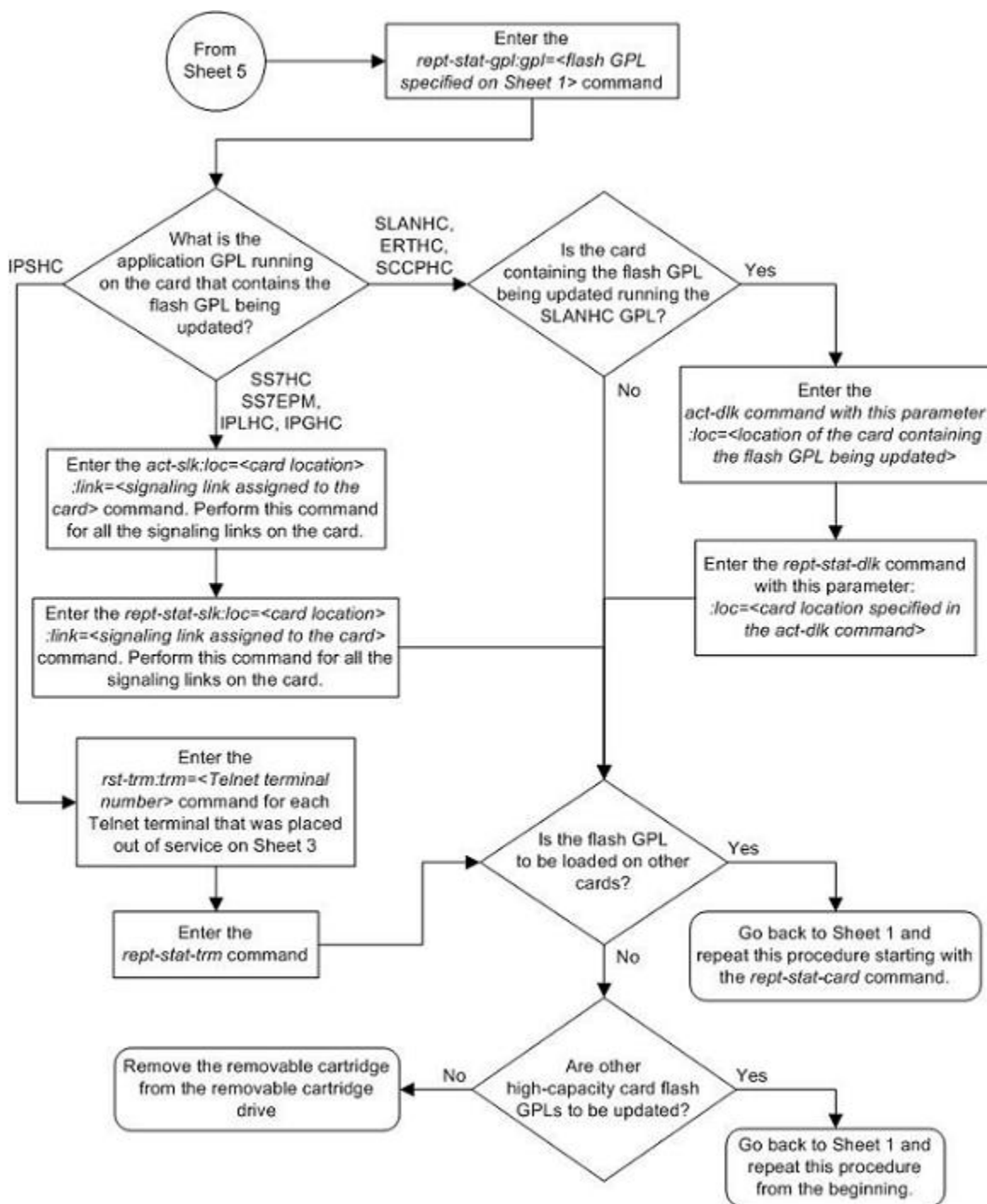
Notes:

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, or E5-IPSM 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, or E5-IPSM 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 these flash GPLs are downloaded to the high-capacity card.

HC MIM – the BLCPLD or BLDIAG GPLs

E5-ENET, E5-E1T1, E5-STC, E5-SLAN, E5-SM4G, or E5-IPSM cards – the BLCPLD or BLDIAG6 GPLs





Updating All the Flash GPLs on the High-Capacity Cards

The high-capacity cards and their flash GPLs are shown in [Table 3-7](#) .

Table 3-7. High-Capacity Card Flash GPLs

HC MIM	E5-E1T1 E5-ENET	E5-STC E5-SLAN E5-IPSM	E5-SM4G
BLCPLD	BLCPLD	BLCPLD	BLCPLD
IMTPCI	IMTPCI	IMTPCI	IMTPCI
BLVXW	BLVXW6	BLVXW6	BLVXW6
BLBIOS	BLBEPM	BLBEPM	BLBSMG
BLDIAG	BLDIAG6	BLDIAG6	BLDIAG6
PLDE1T1	PLDPMC1		
BLDIAG			

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 the [Updating One of the Flash GPLs on the High-Capacity Cards](#) procedure.

The flash GPL names shown in [Table 3-7](#) 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 3-8](#).

Table 3-8. 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	SS71PGW, IPLIM, IPLIMI, IPGWI	IPLHC, IPGHC	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 the SEAS over IP feature

A removable cartridge containing the high-capacity card flash GPLs that are being updated is required.



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*.

Procedure

- 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 high-capacity card.

For an HC MIM, enter these commands.

rtrv-gpl:gpl=blvxw

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
BLVXW	1114	126-002-000	126-002-000	126-001-000	126-003-000
BLVXW	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=blbios

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
BLBIOS	1114	126-002-000	126-002-000	126-001-000	126-003-000
BLBIOS	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=bldiag

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
BLDIAG	1114	126-002-000	126-002-000	126-001-000	126-003-000
BLDIAG	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=blcpld

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
BLCPLD	1114	126-002-000	126-002-000	126-001-000	126-003-000
BLCPLD	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=plde1t1

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
PLDE1T1	1114	126-002-000	126-002-000	126-001-000	126-003-000
PLDE1T1	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=pldpmc1

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
PLDPMC1	1114	126-002-000	126-002-000	126-001-000	126-003-000
PLDPMC1	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=imtpci

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
IMTPCI	1114	126-002-000	126-002-000	126-001-000	126-003-000
IMTPCI	1116	126-002-000	126-002-000	126-001-000	-----

For an E5-E1T1, E5-ENET, E5-STC, E5-SLAN or E5-IPSM card, enter these commands.

rtrv-gpl:gpl=blvxw6

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
BLVXW6	1114	126-002-000	126-002-000	126-001-000	126-003-000
BLVXW6	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=blbepm

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
BLBEPM	1114	126-002-000	126-002-000	126-001-000	126-003-000
BLBEPM	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=bldiag6

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

```
BLDIAG6 1114 126-002-000 126-002-000 126-001-000 126-003-000
BLDIAG6 1116 126-002-000 126-002-000 126-001-000 -----
```

rtrv-gpl:gpl=blcpld

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
BLCPLD	1114	126-002-000	126-002-000	126-001-000	126-003-000
BLCPLD	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=imtpci

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
IMTPCI	1114	126-002-000	126-002-000	126-001-000	126-003-000
IMTPCI	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=pldpmc1

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
PLDPMC1	1114	126-002-000	126-002-000	126-001-000	126-003-000
PLDPMC1	1116	126-002-000	126-002-000	126-001-000	-----

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 07-05-01 11:34:04 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
BLVXW6	1114	126-002-000	126-002-000	126-001-000	126-003-000
BLVXW6	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=blcpld

This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:34:04 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
BLCPLD	1114	126-002-000	126-002-000	126-001-000	126-003-000
BLCPLD	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=imtpci

This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:34:04 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
IMTPCI	1114	126-002-000	126-002-000	126-001-000	126-003-000
IMTPCI	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=bldiag6

This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:34:04 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
BLDIAG6	1114	126-002-000	126-002-000	126-001-000	126-003-000
BLDIAG6	1116	126-002-000	126-002-000	126-001-000	-----

rtrv-gpl:gpl=blbsmg

This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:34:04 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
BLBSMG	1114	126-002-000	126-002-000	126-001-000	126-003-000
BLBSMG	1116	126-002-000	126-002-000	126-001-000	-----

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 2. For more information on removing the removable cartridge from the removable cartridge drive, see the [Removing the Removable Cartridge](#) section.

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, skip steps 2 and 3, and go to step 4.

2. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled). To write a removable cartridge, see the [Write Protecting the Removable Cartridge](#) section.
3. 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, see the [Inserting the Removable Cartridge](#) section. After the removable cartridge has been inserted into the removable cartridge drive, repeat the **rtrv-gpl** command in step 1 and verify the versions of the flash GPLs on the removable cartridge that you wish to update.

4. 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 **rtrv-gpl** command (in step 1) for each flash GPL.

For an HC MIM, enter these commands.

```
chg-gpl:gpl=blvxw:ver=126-003-000
```

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

```
BLVXW upload on 1114 completed
BLVXW upload on 1116 completed
```

System Release ID table upload 1114 completed
System Release ID table upload 1116 completed

chg-gpl:gpl=blbios:ver=126-003-000

These messages should appear.

rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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=bldiag:ver=126-003-000

These messages should appear.

rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
GPL Auditing ON

BLDIAG upload on 1114 completed
BLDIAG upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed

chg-gpl:gpl=blcpld:ver=126-003-000

These messages should appear.

rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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=plde1t1:ver=126-003-000

These messages should appear.

rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
GPL Auditing ON

PLDE1T1 upload on 1114 completed
PLDE1T1 upload on 1116 completed
System Release ID table upload 1114 completed
System Release ID table upload 1116 completed

chg-gpl:gpl=pldpmc1:ver=126-003-000

These messages should appear.

rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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=126-003-000

These messages should appear.


```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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, or E5-IPSM card, enter these commands.

chg-gpl:gpl=blvxw6:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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=bldiag6:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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=126-003-000

These messages should appear.

```
rlghncxa03w 07-05-01 11:43:04 GMT EAGLE5 37.0.0
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=126-003-000

These messages should appear.

```
rlghncxa03w 07-05-01 11:43:04 GMT EAGLE5 37.0.0
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=126-003-000

These messages should appear.

```
rlghncxa03w 07-05-01 11:43:04 GMT EAGLE5 37.0.0
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=126-003-000

These messages should appear.

```
rlghncxa03w 07-05-01 11:43:04 GMT EAGLE5 37.0.0
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=126-003-000

These messages should appear.

```
rlghncxa03w 07-05-01 11:43:04 GMT EAGLE5 37.0.0
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
```

5. Activate the trial GPL, using the **act-gpl** command and specifying the name and version of the trial GPL specified in step 4.

For an HC MIM, enter these commands.

act-gpl:gpl=blvxw:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
BLVXW activate on 1114 completed
BLVXW activate on 1116 completed
```

act-gpl:gpl=blbios:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
BLBIOS activate on 1114 completed
BLBIOS activate on 1116 completed
```

act-gpl:gpl=bldiag:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
BLDIAG activate on 1114 completed
BLDIAG activate on 1116 completed
```

act-gpl:gpl=blcpld:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
BLCPLD activate on 1114 completed
BLCPLD activate on 1116 completed
```

act-gpl:gpl=plde1t1:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
PLDE1T1 activate on 1114 completed
PLDE1T1 activate on 1116 completed
```

act-gpl:gpl=pldpmc1:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
PLDPMC1 activate on 1114 completed
PLDPMC1 activate on 1116 completed
```

act-gpl:gpl=imtpci:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
IMTPCI activate on 1114 completed
IMTPCI activate on 1116 completed
```

For an E5-E1T1, E5-ENET, E5-STC, E5-SLAN , or E5-IPSM card, enter these commands.

act-gpl:gpl=blvxw6:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
BLVXW6 activate on 1114 completed
BLVXW6 activate on 1116 completed
```

act-gpl:gpl=blbepm:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
BLBEPM activate on 1114 completed
BLBEPM activate on 1116 completed
```

act-gpl:gpl=bldiag6:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
BLDIAG6 activate on 1114 completed
BLDIAG6 activate on 1116 completed
```

act-gpl:gpl=blcpld:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
BLCPLD activate on 1114 completed
BLCPLD activate on 1116 completed
```

act-gpl:gpl=imtpci:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
IMTPCI activate on 1114 completed
IMTPCI activate on 1116 completed
```

act-gpl:gpl=pldpmc1:ver=126-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
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=126-003-000

These messages should appear.

```
rlghncxa03w 07-05-01 06:54:39 GMT EAGLE5 37.0.0
BLVXW6 activate on 1114 completed
BLVXW6 activate on 1116 completed
```

act-gpl:gpl=blbsmg:ver=126-003-000

These messages should appear.

```
rlghncxa03w 07-05-01 06:54:39 GMT EAGLE5 37.0.0
BLBSMG activate on 1114 completed
BLBSMG activate on 1116 completed
```

act-gpl:gpl=bldiag6:ver=126-003-000

These messages should appear.

```
rlghncxa03w 07-05-01 06:54:39 GMT EAGLE5 37.0.0
BLDIAG6 activate on 1114 completed
BLDIAG6 activate on 1116 completed
```

act-gpl:gpl=blcpld:ver=126-003-000

These messages should appear.

```
rlghncxa03w 07-05-01 06:54:39 GMT EAGLE5 37.0.0
BLCPLD activate on 1114 completed
BLCPLD activate on 1116 completed
```

act-gpl:gpl=imtpci:ver=126-003-000

These messages should appear.

```
rlghncxa03w 07-05-01 06:54:39 GMT EAGLE5 37.0.0
IMTPCI activate on 1114 completed
IMTPCI activate on 1116 completed
```

6. Verify that the GPL on the removable cartridge is the trial GPL on the fixed disk using the **rtrv-gpl** command with the **gpl** parameter value specified in step 5.

For an HC MIM, enter these commands.

rtrv-gpl:gpl=blvxw

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
BLVXW	1114	126-003-000	126-003-000	126-002-000	126-003-000
BLVXW	1116	126-003-000	126-003-000	126-002-000	-----

rtrv-gpl:gpl=blbios

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
BLBIOS	1114	126-003-000	126-003-000	126-002-000	126-003-000
BLBIOS	1116	126-003-000	126-003-000	126-002-000	-----

rtrv-gpl:gpl=bldiag

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

```
BLDIAG      1114  126-003-000  126-003-000      126-002-000  126-003-000
BLDIAG      1116  126-003-000  126-003-000      126-002-000  -----
```

rtrv-gpl:gpl=blcpld

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
BLCPLD   1114  126-003-000  126-003-000      126-002-000  126-003-000
BLCPLD   1116  126-003-000  126-003-000      126-002-000  -----
```

rtrv-gpl:gpl=plde1t1

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
PLDE1T1  1114  126-003-000  126-003-000      126-002-000  126-003-000
PLDE1T1  1116  126-003-000  126-003-000      126-002-000  -----
```

rtrv-gpl:gpl=pldpmc1

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
PLDPMC1  1114  126-003-000  126-003-000      126-002-000  126-003-000
PLDPMC1  1116  126-003-000  126-003-000      126-002-000  -----
```

rtrv-gpl:gpl=imtpci

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
IMTPCI   1114  126-003-000  126-003-000      126-002-000  126-003-000
IMTPCI   1116  126-003-000  126-003-000      126-002-000  -----
```

For an E5-E1T1, E5-ENET, E5-STC, E5-SLAN , or E5-IPSM card, enter these commands.

rtrv-gpl:gpl=blvxw6

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
BLVXW6   1114  126-003-000  126-003-000      126-002-000  126-003-000
BLVXW6   1116  126-003-000  126-003-000      126-002-000  -----
```

rtrv-gpl:gpl=blbepm

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
BLBEPM	1114	126-003-000	126-003-000	126-002-000	126-003-000
BLBEPM	1116	126-003-000	126-003-000	126-002-000	-----

rtrv-gpl:gpl=bldiag6

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
BLDIAG6	1114	126-003-000	126-003-000	126-002-000	126-003-000
BLDIAG6	1116	126-003-000	126-003-000	126-002-000	-----

rtrv-gpl:gpl=blcpld

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
BLCPLD	1114	126-003-000	126-003-000	126-002-000	126-003-000
BLCPLD	1116	126-003-000	126-003-000	126-002-000	-----

rtrv-gpl:gpl=imtpci

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
IMTPCI	1114	126-003-000	126-003-000	126-002-000	126-003-000
IMTPCI	1116	126-003-000	126-003-000	126-002-000	-----

rtrv-gpl:gpl=pldpmc1

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
PLDPMC1	1114	126-003-000	126-003-000	126-002-000	126-003-000
PLDPMC1	1116	126-003-000	126-003-000	126-002-000	-----

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 07-05-01 11:34:04 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
BLVXW6	1114	126-003-000	126-003-000	126-002-000	126-003-000 BLVXW6
126-003-000	126-003-000	126-002-000	-----		1116

rtrv-gpl:gpl=blbsmg

This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:34:04 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL	
BLBSMG	1114	126-003-000	126-003-000	126-002-000	126-003-000	BLBSMG 1116
126-003-000	126-003-000		126-002-000	-----		

rtrv-gpl:gpl=bldiag6

This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:34:04 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL	
BLDIAG6	1114	126-003-000	126-003-000	126-002-000	126-003-000	BLDIAG6 1116
126-003-000	126-003-000		126-002-000	-----		

rtrv-gpl:gpl=blcpld

This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:34:04 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL	
BLCPLD	1114	126-003-000	126-003-000	126-002-000	126-003-000	BLCPLD 1116
126-003-000	126-003-000		126-002-000	-----		

rtrv-gpl:gpl=imtpci

This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:34:04 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL	
IMTPCI	1114	126-003-000	126-003-000	126-002-000	126-003-000	IMTPCI 1116
126-003-000	126-003-000		126-002-000	-----		

7. 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 06-10-01 11:40:26 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RUNNING	APPROVED	TRIAL
SS7HC	1303	126-003-000	126-003-000	126-002-000
SS7HC	2101	126-003-000	126-003-000	126-002-000
SS7HC	2103	126-003-000	126-003-000	126-002-000
SS7HC	2205	126-003-000	126-003-000	126-002-000
SS7HC	2207	126-003-000	126-003-000	126-002-000
SS7HC	2211	126-003-000	126-003-000	126-002-000

Command Completed

For an E5-E1T1 card, enter this command.

rept-stat-gpl:gpl=ss7epm

This is an example of the possible output.


```
rlghncxa03w 06-10-01 11:40:26 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RUNNING	APPROVED	TRIAL
SS7EPM	1303	126-003-000	126-003-000	126-002-000
SS7EPM	2101	126-003-000	126-003-000	126-002-000
SS7EPM	2103	126-003-000	126-003-000	126-002-000
SS7EPM	2205	126-003-000	126-003-000	126-002-000
SS7EPM	2207	126-003-000	126-003-000	126-002-000
SS7EPM	2211	126-003-000	126-003-000	126-002-000

Command Completed

For an E5-ENET card, specify the **gpl** parameter values **iplhc** or **ipghc**. Enter this command.

rept-stat-gpl:gpl=iplhc

This is an example of the possible output.

```
rlghncxa03w 06-10-01 11:40:26 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RUNNING	APPROVED	TRIAL
IPLHC	1303	126-003-000	126-003-000	126-002-000
IPLHC	2101	126-003-000	126-003-000	126-002-000
IPLHC	2103	126-003-000	126-003-000	126-002-000
IPLHC	2205	126-003-000	126-003-000	126-002-000
IPLHC	2207	126-003-000	126-003-000	126-002-000
IPLHC	2211	126-003-000	126-003-000	126-002-000

Command Completed

For an E5-STC card, enter this command.

rept-stat-gpl:gpl=erthc

This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:40:26 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RUNNING	APPROVED	TRIAL
ERTHC	1303	126-003-000	126-003-000	126-002-000
ERTHC	2101	126-003-000	126-003-000	126-002-000
ERTHC	2103	126-003-000	126-003-000	126-002-000
ERTHC	2205	126-003-000	126-003-000	126-002-000
ERTHC	2207	126-003-000	126-003-000	126-002-000
ERTHC	2211	126-003-000	126-003-000	126-002-000

Command Completed.

For an E5-SLAN card, enter this command.

rept-stat-gpl:gpl=slanhc

This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:40:26 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RUNNING	APPROVED	TRIAL
SLANHC	1303	126-003-000	126-003-000	126-002-000
SLANHC	2101	126-003-000	126-003-000	126-002-000
SLANHC	2103	126-003-000	126-003-000	126-002-000
SLANHC	2205	126-003-000	126-003-000	126-002-000
SLANHC	2207	126-003-000	126-003-000	126-002-000
SLANHC	2211	126-003-000	126-003-000	126-002-000

Command Completed.

For an E5-SM4G card, enter this command.

rept-stat-gpl:gpl=sccphc

This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:40:26 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RUNNING	APPROVED	TRIAL
SCCPHC	1303	126-003-000	126-003-000	126-002-000
SCCPHC	2101	126-003-000	126-003-000	126-002-000
SCCPHC	2103	126-003-000	126-003-000	126-002-000
SCCPHC	2205	126-003-000	126-003-000	126-002-000
SCCPHC	2207	126-003-000	126-003-000	126-002-000
SCCPHC	2211	126-003-000	126-003-000	126-002-000

Command Completed

For an E5-IPSM card, enter this command.

rept-stat-gpl:gpl=ipshc

This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:40:26 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RUNNING	APPROVED	TRIAL
IPSHC	1303	126-003-000	126-003-000	126-002-000
IPSHC	2101	126-003-000	126-003-000	126-002-000
IPSHC	2103	126-003-000	126-003-000	126-002-000
IPSHC	2205	126-003-000	126-003-000	126-002-000
IPSHC	2207	126-003-000	126-003-000	126-002-000
IPSHC	2211	126-003-000	126-003-000	126-002-000

Command Completed

8. Choose one of the cards displayed in step 7.

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 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RUNNING	APPROVED	TRIAL
SS7HC	1203	126-003-000	126-003-000	126-002-000
	IMTPCI	126-002-000 ALM	126-003-000	126-002-000
	BLBIOS	126-002-000 ALM	126-003-000	126-002-000
	BLCPLD	126-002-000 ALM	126-003-000	126-002-000
	BLVXW	126-002-000 ALM	126-003-000	126-002-000
	BLDIAG	126-002-000 ALM	126-003-000	126-002-000
	PLDE1T1	126-002-000 ALM	126-003-000	126-002-000
	PLDPMC1	126-002-000 ALM	126-003-000	126-002-000
			ACTIVE	INACTIVE
	IMTPCI	126-002-000 ALM	126-002-000	-----
	BLBIOS	126-002-000 ALM	126-002-000	-----
	BLCPLD	126-002-000 ALM	126-002-000	-----
	BLVXW	126-002-000 ALM	126-002-000	-----

BLDIAG	126-002-000	ALM	126-002-000	-----
PLDE1T1	126-002-000	ALM	126-002-000	-----
PLDPMC1	126-002-000	ALM	126-002-000	-----

Command Completed.

For an E5-E1T1 card, this is an example of the possible output.

```
rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RUNNING	APPROVED	TRIAL
SS7EPM	1203	126-003-000	126-003-000	126-002-000
	IMTPCI	126-002-000 ALM	126-003-000	126-002-000
	BLBEPM	126-002-000 ALM	126-003-000	126-002-000
	BLCPLD	126-002-000 ALM	126-003-000	126-002-000
	BLVXW6	126-002-000 ALM	126-003-000	126-002-000
	BLDIAG6	126-002-000 ALM	126-003-000	126-002-000
	PLDPMC1	126-002-000 ALM	126-003-000	126-002-000
			ACTIVE	INACTIVE
	IMTPCI	126-002-000 ALM	126-002-000	-----
	BLBEPM	126-002-000 ALM	126-002-000	-----
	BLCPLD	126-002-000 ALM	126-002-000	-----
	BLVXW6	126-002-000 ALM	126-002-000	-----
	BLDIAG6	126-002-000 ALM	126-002-000	-----
	PLDPMC1	126-002-000 ALM	126-002-000	-----

Command Completed.

For an E5-ENET card, this is an example of the possible output.

```
rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RUNNING	APPROVED	TRIAL
IPLHC	1203	126-003-000	126-003-000	126-002-000
	IMTPCI	126-002-000 ALM	126-003-000	126-002-000
	BLBEPM	126-002-000 ALM	126-003-000	126-002-000
	BLCPLD	126-002-000 ALM	126-003-000	126-002-000
	BLVXW6	126-002-000 ALM	126-003-000	126-002-000
	BLDIAG6	126-002-000 ALM	126-003-000	126-002-000
	PLDPMC1	126-002-000 ALM	126-003-000	126-002-000
			ACTIVE	INACTIVE
	IMTPCI	126-002-000 ALM	126-002-000	-----
	BLBEPM	126-002-000 ALM	126-002-000	-----
	BLCPLD	126-002-000 ALM	126-002-000	-----
	BLVXW6	126-002-000 ALM	126-002-000	-----
	BLDIAG6	126-002-000 ALM	126-002-000	-----
	PLDPMC1	126-002-000 ALM	126-002-000	-----

Command Completed.

For an E5-STC card, this is an example of the possible output.

```
rlghncxa03w 07-05-01 07:01:08 GMT EAGLE5 37.0.0
GPL Auditing ON
```

GPL	CARD	RUNNING	APPROVED	TRIAL
ERTHC	1203	126-003-000	126-003-000	126-002-000
	IMTPCI	126-002-000 ALM	126-003-000	126-002-000
	BLBEPM	126-002-000 ALM	126-003-000	126-002-000
	BLCPLD	126-002-000 ALM	126-003-000	126-002-000
	BLVXW6	126-002-000 ALM	126-003-000	126-002-000
	BLDIAG6	126-002-000 ALM	126-003-000	126-002-000
			ACTIVE	INACTIVE
	IMTPCI	126-002-000 ALM	126-002-000	-----
	BLBEPM	126-002-000 ALM	126-002-000	-----
	BLCPLD	126-002-000 ALM	126-002-000	-----

```

BLVXW6      126-002-000 ALM    126-002-000 -----
BLDIAG6     126-002-000 ALM    126-002-000 -----

```

Command Completed.

For an E5-SLAN card, this is an example of the possible output.

```

rlghncxa03w 07-05-01 07:01:08 GMT EAGLE5 37.0.0
  GPL Auditing  ON

```

GPL	CARD	RUNNING	APPROVED	TRIAL
SLANHC	1203	126-003-000	126-003-000	126-002-000
	IMTPCI	126-002-000 ALM	126-003-000	126-002-000
	BLBEPM	126-002-000 ALM	126-003-000	126-002-000
	BLCPLD	126-002-000 ALM	126-003-000	126-002-000
	BLVXW6	126-002-000 ALM	126-003-000	126-002-000
	BLDIAG6	126-002-000 ALM	126-003-000	126-002-000
			ACTIVE	INACTIVE
	IMTPCI	126-002-000 ALM	126-002-000	-----
	BLBEPM	126-002-000 ALM	126-002-000	-----
	BLCPLD	126-002-000 ALM	126-002-000	-----
	BLVXW6	126-002-000 ALM	126-002-000	-----
	BLDIAG6	126-002-000 ALM	126-002-000	-----

Command Completed.

For an E5-SM4G card, this is an example of the possible output.

```

rlghncxa03w 07-05-01 07:01:08 GMT EAGLE5 37.0.0
  GPL Auditing  ON

```

GPL	CARD	RUNNING	APPROVED	TRIAL
SCCPHC	1203	126-003-000	126-003-000	126-002-000
	IMTPCI	126-002-000 ALM	126-003-000	126-002-000
	BLBSMG	126-002-000 ALM	126-003-000	126-002-000
	BLCPLD	126-002-000 ALM	126-003-000	126-002-000
	BLVXW6	126-002-000 ALM	126-003-000	126-002-000
	BLDIAG6	126-002-000 ALM	126-003-000	126-002-000
			ACTIVE	INACTIVE
	IMTPCI	126-002-000 ALM	126-002-000	-----
	BLBSMG	126-002-000 ALM	126-002-000	-----
	BLCPLD	126-002-000 ALM	126-002-000	-----
	BLVXW6	126-002-000 ALM	126-002-000	-----
	BLDIAG6	126-002-000 ALM	126-002-000	-----

Command Completed.

For an E5-IPSM card, this is an example of the possible output.

```

rlghncxa03w 07-05-01 07:01:08 GMT EAGLE5 37.0.0
  GPL Auditing  ON

```

GPL	CARD	RUNNING	APPROVED	TRIAL
IPSHC	1203	126-003-000	126-003-000	126-002-000
	IMTPCI	126-002-000 ALM	126-003-000	126-002-000
	BLBEPM	126-002-000 ALM	126-003-000	126-002-000
	BLCPLD	126-002-000 ALM	126-003-000	126-002-000
	BLVXW6	126-002-000 ALM	126-003-000	126-002-000
	BLDIAG6	126-002-000 ALM	126-003-000	126-002-000
			ACTIVE	INACTIVE
	IMTPCI	126-002-000 ALM	126-002-000	-----
	BLBEPM	126-002-000 ALM	126-002-000	-----
	BLCPLD	126-002-000 ALM	126-002-000	-----
	BLVXW6	126-002-000 ALM	126-002-000	-----
	BLDIAG6	126-002-000 ALM	126-002-000	-----

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.

9. Display the status of the card using the **rept-stat-card** command and specifying the location of the card used in step 8.

For this example, enter this command.

rept-stat-card: loc=1303

For an HC MIM, 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
1303  126-003-000  LIME1    SS7HC    IS-NR    Active   -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-002-000
BLCPLD  GPL version = 126-002-000
BLDIAG  GPL version = 126-002-000
BLBIOS  GPL version = 126-002-000
BLVXW   GPL version = 126-002-000
PLDE1T1 GPL version = 126-002-000
PLDPMC1 GPL version = 126-002-000
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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      GPL      PST      SST      AST
1303  126-003-000  LIME1    SS7EPM   IS-NR    Active   -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-002-000
BLCPLD  GPL version = 126-002-000
BLDIAG6 GPL version = 126-002-000
BLBEPM  GPL version = 126-002-000
PLDPMC1 GPL version = 126-002-000
BLVXW6  GPL version = 126-002-000
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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      GPL      PST      SST      AST
1303  126-003-000  DCM      IPLHC    IS-NR    Active   -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-002-000
```

```

BLCPLD  GPL version = 126-002-000
BLDIAG6 GPL version = 126-002-000
BLBEPM  GPL version = 126-002-000
PLDPMC1 GPL version = 126-002-000
BLVXW6  GPL version = 126-002-000
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 07-05-01 09:12:36 GMT EAGLE5 37.0.0
CARD  VERSION  TYPE      GPL      PST      SST      AST
1303  126-003-000 STC      ERTHC    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 = 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 07-05-01 09:12:36 GMT EAGLE5 37.0.0
CARD  VERSION  TYPE      GPL      PST      SST      AST
1303  126-003-000 DCM      SLANHC    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 = 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 07-05-01 09:12:36 GMT EAGLE5 37.0.0
CARD  VERSION  TYPE      GPL      PST      SST      AST
1303  126-003-000 DSM      SCCPHC    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

```

```

BLBSMG  GPL version = 126-002-000
BLCPLD  GPL version = 126-002-000
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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      GPL      PST      SST      AST
1303  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.

```

Continue the procedure by performing one of these actions:

- If the application GPL running on the card is SS7HC, SS7EPM, IPLHC, or IPGHC (shown in the **GPL** column in the **rept-stat-card** output in step 9), continue the procedure with step 10.
- If the application GPL running on the card is ERTHC or SCCPHC, skip steps 10 through 16, and go to step 17.
- If the application GPL running on the card is SLANHC, skip steps 10 and 11, and go to step 12.
- If the application GPL running on the card is IPSHC, skip steps 10 through 13, and go to step 14.

10. Display the signaling links associated with the card shown in step 9.

Enter the **rtrv-slk** command with the card location specified in step 9. 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 06-10-01 21:16:37 GMT EAGLE5 36.0.0

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 06-10-01 21:16:37 GMT EAGLE5 36.0.0

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

```

11. 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: 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 06-10-01 11:45:18 GMT EAGLE5 36.0.0
Deactivate SLK message sent to card
```

After step 11 is performed, skip steps 12 through 16, and go to step 17.

12. Display the data link, and its status, associated with the card shown in step 9.

Enter the **rept-stat-dlk** command with the card location specified in step 9. For this example, enter this command.

```
rept-stat-dlk:loc=1303
```

This is an example of the possible output.

```
rlghncxa03w 07-05-01 17:00:36 GMT EAGLE5 37.0.0
DLK   PST           SST           AST
1303  IS-NR         Avail         ---
```

Command Completed.

13. 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: 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 07-05-01 11:45:18 GMT EAGLE5 37.0.0
Deactivate Link message sent to card.
Command Completed.
```

After step 13 has been performed, skip steps 14 through 16, and go to step 17.

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

The Telnet terminals associated with the card shown in step 9 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 07-05-01 16:02:08 GMT EAGLE5 37.0.0
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-O-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-O-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

TRM	TRAF	LINK	SA	SYS	PU	DB
1	NO	YES	NO	YES	NO	YES
2	NO	NO	NO	NO	NO	NO
.						
.						
.						
39	NO	NO	NO	NO	NO	NO
40	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
.												
.												
.												
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

15. Display the status of the terminals with the rept-stat-trm command. This is an example of the possible output.

```
rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
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.

16. 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: 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 15 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 07-05-01 15:08:45 GMT EAGLE5 37.0.0
Inhibit message sent to terminal
```

```
rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
Command Completed.
```

17. Place the card shown in step 9 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Card has been inhibited.
```

If the card contains the last signaling link in a linkset, the **force=yes** parameter must be specified.

18. Load the approved version of the flash GPLs onto the card inhibited in step 17 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: 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 17. 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Downloading BLBIOS on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 download BLBIOS complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Downloading BLDIAG on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 download BLDIAG complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Downloading PLDE1T1 on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 download PLDE1T1 complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Downloading IMTPCI on card 1303.
```

```
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 download IMTPCI complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Downloading BLVXW on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 download BLVXW complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Downloading PLDPMC1 on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 download PLDPMC1 complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Activating BLBIOS on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 activation BLBIOS complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Activating BLDIAG on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 activation BLDIAG complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Activating PLDE1T1 on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 activation PLDE1T1 complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Activating IMTPCI on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 activation IMTPCI complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Activating BLVXW on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 activation BLVXW complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Activating PLDPMC1 on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 activation PLDPMC1 complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Downloading BLCPLD on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 download BLCPLD complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Activating BLCPLD on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 activation BLCPLD complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.
```

When this command has successfully completed on an E5-E1T1 or E5-ENET card, these messages should appear.

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
```

```
Flash Card: Downloading BLBEPM on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 download BLBEPM complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Downloading BLDIAG6 on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 download BLDIAG6 complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Downloading IMTPCI on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 download IMTPCI complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Downloading BLVXW6 on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 download BLVXW6 complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Downloading PLDPMC1 on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 download PLDPMC1 complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Activating BLBEPM on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 activation BLBEPM complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Activating BLDIAG6 on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 activation BLDIAG6 complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Activating IMTPCI on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 activation IMTPCI complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Activating BLVXW6 on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 activation BLVXW6 complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Downloading BLCPLD on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 download BLCPLD complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Activating BLCPLD on card 1303.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Flash Card: Card 1303 activation BLCPLD complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.
```

When this command has successfully completed on an E5-STC, E5-SLAN , or E5-IPSM card, these messages should appear.

```

    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Downloading BLBEPM on card 1303.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 download BLBEPM complete.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Downloading BLDIAG6 on card 1303.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 download BLDIAG6 complete.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Downloading IMTPCI on card 1303.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 download IMTPCI complete.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Downloading BLVXW6 on card 1303.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 download BLVXW6 complete.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Activating BLBEPM on card 1303.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 activation BLBEPM complete.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Activating BLDIAG6 on card 1303.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 activation BLDIAG6 complete.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Activating IMTPCI on card 1303.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 activation IMTPCI complete.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Activating BLVXW6 on card 1303.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 activation BLVXW6 complete.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Downloading BLCPLD on card 1303.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 download BLCPLD complete.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Activating BLCPLD on card 1303.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 activation BLCPLD complete.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Command Completed.

```

When this command has successfully completed on an E5-SM4G card, these messages should appear.

```

    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Downloading BLBSMG on card 1303.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 download BLBSMG complete.
;
    rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0

```

```

Flash Card: Downloading BLDIAG6 on card 1303.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 download BLDIAG6 complete.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Downloading IMTPCI on card 1303.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 download IMTPCI complete.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Downloading BLVXW6 on card 1303.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 download BLVXW6 complete.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Activating BLBEPM on card 1303.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 activation BLBEPM complete.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Activating BLDIAG6 on card 1303.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 activation BLDIAG6 complete.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Activating IMTPCI on card 1303.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 activation IMTPCI complete.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Activating BLVXW6 on card 1303.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 activation BLVXW6 complete.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Downloading BLCPLD on card 1303.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 download BLCPLD complete.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Activating BLCPLD on card 1303.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Flash Card: Card 1303 activation BLCPLD complete.
;
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Command Completed.

```

The card specified in the **flash-card** command will be re-initialized when the flash GPL downloads are complete.

19. Put the card that was taken out of service in step 17 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Card has been allowed.
```

20. Verify that the flash GPLs from step 18 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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      GPL      PST      SST      AST
1303  126-003-000  LIME1    SS7HC    IS-NR    Active   -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-003-000
BLCPLD  GPL version = 126-003-000
BLDIAG  GPL version = 126-003-000
BLBIOS  GPL version = 126-003-000
BLVXW   GPL version = 126-003-000
PLDE1T1 GPL version = 126-003-000
PLDPMC1 GPL version = 126-003-000
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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      GPL      PST      SST      AST
1303  126-003-000  LIME1    SS7EPM   IS-NR    Active   -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-003-000
BLCPLD  GPL version = 126-003-000
BLDIAG6 GPL version = 126-003-000
BLBEPM  GPL version = 126-003-000
PLDPMC1 GPL version = 126-003-000
BLVXW6  GPL version = 126-003-000
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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      GPL      PST      SST      AST
1303  126-003-000  DCM      IPLHC    IS-NR    Active   -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-003-000
BLCPLD  GPL version = 126-003-000
BLDIAG6 GPL version = 126-003-000
BLBEPM  GPL version = 126-003-000
PLDPMC1 GPL version = 126-003-000
```



```

BLVXW6  GPL version = 126-003-000
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 07-05-01 09:12:36 GMT EAGLE5 37.0.0
CARD  VERSION  TYPE      GPL      PST      SST      AST
1303  126-003-000 STC      ERTHC    IS-NR      Active    -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-003-000
BLVXW6  GPL version = 126-003-000
BLDIAG6 GPL version = 126-003-000
BLBEPM  GPL version = 126-003-000
BLCPLD  GPL version = 126-003-000
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 07-05-01 09:12:36 GMT EAGLE5 37.0.0
CARD  VERSION  TYPE      GPL      PST      SST      AST
1303  126-003-000 DCM      SLANHC    IS-NR      Active    -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-003-000
BLVXW6  GPL version = 126-003-000
BLDIAG6 GPL version = 126-003-000
BLBEPM  GPL version = 126-003-000
BLCPLD  GPL version = 126-003-000
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 07-05-01 09:12:36 GMT EAGLE5 37.0.0
CARD  VERSION  TYPE      GPL      PST      SST      AST
1303  126-003-000 DSM      SCCPHC    IS-NR      Active    -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-003-000
BLVXW6  GPL version = 126-003-000
BLDIAG6 GPL version = 126-003-000
BLBSMG  GPL version = 126-003-000
BLCPLD  GPL version = 126-003-000
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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      GPL      PST      SST      AST
1303  126-003-000  IPSM      IPSHC    IS-NR    Active   -----
ALARM STATUS      = No Alarms.
IMTPCI  GPL version = 126-003-000
BLVXW6  GPL version = 126-003-000
BLDIAG6 GPL version = 126-003-000
BLBEPM  GPL version = 126-003-000
BLCPLD  GPL version = 126-003-000
IMT BUS A          = Conn
IMT BUS B          = Conn
CURRENT TEMPERATURE = 32C ( 90F)
PEAK TEMPERATURE:   = 39C (103F)   [06-05-02 13:40]
Command Completed.

```

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 5, contact the Customer Care Center. Refer to [Customer Care Center](#) for the contact information.

Continue the procedure by performing one of these actions:

- If the application GPL running on the card is SS7HC, SS7EPM, IPLHC, or IPGHC (shown in the **GPL** column in the **rept-stat-card** output in step 20), continue the procedure with step 21.
 - If the application GPL running on the card is ERTHC or SCCPHC card), skip steps 21 through 26, and go to step 27
 - If the application GPL running on the card is SLANHC, skip steps 21 and 22, and go to step 23.
 - If the application GPL running on the card is IPSHC, skip steps 21 through 24, and go to step 25.
21. Place the signaling links that were deactivated in step 11 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 06-10-01 11:55:49 GMT EAGLE5 36.0.0
Activate SLK message sent to card

```

22. Verify that the signaling links activated in step 21 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 06-10-01 13:06:25 GMT EAGLE5 36.0.0
```

```

SLK      LSN      CLLI      PST      SST      AST
1303,A   e11303a  -----  IS-NR    Avail    ----
  ALARM STATUS      = No Alarms.
  UNAVAIL REASON    = --

```

rept-stat-slkl:loc=1303: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
1303,B   e11303b  -----  IS-NR    Avail    ----
  ALARM STATUS      = No Alarms.
  UNAVAIL REASON    = --

```

rept-stat-slkl:loc=1303: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
1303,A1  e11303a  -----  IS-NR    Avail    ----
  ALARM STATUS      = No Alarms.
  UNAVAIL REASON    = --

```

rept-stat-slkl:loc=1303:link=b3

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
1303,B3  e11303b  -----  IS-NR    Avail    ----
  ALARM STATUS      = No Alarms.
  UNAVAIL REASON    = --
Command Completed.

```

After step 22 has been performed, skip steps 20 and 21, and go to step 22 skip steps 23 through 26, and go to step 27.

23. Place the TCP/IP data link that was deactivated in step 13 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 07-05-01 11:55:49 GMT EAGLE5 37.0.0
Activate Link message sent to card.

```

24. Verify that the TCP/IP data link activated in step 23 is back in service with the **rept-stat-dlkl** command. For this example, enter this command.

rept-stat-dlkl:loc=1303

This is an example of the possible output.

```

rlghncxa03w 07-05-01 17:00:36 GMT EAGLE5 37.0.0
DLK      PST      SST      AST
1303     IS-NR    Avail    ---

```

Command Completed.

After step 24 has been performed, skip steps 25 and 26, and go to step 27.

25. 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 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.
```

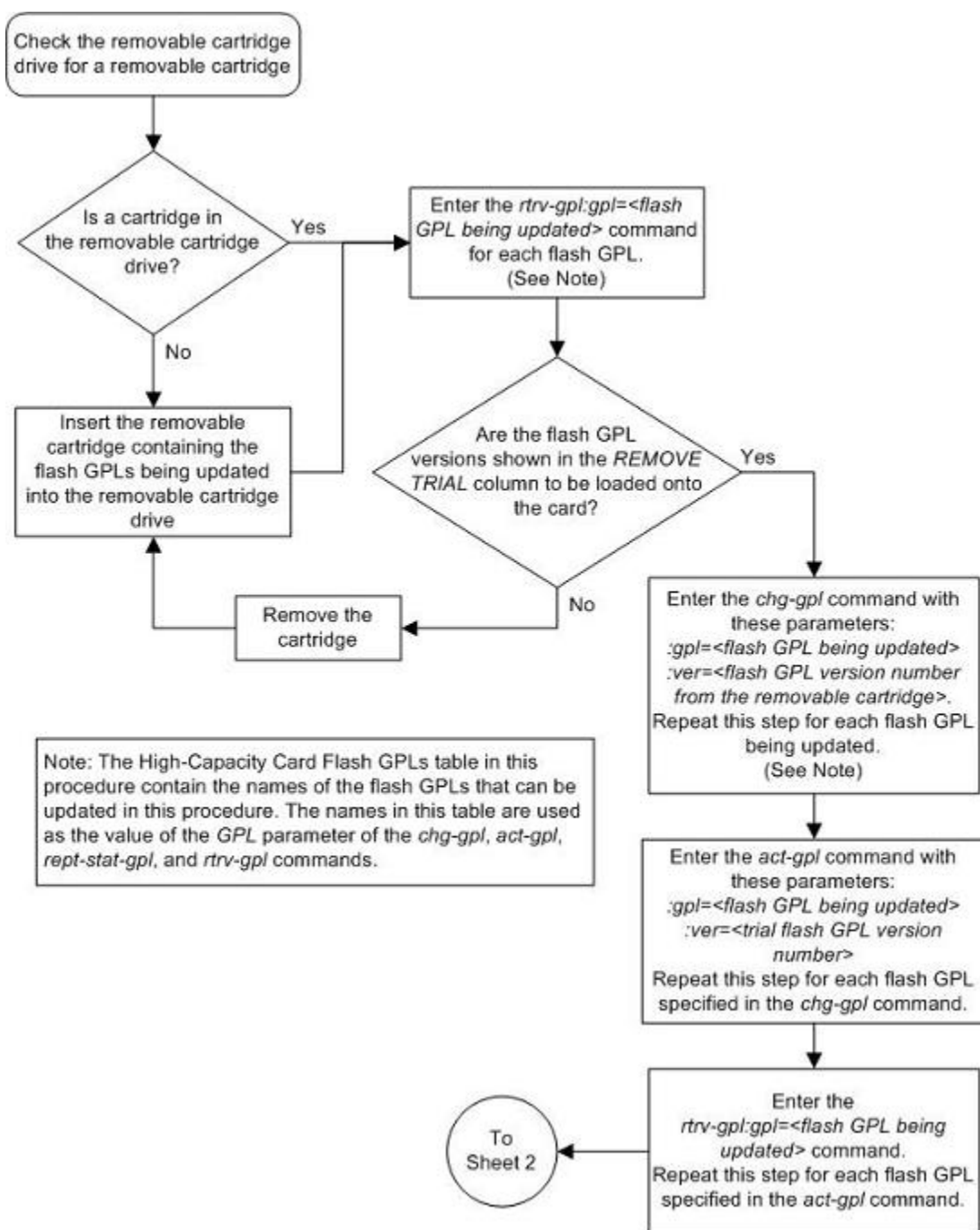
26. Verify that the terminals are in service with the **rept-stat-trm** command. This is an example of the possible output.

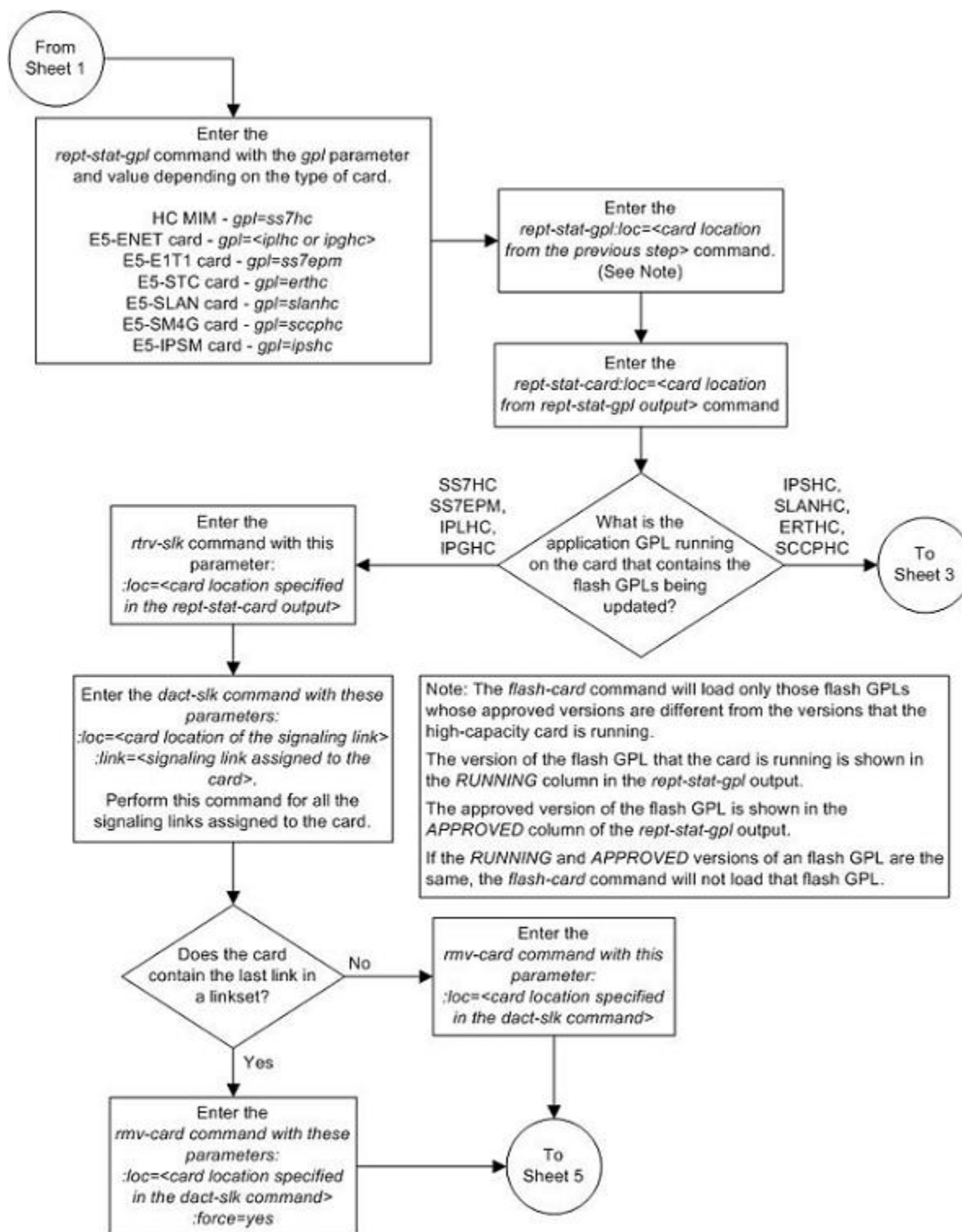
```
rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
TRM   PST      SST      AST
1     IS-NR     Active    -----
2     IS-NR     Active    -----
3     IS-NR     Active    -----
4     IS-NR     Active    -----
5     IS-NR     Active    -----
6     IS-NR     Active    -----
7     IS-NR     Active    -----
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    -----
```

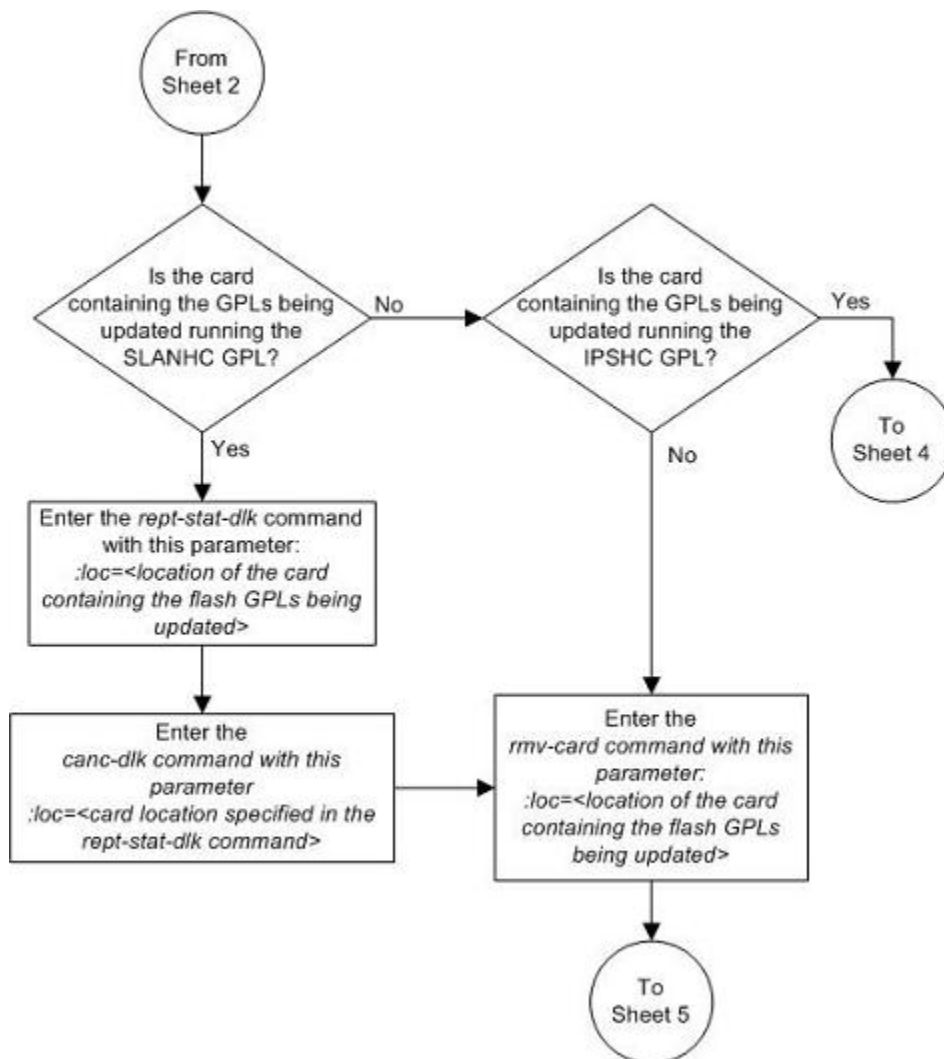
```
Command Completed.
```

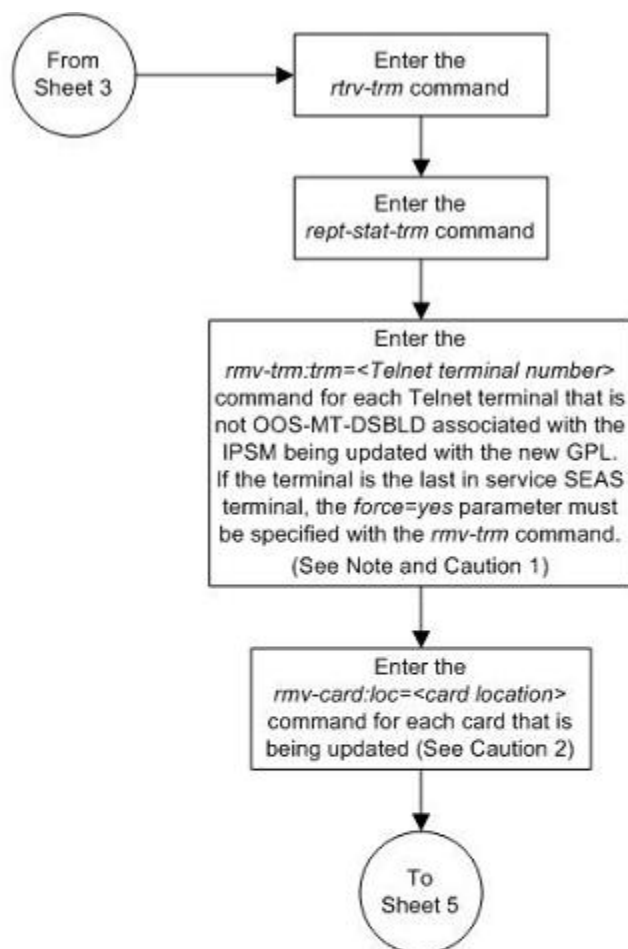
27. Remove the removable cartridge from the removable cartridge drive on the MDAL card.

Flowchart 3-7. Updating All the Flash GPLs on the High-Capacity Cards





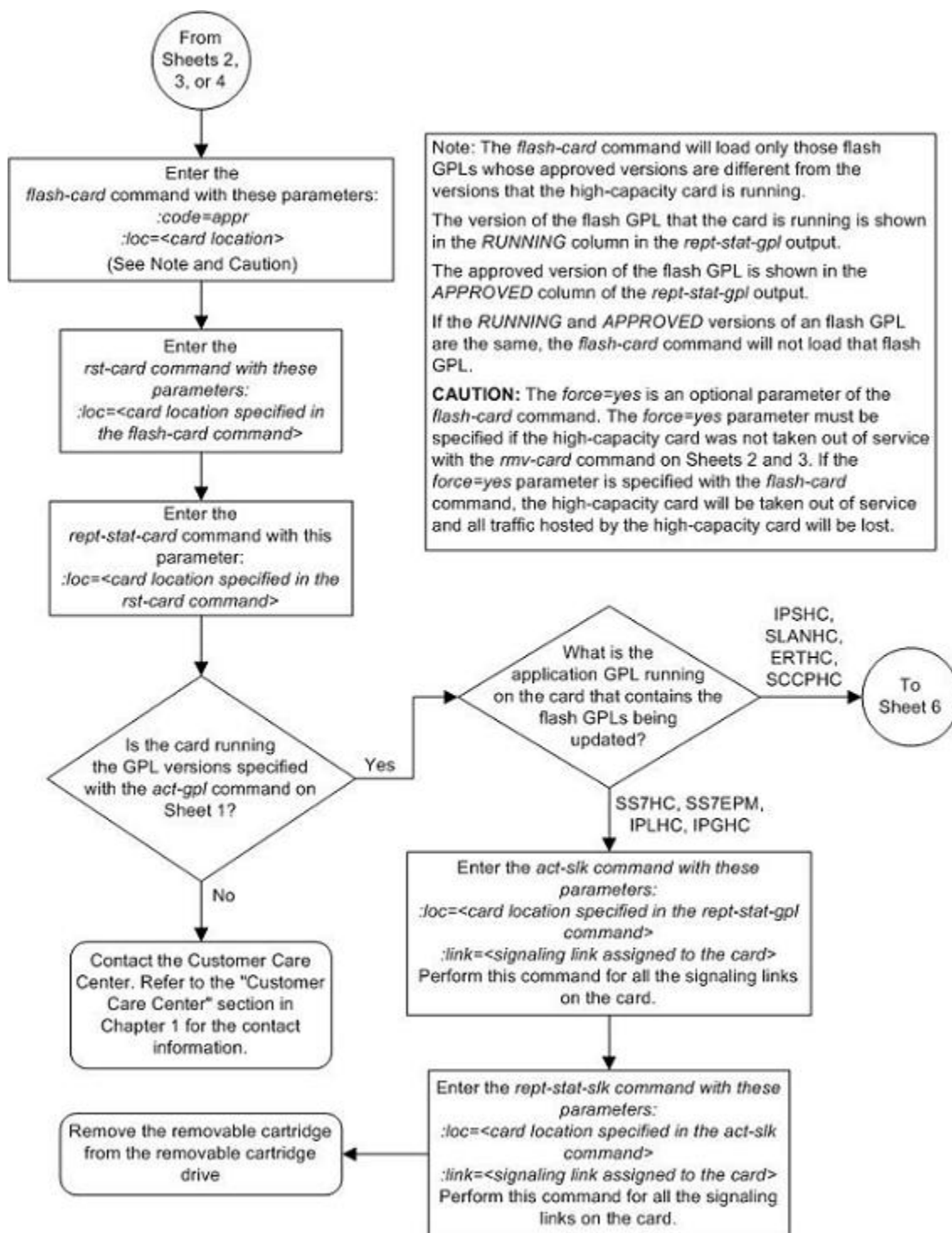


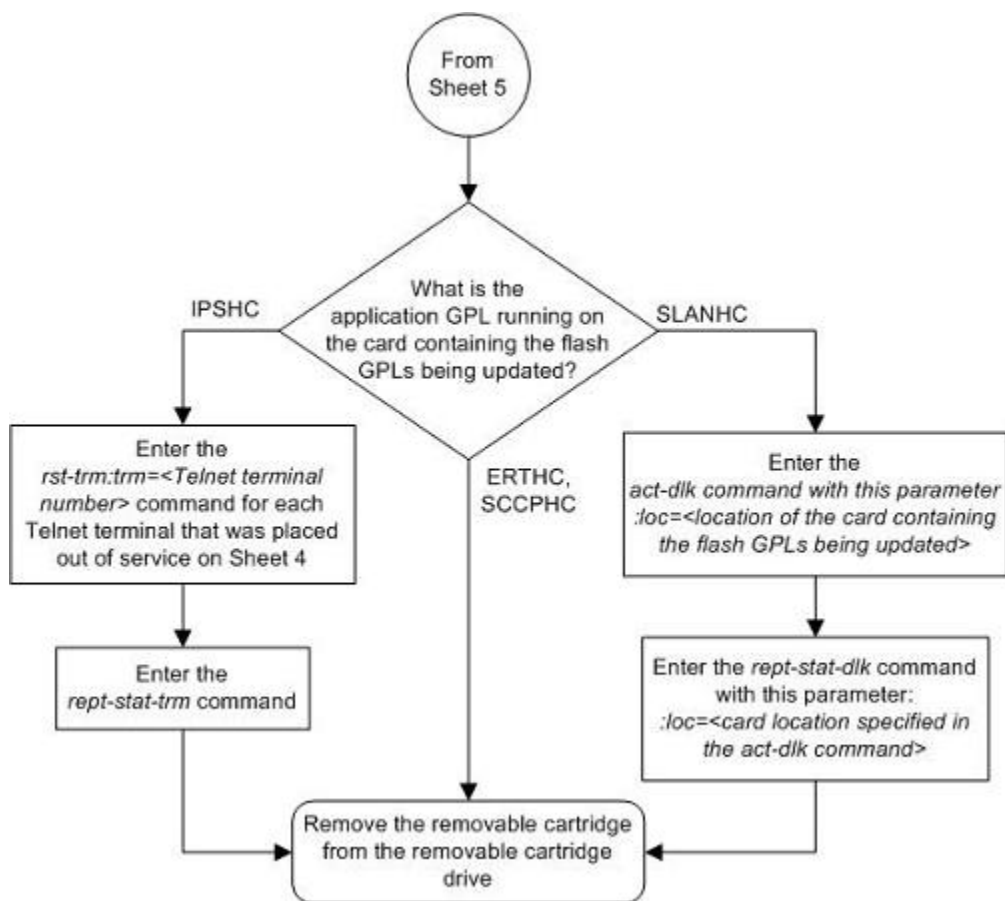


Note: Each IPSM has 8 Telnet terminals associated with it. The *rtrv-trm* output shows the Telnet terminals that are associated with each IPSM.

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.





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, 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 that contains the **bphmux** GPL to be loaded on to the EAGLE 5 ISS is required.

Procedure

1. 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, see [Removing the Removable Cartridge](#).
2. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).

To write protect a removable cartridge, see [Write Protecting the Removable Cartridge](#) .

3. 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, see [Inserting the Removable Cartridge](#) .

4. 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 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON

GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
BPHMUX   1114  118-002-000  118-002-000   118-001-000  118-003-000
BPHMUX   1116  118-002-000  118-002-000   118-001-000  -----
```

5. Change the GPLs, 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 4.

For this example, enter this command.

```
chg-gpl:gpl=bphmux:ver=118-003-000
```

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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
```

6. Activate the trial GPL, using the **act-gpl** command and specifying the value for the trial **bphmux** GPL used in step 5.

For this example, enter this command.

```
act-gpl:gpl=bphmux:ver=118-003-000
```

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
BPHMUX activate on 1114 completed
BPHMUX activate on 1116 completed
```

7. Verify that the **bphmux** GPL on the removable cartridge is the approved GPL on the fixed disk using the **rtrv-gpl:gpl=bphmux** command.

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
BPHMUX   1114  118-003-000  118-003-000   118-002-000  118-003-000
BPHMUX   1116  118-003-000  118-003-000   118-002-000  -----
```

8. 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 06-10-01 11:40:26 GMT EAGLE5 36.0.0
GPL      CARD      RUNNING      APPROVED      TRIAL
BPHMUX   1109      118-002-000 ALM      118-003-000      118-002-000
BPHMUX   1110      118-002-000 ALM      118-003-000      118-002-000
BPHMUX   1209      118-002-000 ALM      118-003-000      118-002-000
BPHMUX   1210      118-002-000 ALM      118-003-000      118-002-000
BPHMUX   1309      118-002-000 ALM      118-003-000      118-002-000
BPHMUX   1310      118-002-000 ALM      118-003-000      118-002-000
BPHMUX   2109      118-002-000 ALM      118-003-000      118-002-000
BPHMUX   2110      118-002-000 ALM      118-003-000      118-002-000
Command Completed
```

9. Load the approved **bphmux** GPL onto a card selected from the cards shown in step 8 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Downloading for card 1109 Started.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
BPHMUX Downloading for card 1109 Complete.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.
```

Updating more than OneHMUX 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 **sloc** and **eloc** parameters specifies the HMUX cards on IMT bus A. Specifying card locations XX10 for the **sloc** and **eloc** 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:

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 update the HMUX cards on IMT Bus B shown in step 8 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 8, 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
```

```

FLASH Memory Download for cards 1110 - 2110 Started.
;
rlghncxa03w 06-10-01 13:07:15 GMT EAGLE5 36.0.0
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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.

```

10. Re-initialize the HMUX cards specified in step 9 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 9, re-initialize the IMT bus containing the cards specified in step 9 by entering **init-mux** command and specifying the IMT bus (the **bus** parameter) containing the cards specified in step 9. Specifying card locations XX09 for the **sloc** and **eloc** parameters in step 9 requires that IMT bus A is re-initialized. Specifying card locations XX10 for the **sloc** and **eloc** parameters in step 9 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
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.

11. Verify that the approved **bphmux** GPL from step 10 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 steps 9 and 10, enter the **rept-stat-card** command for each specified card. For this example, enter this command.

rept-stat-card:loc=1109:mode=full

```

rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
CARD  VERSION      TYPE      APPL      PST      SST      AST
1109  118-003-000  HMUX      HMUX      IS-NR      Active    -----
ALARM STATUS      = No Alarms
APPROVED VERSION   = 118-003-000
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 5, contact the Customer Care Center. Refer to [Customer Care Center](#) for the contact information.

12. Activate the approved **bphmux** GPL loaded onto the card in step 9 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Activation for card 1109 Completed.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.
```

Activating the BPHMUX GPL on more than One HMUX Card at the Same Time

If more than one HMUX card was specified in step 9, 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 8 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 8, 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Activation for cards 1110 - 2110 Started.
;
rlghncxa03w 06-10-01 13:07:15 GMT EAGLE5 36.0.0
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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.
```

13. 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.

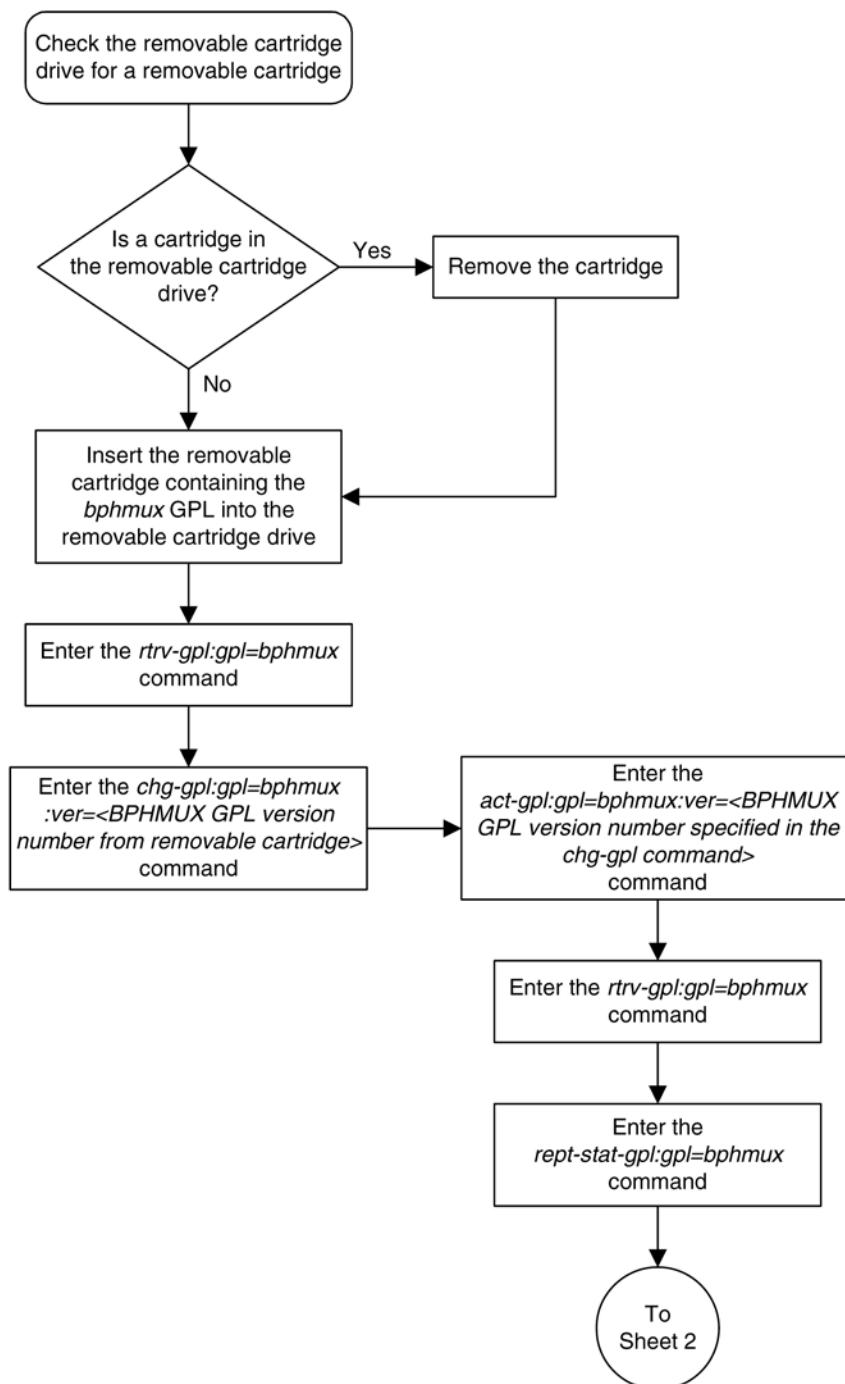
This is an example of the possible output.

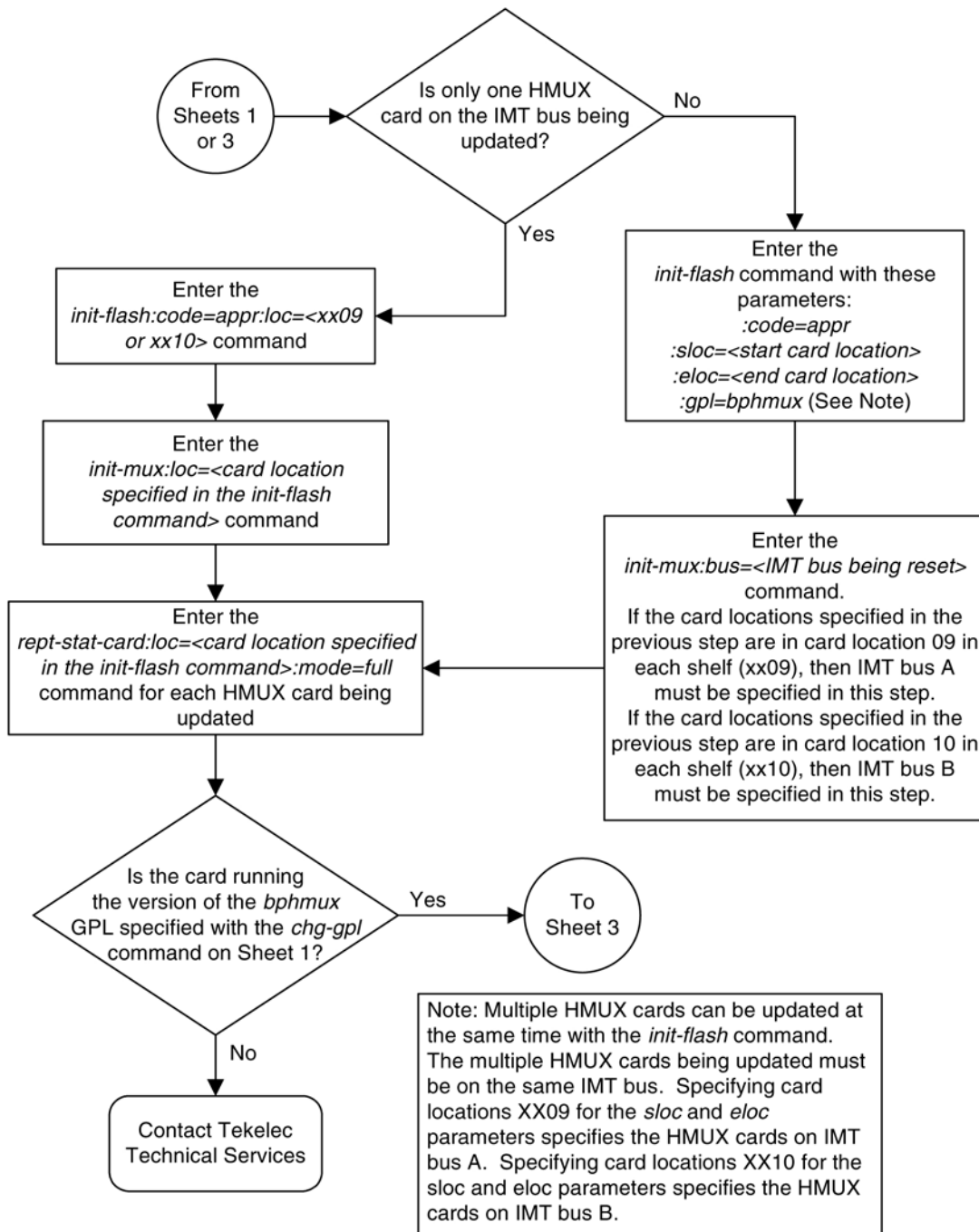
```
rlghncxa03w 06-10-01 11:40:26 GMT EAGLE5 36.0.0
GPL      CARD  RUNNING      APPROVED      TRIAL
BPHMUX   1109  118-003-000  118-003-000  118-002-000
BPHMUX   1110  118-002-000 ALM  118-003-000  118-002-000
BPHMUX   1209  118-002-000 ALM  118-003-000  118-002-000
BPHMUX   1210  118-002-000 ALM  118-003-000  118-002-000
BPHMUX   1309  118-002-000 ALM  118-003-000  118-002-000
BPHMUX   1310  118-002-000 ALM  118-003-000  118-002-000
BPHMUX   2109  118-002-000 ALM  118-003-000  118-002-000
BPHMUX   2110  118-002-000 ALM  118-003-000  118-002-000
Command Completed
```

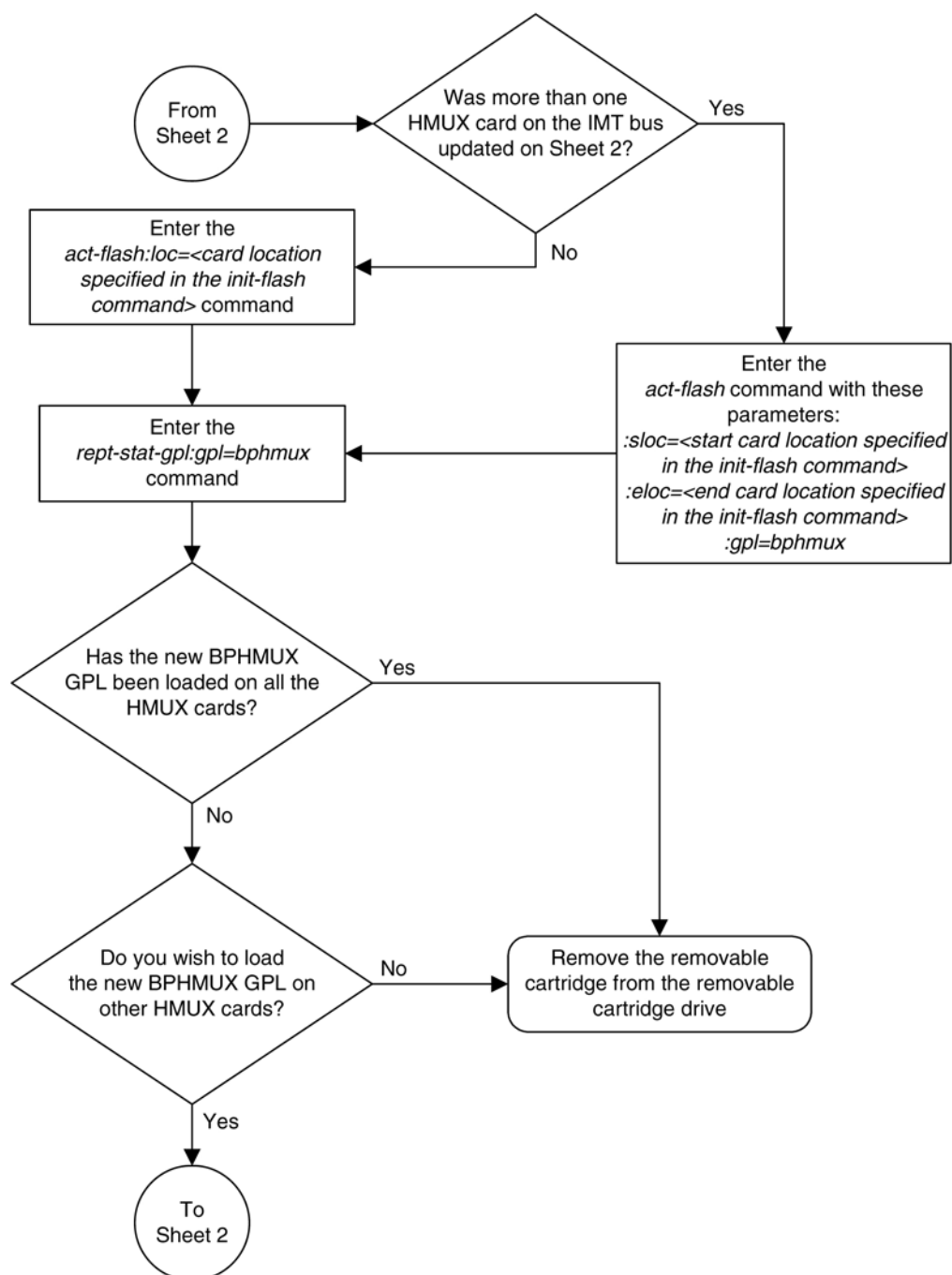
14. To load the **bphmux** GPL on the other HMUX cards, repeat steps 9 through 13 for each card.
15. Remove the removable cartridge from the removable cartridge drive on the MDAL card.

For more information on removing the removable cartridge from the removable cartridge drive, see [Removing the Removable Cartridge](#) .

Flowchart 3-8. 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, 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 that contains the **hipr** GPL to be loaded on to the EAGLE 5 ISS is required.

Procedure

1. 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, see [Removing the Removable Cartridge](#) .
2. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).
To write protect a removable cartridge, see [Write Protecting the Removable Cartridge](#) .
3. 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, see [Inserting the Removable Cartridge](#) .

4. 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 06-10-01 11:34:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
HIPR	1114	126-002-000	126-002-000	126-001-000	126-003-000
HIPR	1116	126-002-000	126-002-000	126-001-000	-----

5. 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 4.

For this example, enter this command.

```
chg-gpl:gpl=hipr:ver=125-003-000
```

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
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, skip steps 6 and 7, and go to step 8.**

6. Activate the trial GPL, using the **act-gpl** command and specifying the value for the trial **hipr** GPL shown in step 5.

For this example, enter this command.

act-gpl:gpl=hipr:ver=125-003-000

These messages should appear.

```
rlghncxa03w 06-10-01 06:54:39 GMT EAGLE5 36.0.0
HIPR activate on 1114 completed
HIPR activate on 1116 completed
```

7. Verify that the **hipr** GPL on the removable cartridge is the approved GPL on the fixed disk using the **rtrv-gpl:gpl=hipr** command.

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
HIPR	1114	126-003-000	126-003-000	126-002-000	126-003-000
HIPR	1116	126-003-000	126-003-000	126-002-000	-----

8. 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 06-10-01 11:40:26 GMT EAGLE5 36.0.0
GPL      CARD      RUNNING      APPROVED      TRIAL
HIPR     1109      126-002-000 ALM    126-003-000    126-002-000
HIPR     1110      126-002-000 ALM    126-003-000    126-002-000
HIPR     1209      126-002-000 ALM    126-003-000    126-002-000
HIPR     1210      126-002-000 ALM    126-003-000    126-002-000
HIPR     1309      126-002-000 ALM    126-003-000    126-002-000
HIPR     1310      126-002-000 ALM    126-003-000    126-002-000
HIPR     2109      126-002-000 ALM    126-003-000    126-002-000
HIPR     2110      126-002-000 ALM    126-003-000    126-002-000
Command Completed
```

9. Load the approved **hipr** GPL onto a card selected from the cards shown in step 8 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Downloading for card 1109 Started.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
HIPR Downloading for card 1109 Complete.
;

rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
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 **e loc** parameters specifies the HIPR cards on IMT bus A. Specifying card locations XX10 for the **sloc** and **e loc** 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 8 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 8, 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Download for cards 1110 - 2110 Started.
;
rlghncxa03w 06-10-01 13:07:15 GMT EAGLE5 36.0.0
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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.
```

10. Re-initialize the HIPR cards specified in step 9 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 9, re-initialize the IMT bus containing the cards specified in step 9 by entering **init-mux** command and specifying the IMT bus (the **bus** parameter) containing the cards specified in step 9. Specifying card locations XX09 for the **sloc** and **eloc** parameters in step 9 requires that IMT bus A is re-initialized. Specifying card locations XX10 for the **sloc** and **eloc** parameters in step 9 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
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.

11. Verify that the approved **hipr** GPL from step 10 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 steps 9 and 10, enter the **rept-stat-card** command for each specified card. For this example, enter this command.

```
rept-stat-card:loc=1109:mode=full
```

```
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
CARD   VERSION   TYPE     APPL     PST       SST       AST
1109   126-003-000 HIPR      HIPR      IS-NR      Active    -----
  ALARM STATUS      = No Alarms
  TRIAL  VERSION     = 126-003-000
  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 5, contact the Customer Care Center. Refer to [Customer Care Center](#) for the contact information.

12. Activate the approved **hipr** GPL loaded onto the card in step 9 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Activation for card 1109 Completed.
;
rlghncxa03w 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.
```

Activating the HIPR GPL on more than One HIPR Card at the Same TimeIf more than one HIPR card was specified in step 9, 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 8 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 8, 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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
FLASH Memory Activation for cards 1110 - 2110 Started.
;
rlghncxa03w 06-10-01 13:07:15 GMT EAGLE5 36.0.0
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 06-10-01 11:11:28 GMT EAGLE5 36.0.0
Command Completed.
```

13. 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.

```

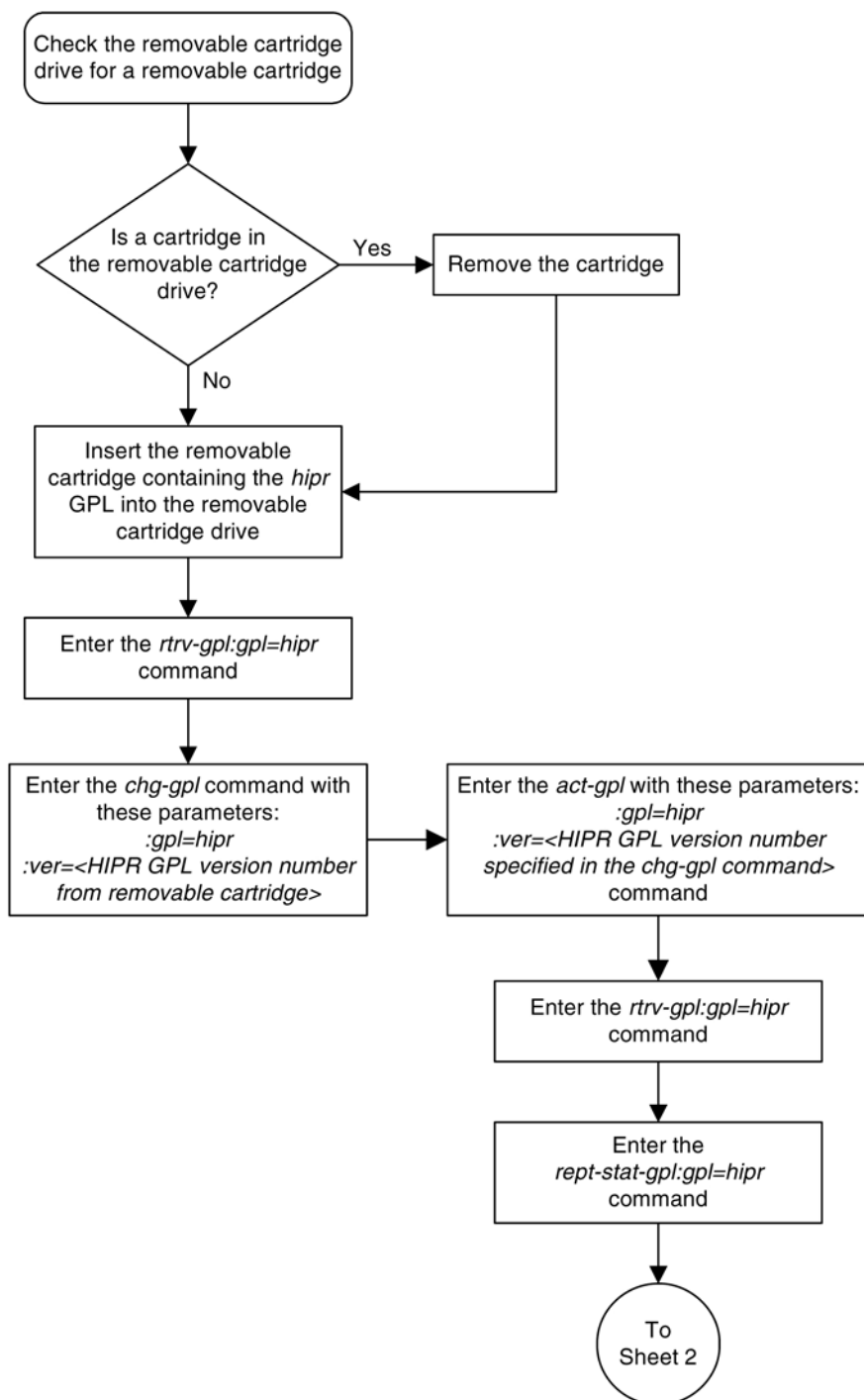
r1ghncxa03w 06-10-01 11:40:26 GMT EAGLE5 36.0.0
GPL      CARD  RUNNING      APPROVED      TRIAL
HIPR     1109  126-003-000    126-003-000    126-002-000
HIPR     1110  126-002-000 ALM    126-003-000    126-002-000
HIPR     1209  126-002-000 ALM    126-003-000    126-002-000
HIPR     1210  126-002-000 ALM    126-003-000    126-002-000
HIPR     1309  126-002-000 ALM    126-003-000    126-002-000
HIPR     1310  126-002-000 ALM    126-003-000    126-002-000
HIPR     2109  126-002-000 ALM    126-003-000    126-002-000
HIPR     2110  126-002-000 ALM    126-003-000    126-002-000
Command Completed

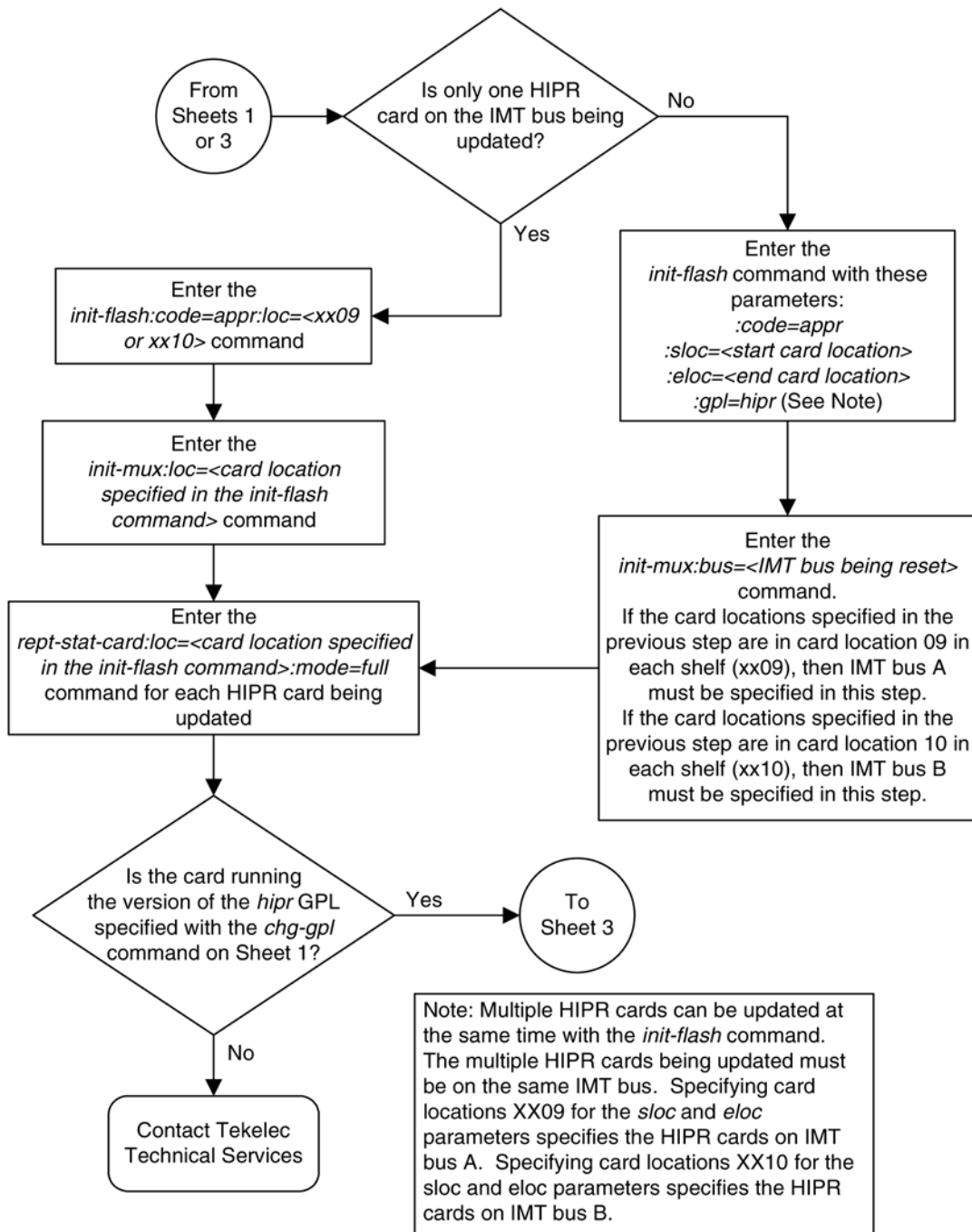
```

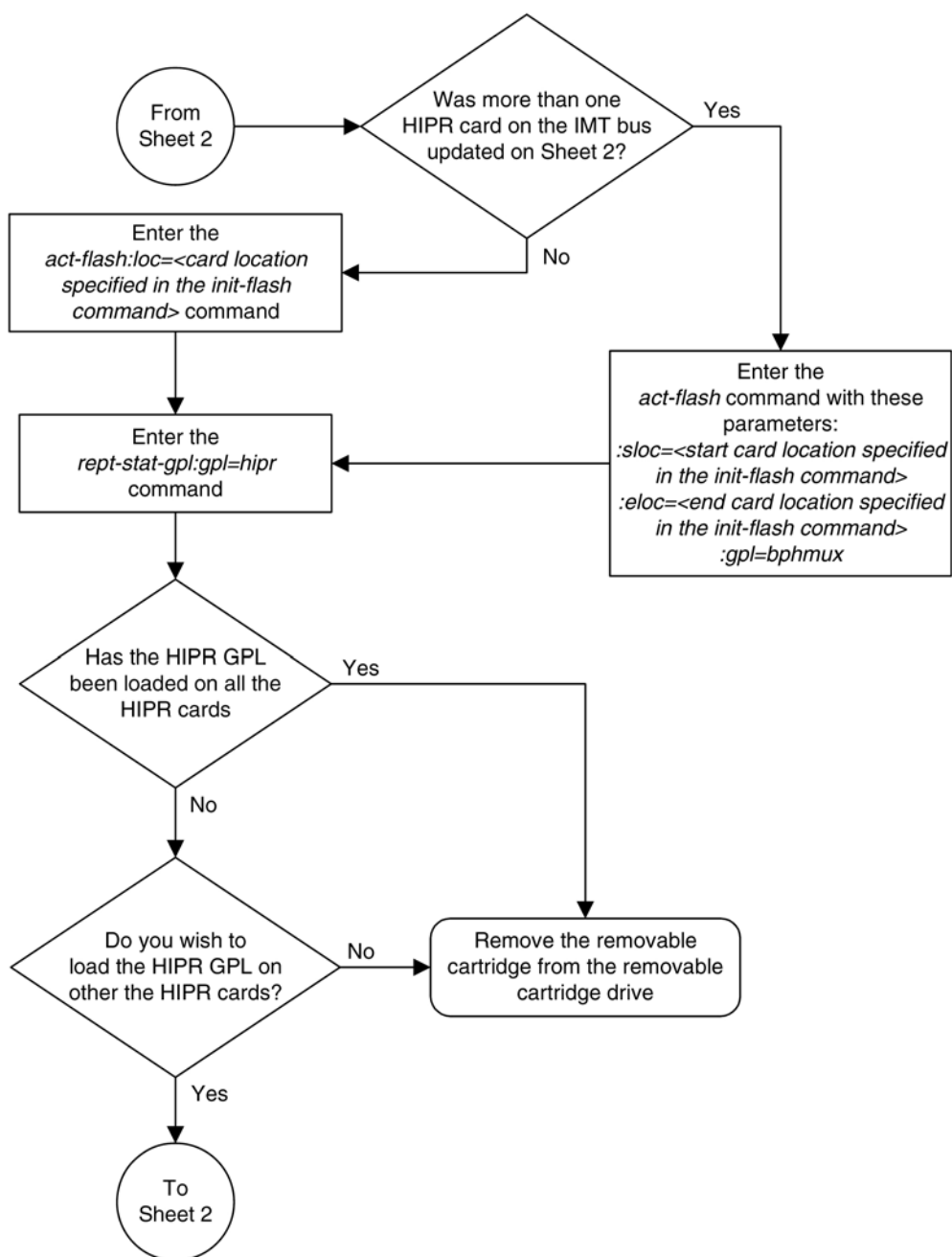
14. To load the **hipr** GPL on the other HIPR cards, repeat steps 9 through 13 for each card.
15. Remove the removable cartridge from the removable cartridge drive on the MDAL card.

For more information on removing the removable cartridge from the removable cartridge drive, see [Removing the Removable Cartridge](#) .

Flowchart 3-9. 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. 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 that contains the **utility** GPL to be loaded on to the EAGLE 5 ISS is required.

Procedure

1. 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, see [Removing the Removable Cartridge](#) .
2. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).
To write protect a removable cartridge, see [Write Protecting the Removable Cartridge](#) .
3. 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, see [Inserting the Removable Cartridge](#) .

4. 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 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
UTILITY	1114	153-000-000	153-000-000	153-001-000	153-001-000
UTILITY	1116	153-000-000	153-000-000	-----	-----

5. 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 4.

For this example, enter this command.

chg-gpl:gpl=utility:ver=153-001-000

This message should appear.

```
rlghncxa03w 06-10-01 06:52:20 GMT EAGLE5 36.0.0
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
```

6. 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.

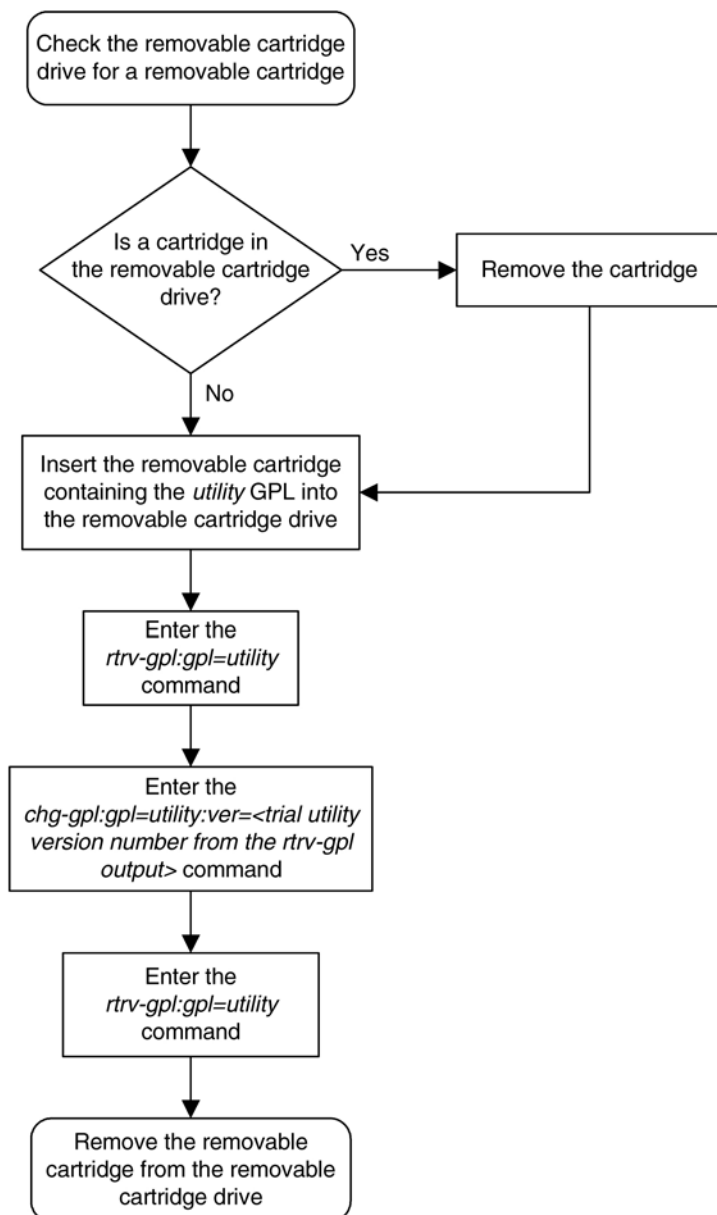
```
rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
UTILITY	1114	153-001-000	153-001-000	153-001-000	153-001-000
UTILITY	1116	153-001-000	153-001-000	-----	-----

7. 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, see [Removing the Removable Cartridge](#) .

Flowchart 3-10. Making the Trial Utility GPL the Approved Utility GPL



Updating the OAP GPL

This section presents the procedure for updating the **oap** generic program load (GPL). The **oap** GPL is the software running on the **oap** used for the SEAS feature. This software is assigned a version number using the GPL numbering scheme used by the EAGLE 5 ISS GPL version numbers. When the OAP is connected to the EAGLE 5 ISS, the **oap** GPL version number is transmitted to the EAGLE 5 ISS.

The EAGLE 5 ISS's system release ID table contains the version numbers of all the GPLs used on the EAGLE 5 ISS, including the **oap** GPL. The **oap** GPL version number must match the number contained in the EAGLE 5 ISS's system release ID table. The EAGLE 5 ISS's system release ID table contains the approved version number of the **oap** GPL. This version number is shown in the **APPROVED** column of the **rept-stat-gpl** command output and in the **RELEASE** and **APPROVED** columns of the **rtrv-gpl** command outputs. If the **oap** GPL version transmitted to the EAGLE 5 ISS does not match the **oap** GPL version number in the EAGLE 5 ISS's system release ID table, the indicator **ALM** is displayed next to the GPL version in the **RUNNING** column of the **rept-stat-gpl** output. The **RUNNING** column in the **rept-stat-gpl** command output shows what **oap** GPL version the OAP is actually running. The **ALM** indicator is also displayed next to the **APPROVED** column in the **rtrv-gpl** output.

There is no trial version of the **oap** GPL, so dashes are displayed in the **TRIAL** column in both the **rtrv-gpl** and **rept-stat-gpl** command outputs.

If a removable cartridge is in the removable cartridge drive on the MDAL, the **oap** GPL version number on the removable cartridge is displayed in the **REMOVE TRIAL** column in the **rtrv-gpl** command output.

Only OAPs that are connected to the EAGLE 5 ISS are shown in the **rtrv-gpl** and **rept-stat-gpl** command outputs. The OAPs are shown in the **rtrv-gpl** and **rept-stat-gpl** command outputs as OAP A and OAP B. If only one OAP is connected to the EAGLE 5 ISS, it is shown **rtrv-gpl** and **rept-stat-gpl** command outputs as OAP A and is the only OAP shown in the **rtrv-gpl** and **rept-stat-gpl** command outputs.

To get rid of the alarm condition caused by the mismatched **oap** GPL versions, either the OAP must be upgraded, or the correct **oap** GPL must be loaded from a removable cartridge using the **chg-gpl:gpl=oap** command. To determine which action must be performed, enter the **rept-stat-gpl** command. If the **oap** GPL version shown in the **RUNNING** column is less than the **oap** GPL version shown in the **APPROVED** column, contact the Customer Care Center (refer to [Customer Care Center](#) for the contact information) to have the OAPs upgraded.

If the **oap** GPL version shown in the **RUNNING** column is greater than the **oap** GPL version shown in the **APPROVED** column, then the **oap** GPL must be loaded from the removable cartridge with the **chg-gpl** command.



CAUTION: The **chg-gpl:gpl=oap** command copies the system release ID table from the removable cartridge onto the EAGLE 5 ISS. This not only changes the approved version number of the **oap** GPL on the EAGLE 5 ISS, but will also change the approved GPL version numbers of any GPLs whose version numbers on the removable cartridge are different from the version numbers that are on the EAGLE 5 ISS. This results in the cards not running the approved GPL and the **ALM** indicator will be shown in the **rept-stat-gpl** and **rtrv-gpl** command outputs for that GPL. Go to the procedures for that GPL located in this chapter to clear the **ALM** indicator for that GPL.

The removable cartridge that contains the **oap** GPL to be loaded on to the EAGLE 5 ISS is required if the **oap** GPL is to be loaded onto the EAGLE 5 ISS using the **chg-gpl** command.

Procedure

1. Display the **oap** GPLs on the fixed disk and on the removable cartridge using the **rtrv-gpl:gpl=oap** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
OAP	A	028-003-000	028-003-000	-----	-----
OAP	B	028-003-000	028-003-000	-----	-----

2. Display the **oap** GPLs in the database using the **rept-stat-gpl:gpl=oap** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 12:55:34 GMT EAGLE5 36.0.0
GPL          CARD      RUNNING      APPROVED      TRIAL
OAP          A        028-004-000 ALM    028-003-000  -----
OAP          B        028-003-000      028-003-000  -----
Command Completed.
```

If the **oap** GPL version shown in the **RUNNING** column is less than the **oap** GPL version shown in the **APPROVED** column, contact the Customer Care Center (refer to [Customer Care Center](#) for the contact information) to have the OAPs upgraded.

If the **oap** GPL version shown in the **RUNNING** column is greater than the **oap** GPL version shown in the **APPROVED** column, then the **oap** GPL must be loaded from the removable cartridge with the **chg-gpl** command.

If there are two OAPs connected to the EAGLE 5 ISS and they are running different **oap** GPL versions, as shown in the output example in this step, the OAP not showing the **ALM** indicator should be upgraded to run the same **oap** GPL version as the one that has the **ALM** indicator. Contact the Customer Care Center (refer to [Customer Care Center](#) for the contact information) to have the OAPs upgraded.

For this example, the **oap** GPL must be loaded from the removable cartridge using the **chg-gpl** command. Go to step 3.

3. 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, see [Removing the Removable Cartridge](#).

4. Make sure the removable cartridge containing the new software is “write protected” (NOT write enabled).

To write protect a removable cartridge, see [Write Enabling the Removable Cartridge](#).

5. Insert the removable cartridge containing the **oap** GPL into the removable cartridge drive on the MDAL card.

For more information on inserting the removable cartridge in the removable cartridge drive, see [Inserting the Removable Cartridge](#).

6. Display the **oap** GPLs on the fixed disk and on the removable cartridge using the **rtrv-gpl:gpl=oap** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing ON

GPL          CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL
OAP          A    028-003-000  028-003-000  -----  028-004-000
OAP          B    028-003-000  028-003-000  -----  -----
```

7. Load the **oap** GPL from the removable cartridge using the **chg-gpl:gpl=oap** command.

These messages should appear.

```
rlghncxa03w 06-10-01 11:43:04 GMT EAGLE5 36.0.0
GPL Auditing ON
```

System Release ID table upload 1114 completed
System Release ID table upload 1116 completed

8. Verify the **oap** GPLs on the fixed disk and on the removable cartridge using the **rtrv-gpl:gpl=oap** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 07:01:08 GMT EAGLE5 36.0.0
GPL Auditing ON
```

GPL	CARD	RELEASE	APPROVED	TRIAL	REMOVE TRIAL
OAP	A	028-004-000	028-004-000	-----	028-004-000
OAP	B	028-004-000	028-004-000	-----	-----

9. Display the **oap** GPLs in the database using the **rept-stat-gpl:gpl=oap** command.

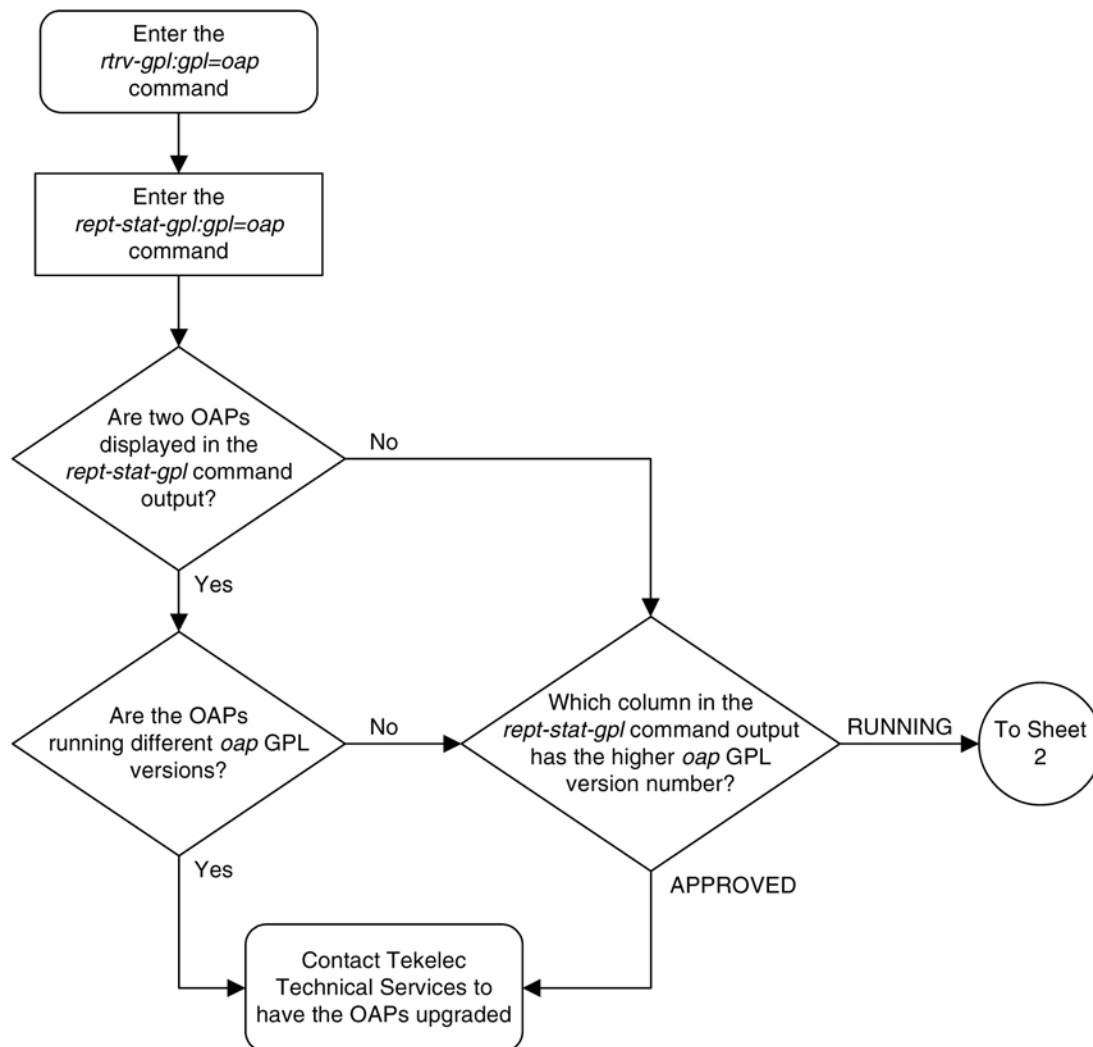
This is an example of the possible output.

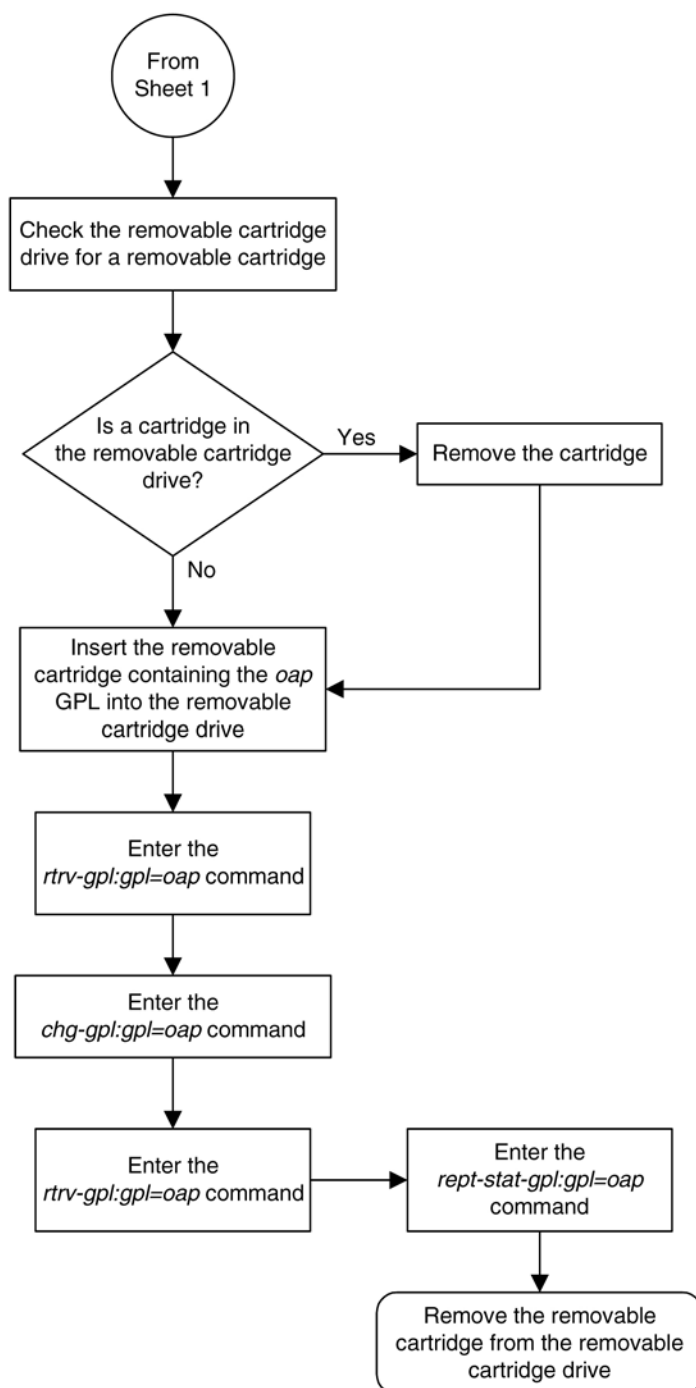
```
rlghncxa03w 06-10-01 12:55:34 GMT EAGLE5 36.0.0
GPL      CARD      RUNNING      APPROVED      TRIAL
OAP      A      028-004-000      028-004-000      -----
OAP      B      028-004-000      028-004-000      -----
Command Completed.
```

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, see [Removing the Removable Cartridge](#) .

Flowchart 3-11. Updating the OAP 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 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 card in the standby MASP. The **rept-stat-clk** output in step 1 shows which TDM is the standby TDM with the entry **(Standby)** 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](#) 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: 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 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 07-05-01 11:34:04 GMT EAGLE5 37.0.0
CARD LOC = 1114 (Active )   CARD LOC = 1116 (Standby )
PRIMARY BITS   = Active    PRIMARY BITS   = Active
SECONDARY BITS = Idle      SECONDARY BITS = Idle
HS PRIMARY CLK = Active    HS PRIMARY CLK = Active
HS SECONDARY CLK = Idle    HS SECONDARY CLK = Idle
HS CLK TYPE    = RS422     HS CLK TYPE    = RS422
HS CLK LINELEN = LONGHAUL  HS CLK LINELEN = LONGHAUL

SYSTEM CLOCK
ALARM STATUS    = No Alarms.
# Cards using CLK A = 009  # Cards with bad CLK A = 000
# Cards using CLK B = 000  # Cards with bad CLK B = 000
# Cards using CLK I = 000

PST             SST             AST
IS-NR           Active         -----

HS SYSTEM CLOCK
ALARM STATUS    = No Alarms.
# Cards using HS CLK A = 002  # Cards with bad HS CLK A = 000
# Cards using HS CLK B = 000  # Cards with bad HS CLK B = 000
# Cards using HS CLK I = 000

PST             SST             AST
IS-NR           Active         -----
```

Command Completed.

If the **rept-stat-clk** output does not show any high-speed clocks (**HS SYSTEM CLOCK**, **HS PRIMARY CLK**, **HS SECONDARY 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 are set to the system default values (**HS CLK TYPE = RS422** and **HS CLK LINELEN = LONGHAUL**), skip step 2 and go to step 3.
 - If the **HS CLK TYPE** and **HS CLK LINELEN** values shown in step 1 are not set to the system default values (**HS CLK TYPE = RS422** and **HS CLK LINELEN = LONGHAUL**), go to step 2.
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, go to step 3.

If the TDM part numbers are not 870-0774-15 or later, the TDMs must be replaced with TDM part numbers 870-0743-15 or later. Contact the Customer Care Center before replacing the TDMs. Refer to [Customer Care Center](#) 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, skip steps 4 through 6 and go to step 7.

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 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	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

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	YES	YES	YES	YES	YES	YES	YES

7	YES	YES	YES	YES	YES	YES	YES	YES
8	NO	NO	NO	NO	YES	NO	YES	
9	YES	YES	YES	YES	YES	YES	YES	YES
10	NO	NO	NO	NO	NO	NO	YES	
11	YES	YES	YES	YES	YES	YES	YES	YES
12	YES	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	

	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	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	YES	YES	
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	YES	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	YES	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 NO
37 NO 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 NO
39 NO 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 NO

```

4. Display the status of the terminals with the **rept-stat-trm** command. This is an example of the possible output.

```

rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
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.

5. Place the OAP or SEAS terminals out of service using the **rmv-trm** command with the number of the terminal displayed in step 4 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, 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, for this example, enter these commands.

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

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



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 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 07-05-01 15:08:45 GMT EAGLE5 37.0.0
Inhibit message sent to terminal
```

```
rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
Command Completed.
```

- NOTE: Step 6 is performed only if the OAP or SEAS terminals were placed out of service in step 5. If the OAP or SEAS terminals were not placed out of service in this step, skip step 6 and go to step 7.
 - If the OAP or SEAS terminals were placed out of service in this step, go to step 6.
6. 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.

If OAP terminals are shown in the **rtrv-trm** output in step 3, 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, 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 07-05-01 11:11:28 GMT EAGLE5 37.0.0
CHG-TRM: MASP B - COMPLTD
```

7. Place the GPSM-II card in the standby MASP out of service using the **rmv-card** command.

The rept-stat-clk output in step 1 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 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Card has been inhibited.
```

8. Load the TDM clock LCA bitfile onto the TDM associated with the GPSM-II card inhibited in step 7 using the **init-card** command with the **initclk=yes** parameter and the card location of the standby GPSM-II 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 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 07-05-01 13:01:59 GMT EAGLE5 37.0.0
Init Card command issued to card 1115
;

rlghncxa03w 07-05-01 13:01:59 GMT EAGLE5 37.0.0
* 3021.0013 * CARD 1115 EOAM Card is isolated from the system
;

rlghncxa03w 07-05-01 13:03:10 GMT EAGLE5 37.0.0
3022.0014 CARD 1115 EOAM Card is present
ASSY SN: 1216115
```

9. Put the GPSM-II card that was inhibited in step 8 back into service using the **rst-card** command with the card location specified in step 8. For this example, enter this command.

rst-card:loc=1115

When this command has successfully completed, this message should appear.

```
rlghncxa03w 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Card has been allowed.
```

- If the TDM clock LCA bitfile will not be loaded on the other TDM in the EAGLE 5 ISS, skip step 10 and go to step 11.
 - If the TDM clock LCA bitfile will be loaded on the other TDM in the EAGLE 5 ISS, go to step 10.
10. 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 card making up active MASP. Initializing the GPSM-II 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 07-05-01 11:11:28 GMT EAGLE5 37.0.0
Init Card command issued to card 1113
```

After the **init-card** command has completed, repeat steps 7, 8, and 9, specifying the card location used in the **init-card** command.

11. Verify the status of the high-speed clocks by entering the **rept-stat-clk** command. This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:34:04 GMT EAGLE5 37.0.0
CARD LOC = 1114 (Standby ) CARD LOC = 1116 (Active )
PRIMARY BITS = Active PRIMARY BITS = Active
SECONDARY BITS = Idle SECONDARY BITS = Idle
HS PRIMARY CLK = Active HS PRIMARY CLK = Active
HS SECONDARY CLK = Idle HS SECONDARY CLK = Idle
HS CLK TYPE = RS422 HS CLK TYPE = RS422
HS CLK LINELEN = LONGHAUL HS CLK LINELEN = LONGHAUL

SYSTEM CLOCK PST SST AST
ALARM STATUS = No Alarms. IS-NR Active -----
# Cards using CLK A = 009 # Cards with bad CLK A = 000
# Cards using CLK B = 000 # Cards with bad CLK B = 000
# Cards using CLK I = 000
```

```

HS SYSTEM CLOCK          PST      SST      AST
ALARM STATUS             IS-NR     Active   -----
= No Alarms.
# Cards using HS CLK A = 002  # Cards with bad HS CLK A = 000
# Cards using HS CLK B = 000  # Cards with bad HS CLK B = 000
# Cards using HS CLK I = 000

```

Command Completed.

- If OAP terminals are not shown in the **rtrv-trm** command output in step 3, skip steps 12 through 14, and go to step 15.
 - If OAP terminals are shown in the **rtrv-trm** command output in step 3, go to step 12.
12. Change the terminal type of the terminals that were changed to **NONE** in step 6 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..

If OAP terminals were changed in step 6, 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, 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 07-05-01 11:11:28 GMT EAGLE5 37.0.0
CHG-TRM: MASP B - COMPLTD

```

13. If the OAP or SEAS terminals were placed out of service in step 5, put the OAP or SEAS terminals back into service using the **rst-trm** command with the number of the terminals specified in step 12. 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 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.

```

14. Verify that the terminals are in service with the **rept-stat-trm** command. This is an example of the possible output.

```

rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
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.

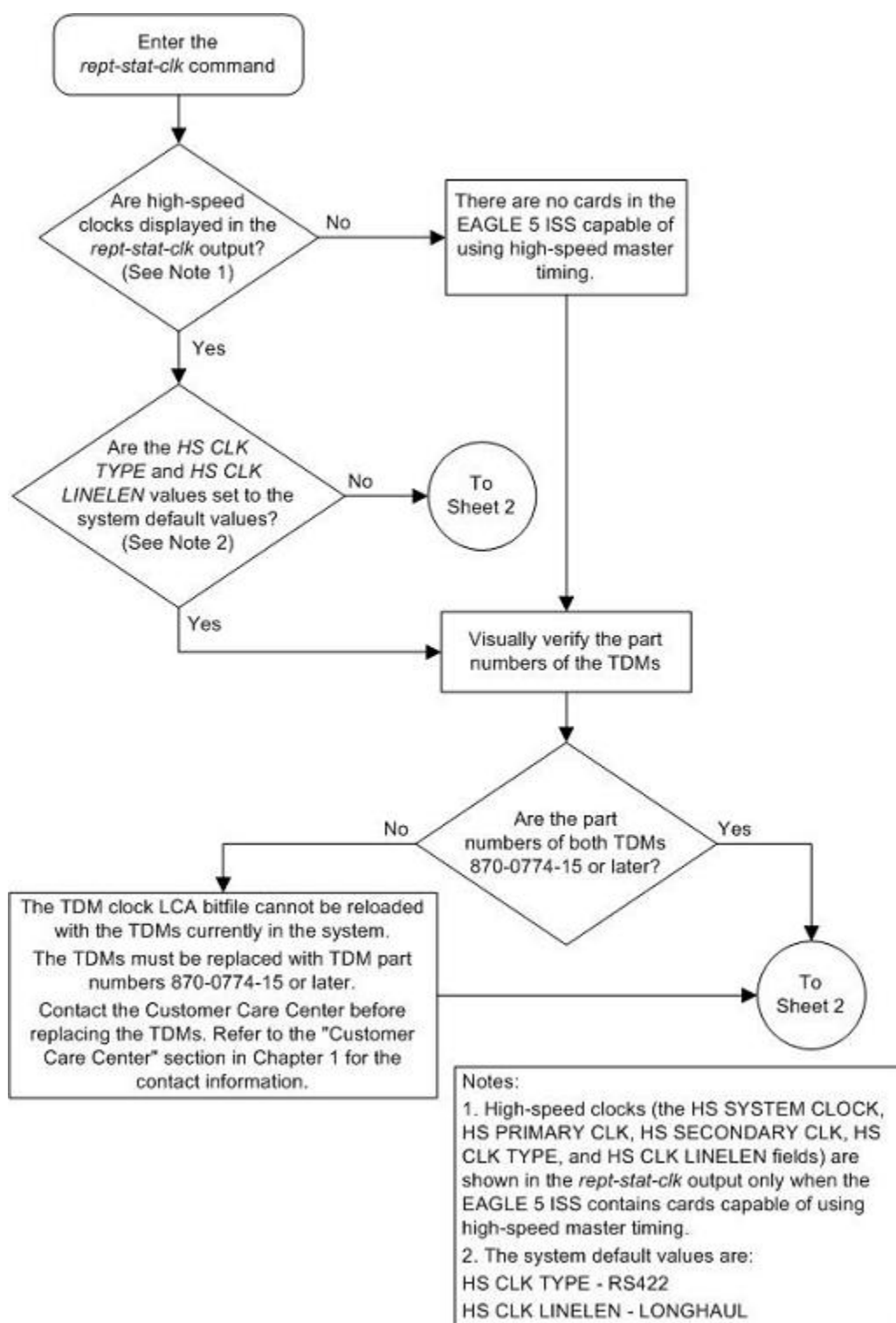
15. Back up the new changes using the **chg-db:action=backup:dest=fixed** command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

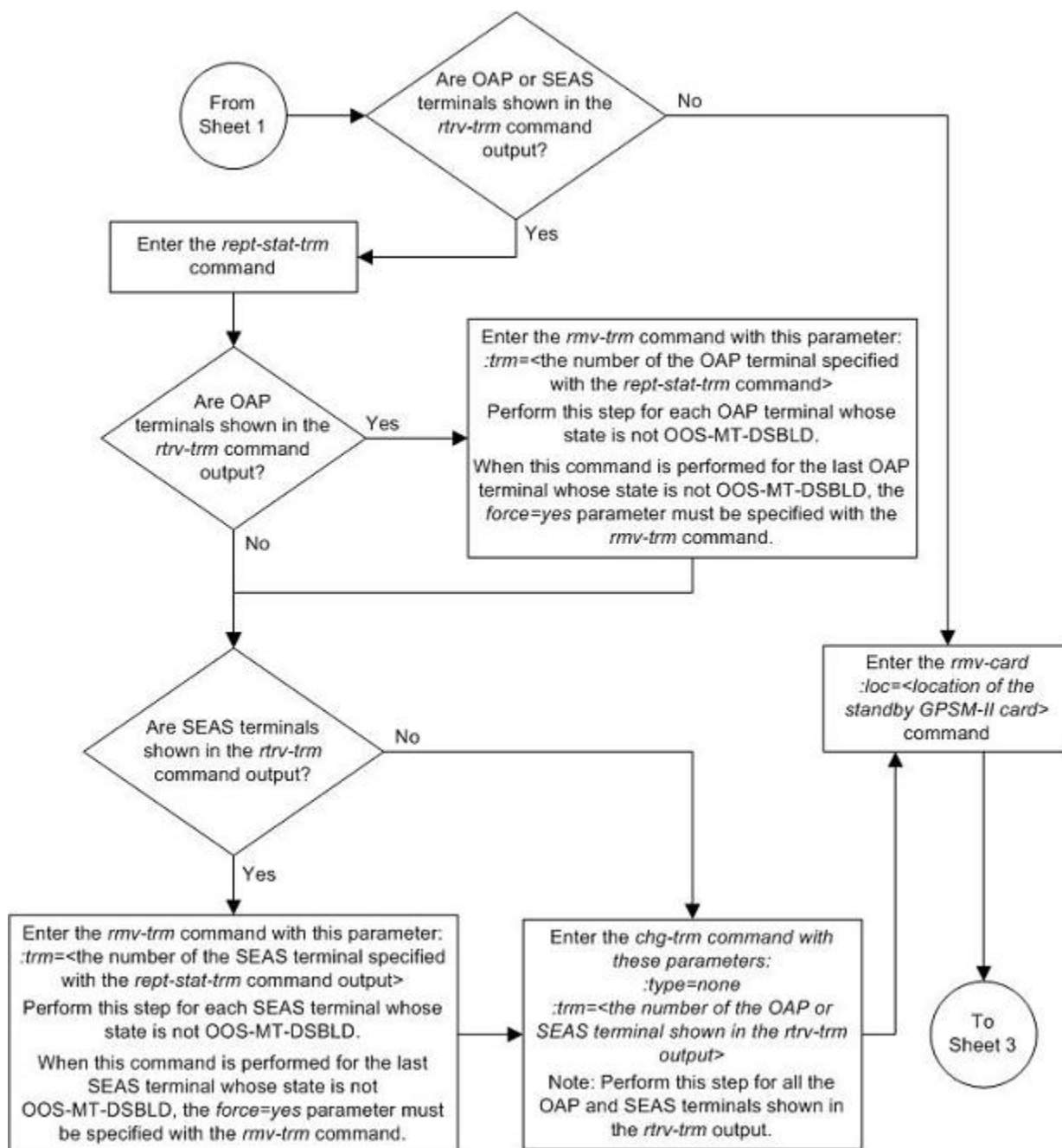
```

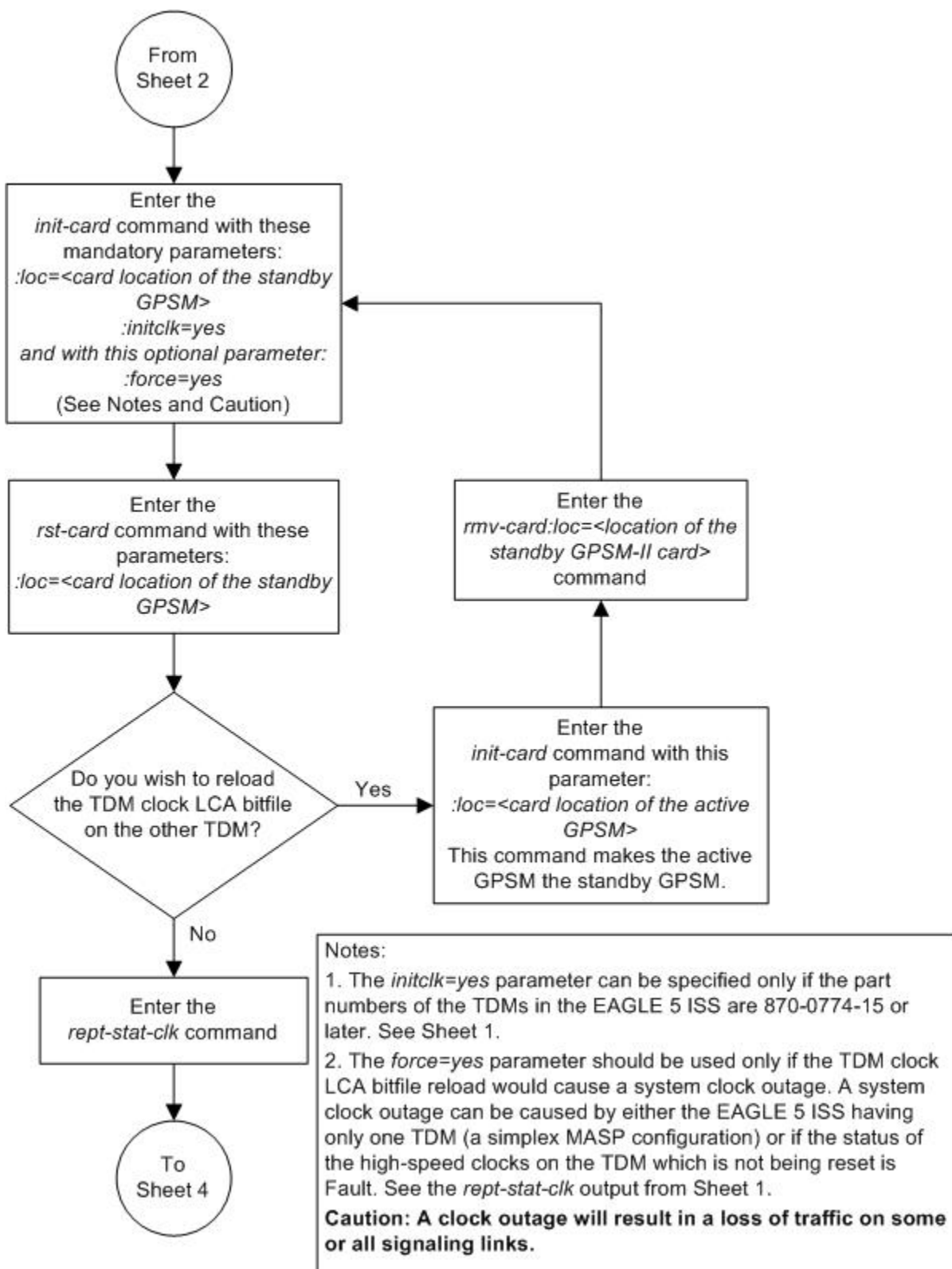
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.

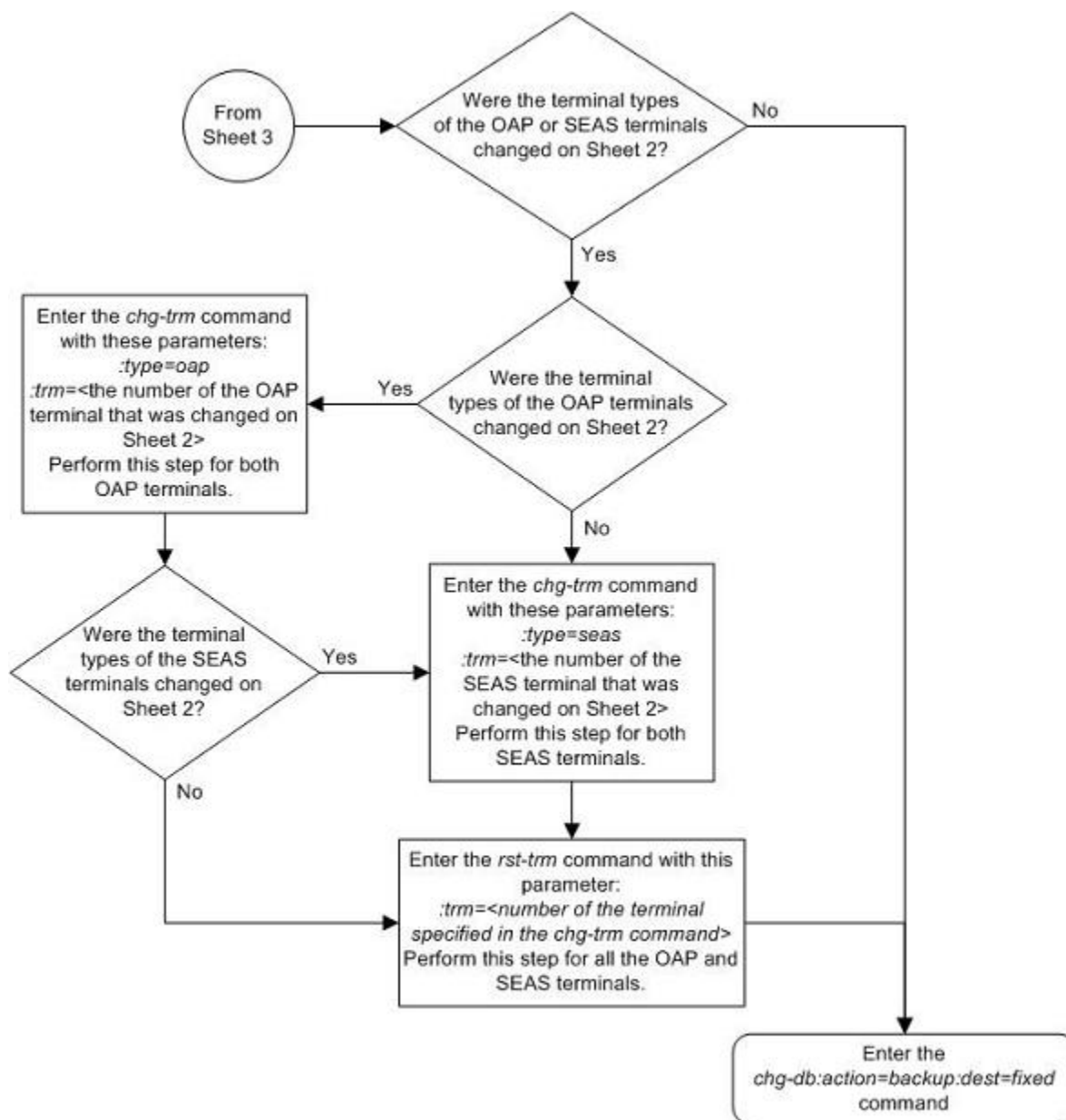
```


Figure 3-1. Reloading the TDM LCA Clock Bitfile









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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.

Procedure

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 4-1](#) . The entry in the Abbreviation column of [Table 4-1](#) is the value to be specified for the time zone parameter.

Table 4-1. 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
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

Time Zone	Abbreviation	Offset from GMT (hours)
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
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.

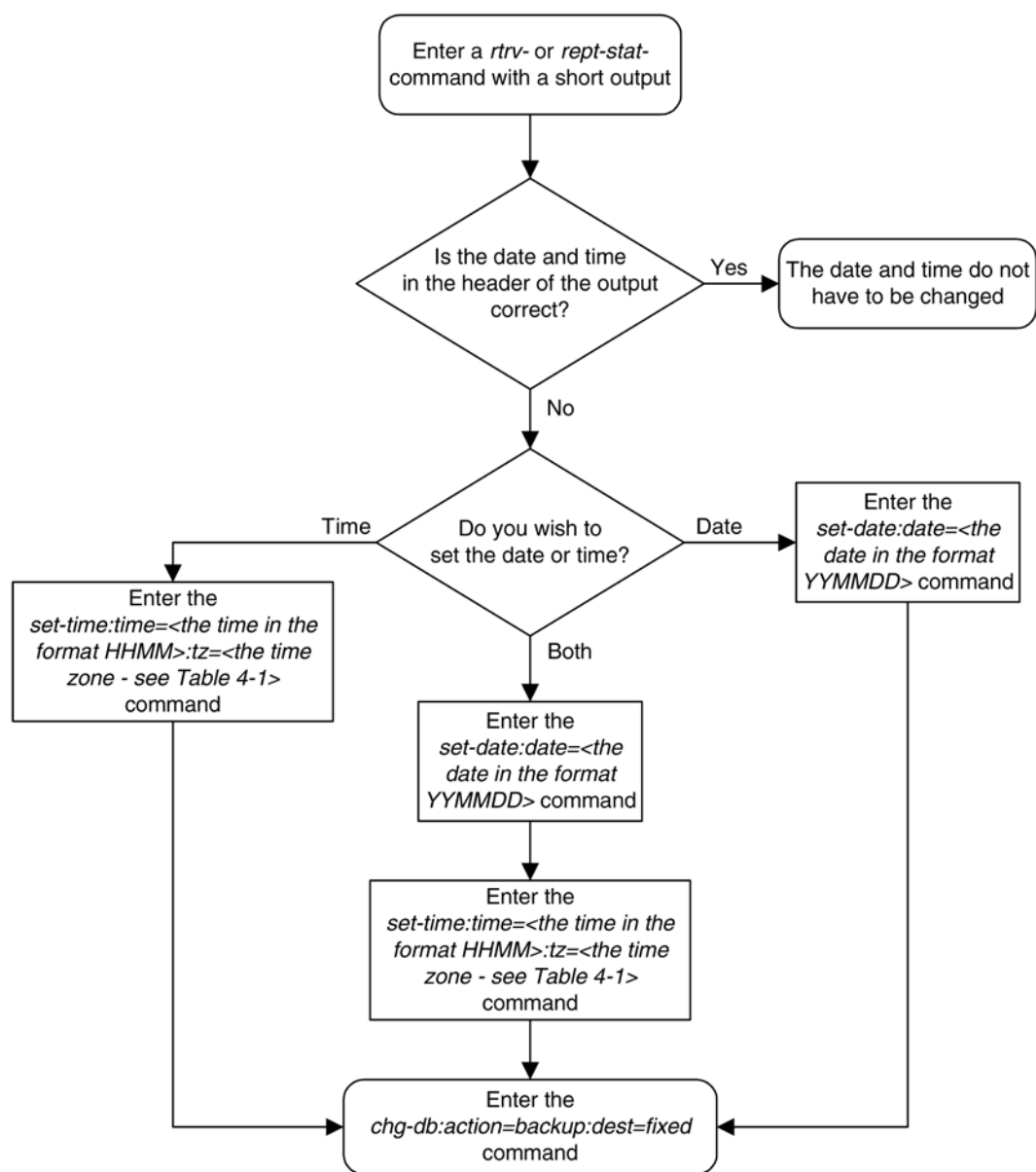
```
rlghncxa03w 06-10-01 14:20:00 GMT EAGLE5 36.0.0
Time set complete.
```

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.
```


Flowchart 4-1. 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)

:wrnln – 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 (“”).

This procedure does not use the **wrnln** and **wrntx** 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](#) 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.

Procedure

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
```

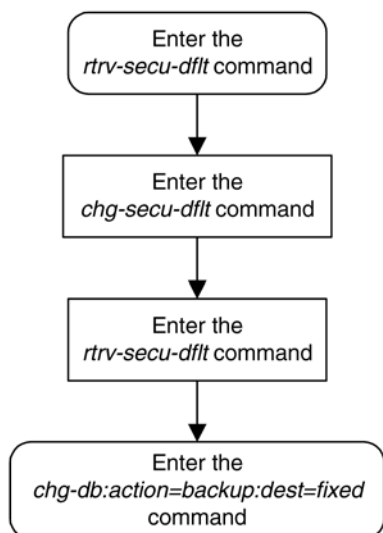
4. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

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.

Flowchart 4-2. 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. This message is configured with the **wrnln** and **wrntx** parameters of the **chg-secu-dflt** command. These are all of the parameters of the **chg-secu-dflt** command.

: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 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.

: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)

:wrnln – 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 text line with no characters can be specified

with this text string, "". This prevents the text line from being displayed in the unauthorized use warning message. A blank line is specified with this text string, " ", the blank space character enclosed in double quotes.

The **chg-secu-dflt** parameters **page**, **uout**, **mult log**, **minlen**, **alpha**, **num**, and **punc** 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](#) 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        *
*                                                       *
* 02/17/00 Notice!!! System will be upgraded between  *
* the hours of 2am-3am on 11/23/96                     *
*                                                       *
*                                                       *
*****
```

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.

Procedure

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** and **wrntx** parameters.

For this example, 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="*  11/17/97 Notice!!! System will be
upgraded between*"

chg-secu-dflt:wrnln=7:wrntx="*  the hours of 2am-3am on 02/07/00  *"

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:wrntx=" "

chg-secu-dflt:wrnln=13:wrntx=" "

chg-secu-dflt:wrnln=14:wrntx=" "

chg-secu-dflt:wrnln=15:wrntx=" "

chg-secu-dflt:wrnln=16:wrntx=" "

```

```
chg-secu-dflt:wrnln=17:wrntx=""
```

```
chg-secu-dflt:wrnln=18:wrntx=""
```

```
chg-secu-dflt:wrnln=19:wrntx=""
```

```
chg-secu-dflt:wrnln=20:wrntx=""
```

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.

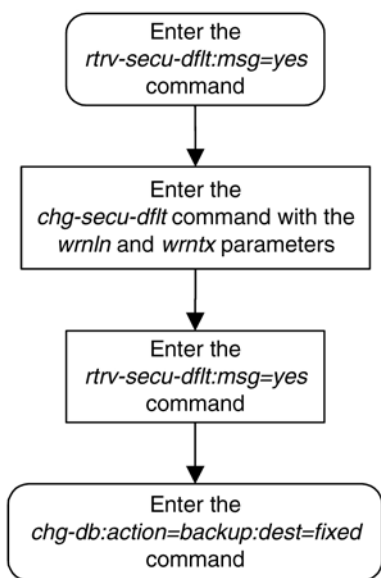
This is an example of the possible output.

```
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:"*  02/17/00 Notice!!! System will be upgraded between *"
7:"*  the hours of 2am-3am on 02/07/00  *"
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.
```

Flowchart 4-3. 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-secu log** command. The **chg-attr-secu log** 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 **upslg** 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

Procedure

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.

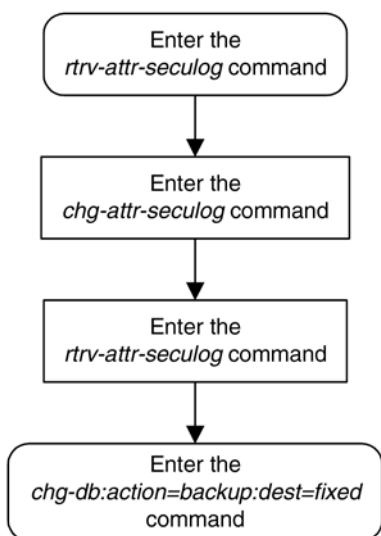
This is an example of the possible output.

```
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.
```

Flowchart 4-4. 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-seculog** command. The **copy-seculog** 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-seculog** command.

:slog – the security log that is copied to the file transfer area, the security log on the active fixed disk or the standby fixed disk.

:dloc – the file transfer area that is receiving the copy of the security log, the file transfer area on the active fixed disk or the file transfer area on the standby fixed disk.

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** 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.

Procedure

1. Display the current characteristics of the security log by entering the **rept-stat-seculog** command.

This is an example of the possible output.

```

rlghncxa03w 06-10-01 16:02:05 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
```

- 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-seculog:dfile=security1.log:slog=act:dloc=act
```

When this command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-17 16:02:37 GMT EAGLE5 36.0.0
Security log on TDM 1114 copied to file security1.log on TDM 1114
```

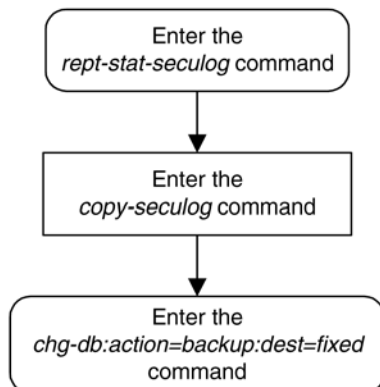
- Verify the changes with the **rept-stat-secu^log** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 16:04:43 GMT EAGLE5 36.0.0
-- SINCE LAST UPLOAD -- OLDEST NEWEST LAST
LOC ROLE ENTRIES %FULL OFLO FAIL RECORD RECORD UPLOAD
1114 Active 1      1      No      No      04-06-01 04-06-01 04-06-01
                               16:04:43 16:04:43 16:02:37

1116 Standby 0      0      No      No      03-12-05 04-06-01 04-05-30
                               11:24:12 14:00:06 14:02:13
```

Flowchart 4-5. 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, go to the [Activating the Eagle OA&M IP Security Enhancement Controlled Feature](#) procedure to enable and activate 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**, and if the LNP feature is enabled, **lnpbas**, **lnpdb**, **lnpsub**).

: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.”

:lnpbas – The user has access to all commands in the command class “LNP Basic.”

:lnpdb – The user has access to all commands in the command class “LNP Database Administration.”

:lnpsub – The user has access to all commands in the command class “LNP Subscription.” If the LNP ELAP Configuration feature is enabled and turned on, LNP Subscription commands cannot be performed from the EAGLE 5 ISS, and the **lnpsub** parameter cannot be specified with the **ent-user** command. LNP Subscription commands are available on the LSMS.

: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 activated. 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 activated, go to the [Activating Controlled Features](#) procedure to enable and activate 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 activated, 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](#) procedure.

The **ent-user** command allows up to eight configurable command classes to be assigned to the user. Use the [Changing User Information](#) procedure 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.

To assign a user to the LNP Basic, LNP Database Administration, or LNP subscription command classes, the LNP feature must be enabled. This can be verified with the **rtrv-ctrl-feat** command. If the LNP feature is not enabled, perform the procedures in the *LNP Feature Activation Guide* to enable the LNP feature.

This example shows an **rtrv-secu-user** command output when the LNP feature is enabled and the Command Class Management feature is enabled and activated. If the LNP feature is not enabled, the fields **LNPBAS**, **LNPDB**, **LNP SUB** are not shown in the **rtrv-secu-user** command output. 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 06-10-01 08:33:48 GMT EAGLE5 36.0.0
```

USER ID	AGE	PAGE	UOUT	REV	LINK	SA	SYS	PU	DB	DBG	LNP BAS	LNP DB	LNP SUB
frodo	750	0	0	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
U01	U02	U03	U04	U05	U06	U07	U08	U09	U10	U11	U12	U13	U14
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
YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO
U31	U32												
YES	YES												
U01	U02	U03	U04	U05	U06	U07	U08	U09	U10	U11	U12	U13	U14
NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
U17	U18	U19	U20	U21	U22	U23	U24	U25	U26	U27	U28	U29	U30
YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO
U31	U32												
YES	YES												
U01	U02	U03	U04	U05	U06	U07	U08	U09	U10	U11	U12	U13	U14
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
YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
U31	U32												
YES	YES												
U01	U02	U03	U04	U05	U06	U07	U08	U09	U10	U11	U12	U13	U14
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
YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
U31	U32												
YES	YES												
U01	U02	U03	U04	U05	U06	U07	U08	U09	U10	U11	U12	U13	U14
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
YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
U31	U32												
YES	YES												

```

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

```

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](#) procedure.

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
```

NOTE: If the **lnpbas**, **lnpdb**, or **lnpsub** parameters are not being specified in this procedure, or the **LNPBAS**, **LNPDB**, or **LNPSUB** fields are shown in the **rtrv-secu-user** output, skip this step, and go to step 3.

2. Verify that the LNP feature is enabled by entering the **rtrv-ctrl-feat** command.

If the LNP feature is enabled, the LNP telephone number quantity is shown in the **LNP TNS** field of the **rtrv-ctrl-feat** output.

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 LNP feature is enabled, go to step 3.

If the LNP feature is not enabled, perform the procedures in the *LNP Feature Activation Guide* to enable the LNP feature.

NOTE: If the LNP ELAP Configuration feature is enabled and turned on, LNP Subscription commands cannot be performed from the EAGLE 5 ISS, and the `inpsub` parameter cannot be specified with the `end-user` command. LNP Subscription commands are available on the LSMS.

NOTE: If the `cc1` through `cc8` parameters are not being specified in this procedure, skip steps 3 and 4, and go to step 5. If configurable command classes are shown in the `rtrv-secu-user` output, skip this step, and go to step 4.

3. Verify that the Command Class Management feature is enabled and activated, 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 activated (**status = on**), go to step 4.

If the Command Class Management feature is not enabled or activated, go to the [Activating Controlled Features](#) procedure and enable and activate 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.

4. 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 06-10-01 21:15:37 GMT EAGLE5 36.0.0
CMD          CLASS
alw-slk      link, u11
ent-user     sa
unhb-slk     link
rtrv-attr-secalog  sa, u31
inh-slk      link, abc
rtrv-meas-sched  link, abc, def
act-lbp      link
act-dlk      link
act-slk      link
rtrv-secalog  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
rept-x25-meas  link
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, go to the [Configuring Command Classes](#) procedure and configure the desired command classes.

- 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.

- 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.

NOTE: If the LNP ELAP Configuration feature is enabled and turned on (shown in step 2), LNP Subscription commands cannot be performed from the EAGLE 5 ISS, and the 1npsub parameter cannot be specified with the ent-user command. LNP Subscription commands are available on the LSMS>

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
```

7. 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 5.
8. At the prompt **verify password**, re-enter the password that was entered in step 7 again.
9. 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.
10. Verify the changes using the **rtrv-secu-user** command with the user ID specified in step 6.

For this example, enter this command.

```
rtrv-secu-user:uid=frodo
```

This is an example of the possible output.

```
rlghncxa03w 06-10-01 08:33:48 GMT EAGLE5 36.0.0
```

USER ID	AGE	PAGE	UOUT	REV	LINK	SA	SYS	PU	DB	DBG	BAS	DB	SUB
frodo	0	60	*	90	*	NO	YES	NO	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	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

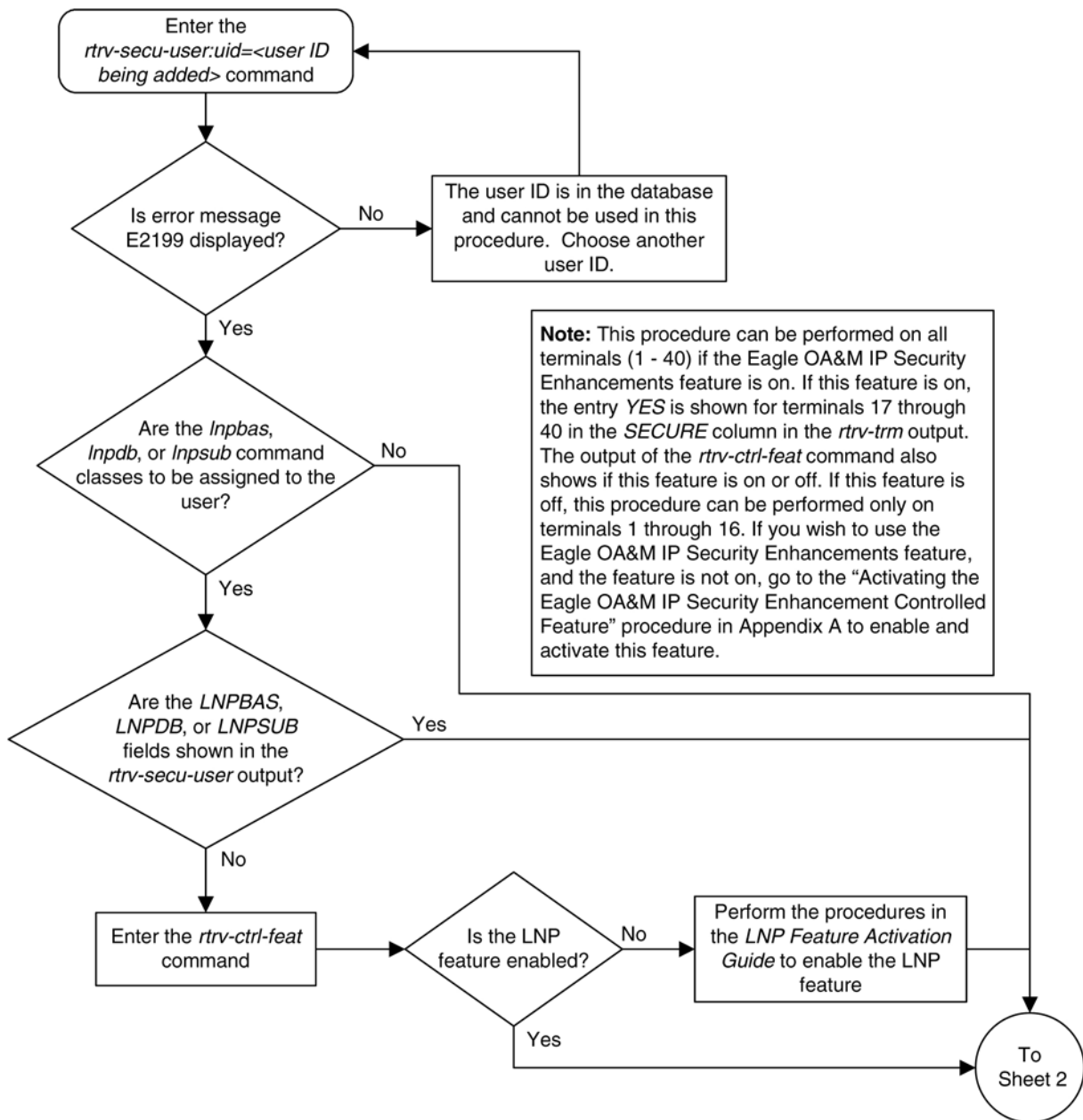
U17	U18	U19	U20	U21	U22	U23	U24	U25	U26	U27	U28	U29	U30	U31	U32
NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

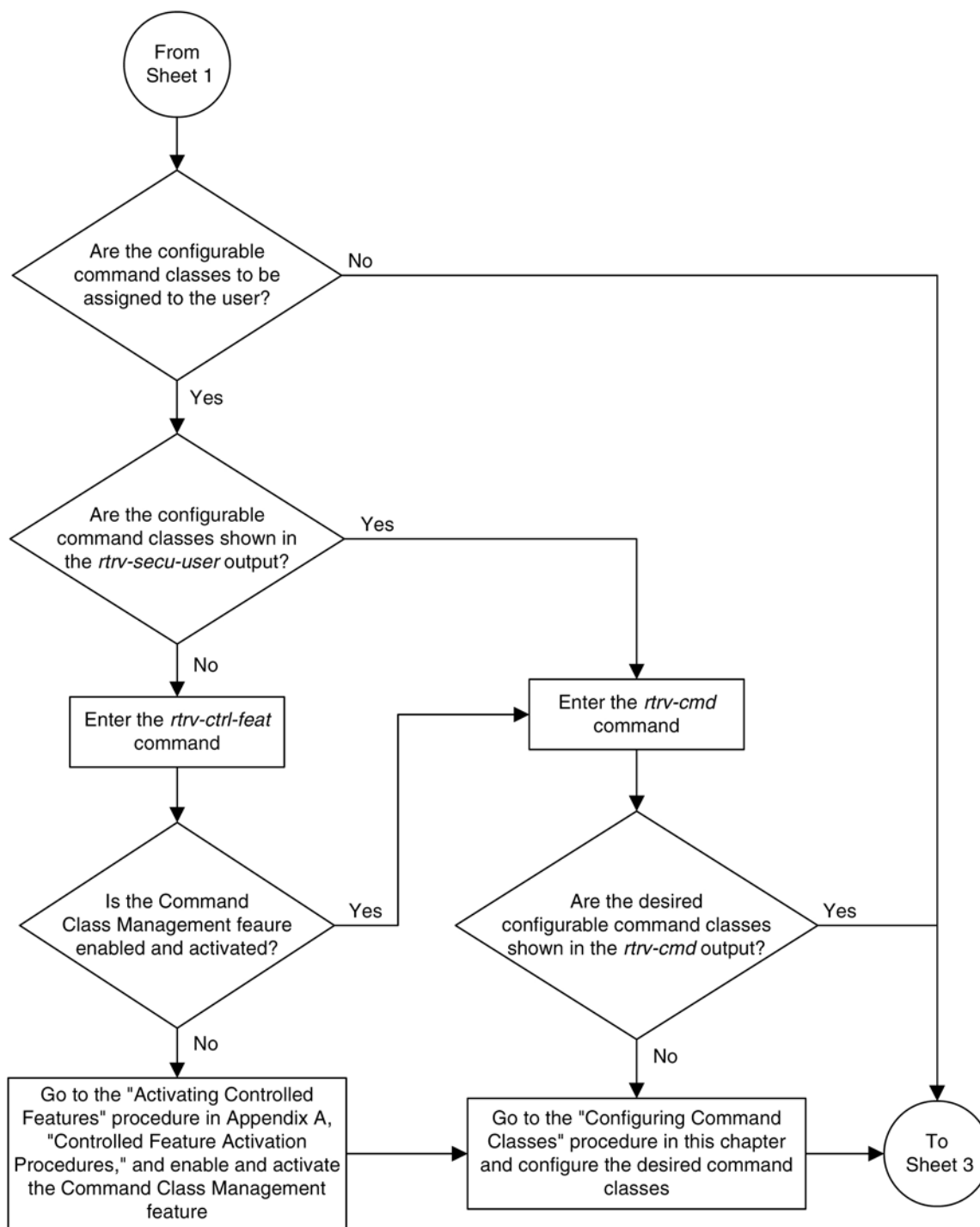
11. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

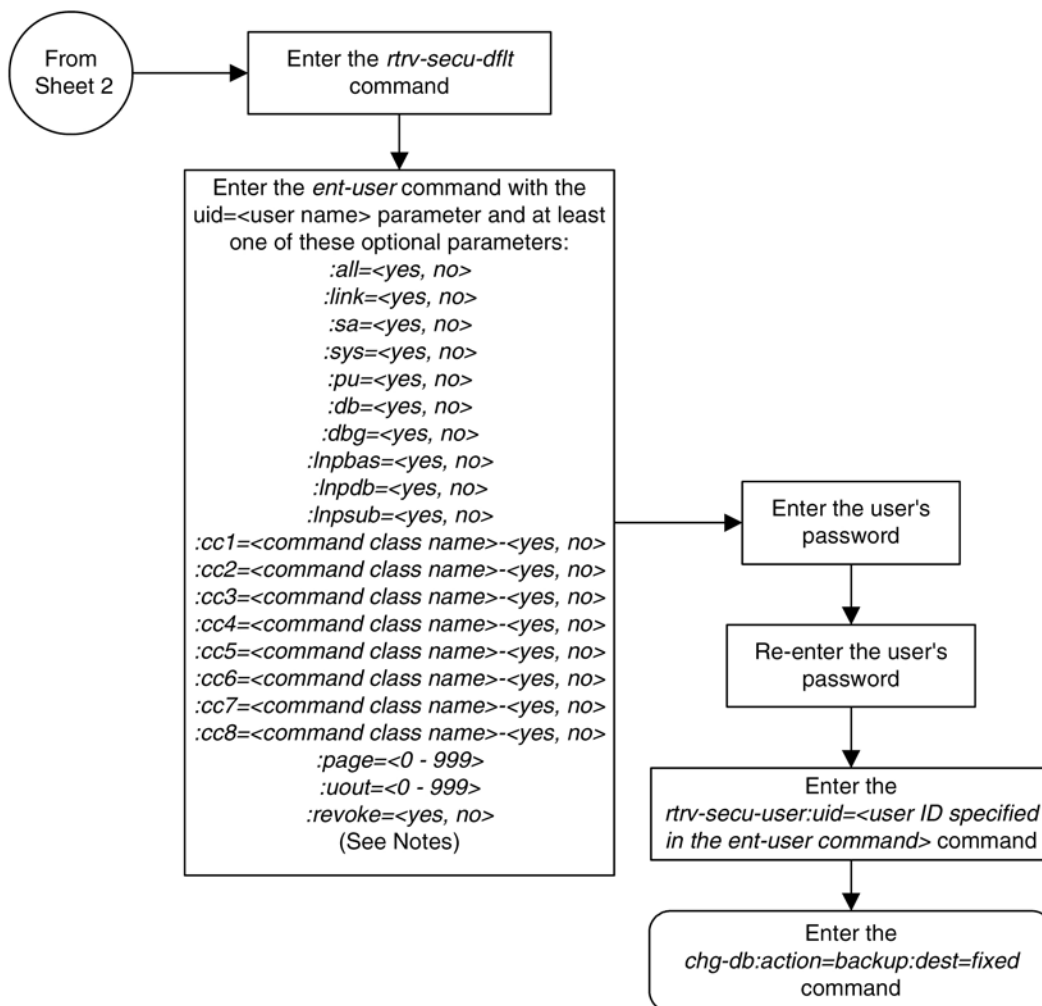
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
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.
```

Flowchart 4-6. Adding a User to the System





**Notes:**

1. The *revoke=yes* parameter cannot be specified with the *sa* parameter value is *yes*.
2. To specify the *lnpbas*, *lnpdb*, or *lnpsub* parameters, the LNP feature must be enabled..
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. The *ent-user* command can assign up to 8 configurable command classes. Go to the Changing User Information procedure to assign the other 24 configurable command classes to the user.
5. The *all* parameter specifies whether or not all non-configurable command classes (*link*, *sa*, *sys*, *pu*, *db*, *dbg*, *lnpbas*, *lnpdb*, *lnpsub*) 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.

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.

Procedure

1. Display the user IDs in the database using the **rtrv-secu-user** command.

This is an example of the possible output.

```
r lghncxa03w 06-10-01 08:33:48 GMT EAGLE5 36.0.0
```

USER ID	AGE	PAGE	U0UT	REV	LINK	SA	SYS	PU	DB	DBG	BAS	DB	SUB
frodo	0	60	*	90	*	NO	YES	NO	YES	NO	YES	YES	NO

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	U0UT	REV	LINK	SA	SYS	PU	DB	DBG	BAS	DB	SUB
manny	36	60	60	NO	YES	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	NO	NO	NO	NO	YES

USER ID	AGE	PAGE	U0UT	REV	LINK	SA	SYS	PU	DB	DBG	BAS	DB	SUB
fred	750	0	0	NO	YES	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	NO	NO	NO

USER ID	AGE	PAGE	U0UT	REV	LINK	SA	SYS	PU	DB	DBG	BAS	DB	SUB
travist	101	60	*	90	*	NO	YES	NO	YES	NO	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	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

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.

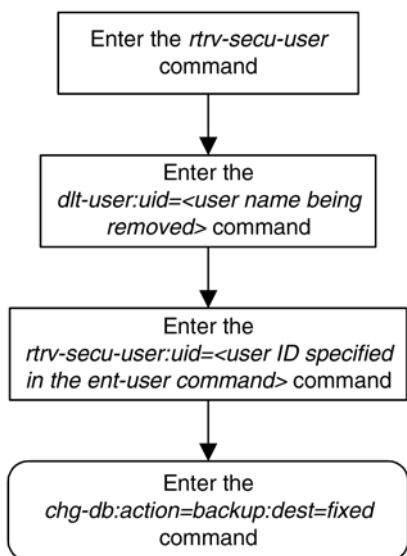
```
E2199 Cmd Rej: The specified user identification is not defined
```

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.
```

Flowchart 4-7. 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, go to the [Activating the Eagle OA&M IP Security Enhancement Controlled Feature](#) procedure 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.”

:lnpbas – The user has access to all commands in the command class “LNP Basic.”

:lnpdb – The user has access to all commands in the command class “LNP Database Administration.”

:lnpsub – The user has access to all commands in the command class “LNP Subscription.” IF the LNP ELAP Configuration feature is enabled and turned on, LNP Subscription commands cannot be performed from EAGLE 5 ISS, and the **lnpsub** parameter cannot be specified with the **chg-user** command. LNP Subscription commands are available on the LSMS.

: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 activated. 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 activated, go to the [Activating Controlled Features](#) procedure to enable and activate 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 activated, 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](#) procedure.

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.

:rstls1 – 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.

To assign a user to the LNP Basic, LNP Database Administration, or LNP subscription command classes, the LNP feature must be enabled. This can be verified with the **rtrv-ctrl-feat** command. If the LNP feature is not enabled, perform the procedures in the *LNP Feature Activation Guide* to enable the LNP feature.

This example shows an **rtrv-secu-user** command output when the LNP feature is turned on and the Command Class Management feature is enabled and activated. If the LNP feature is not enabled, the fields **LNPBAS**, **LNPDB**, **LNPSUB** are not shown in the **rtrv-secu-user** command output. 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 06-10-01 08:33:48 GMT EAGLE5 36.0.0
```

USER ID	AGE	PAGE	UOUT	REV	LINK	SA	SYS	PU	DB	DBG	LNP BAS	LNP DB	LNP SUB
frodo	750	0	0	NO	YES	YES	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	NO	NO	NO	NO	YES

USER ID	AGE	PAGE	UOUT	REV	LINK	SA	SYS	PU	DB	DBG	LNP BAS	LNP DB	LNP SUB
manny	36	60	60	NO	YES	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	NO	NO	NO	NO	YES

USER ID	AGE	PAGE	UOUT	REV	LINK	SA	SYS	PU	DB	DBG	LNP BAS	LNP DB	LNP SUB
moe	100	30	60	YES	YES	YES	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

Procedure

- This is an example of the possible output.

```
rlghncxa03w 06-10-01 08:33:48 GMT EAGLE5 36.0.0
```

NOTE: If the Inpbas, Inpdb, or Inpsub parameters are not being specified in this procedure, or the LNPBAS, LNPDB, or LNPSUB fields are show in the rtrv-secu-user output, skip this step, and go to step 3.

- If the LNP feature is enabled, the LNP telephone number quantity is shown in the **LNP TNS** field of the **rtrv-ctrl-feat** output.

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 LNP feature is enabled, go to step 3.

If the LNP feature is not enabled, perform the procedures in the *LNP Feature Activation Guide* to enable the LNP feature.

NOTE: If the LNP ELAP Configuration feature is enabled and turned on, LNP Subscription commands cannot be performed from the EAGLE 5 ISS, and the **lnpsub** parameter cannot be specified with the **chg-user** command. LNP Subscription commands are available on the LSMS.

NOTE: If the **lnpbas**, **lnpdb**, or **lnpsub** parameters are not being specified in this procedure, or the **LNPBAS**, **LNPDB**, or **LNPSUB** fields are shown in the **rtrv-secu-user** output, skip this step, and go to step 3.

3. 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 activated (status = on), go to step 4.

If the Command Class Management feature is not enabled or activated, go to the [Activating Controlled Features](#) procedure and enable and activate 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.

4. 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 06-10-01 21:15:37 GMT EAGLE5 36.0.0
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
rept-x25-meas                   link
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, go to the [Configuring Command Classes](#) procedure and configure the desired command classes.

NOTE: A user ID cannot be changed while the user is loggedon, 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.

5. 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

```

6. 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.

NOTE: If the LNP ELAP Configuration feature is enabled and turned on (shown in step 2), LNP Subscription commands cannot be performed from the EAGLE 5 ISS, and the lnpsub parameter cannot be specified with the chg-user command. LNP Subscription commands are available on the LSMS.

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
```

7. Verify the changes using the **rtrv-secu-user** command and specifying the user ID used in step 6 with the **uid** parameter.

If the user ID was changed in step 6, 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 06-10-01 08:33:48 GMT EAGLE5 36.0.0
```

USER ID	AGE	PAGE	U0UT	REV	LINK	SA	SYS	PU	DB	DBG	BAS	DB	SUB
bilbo	36	60	60	NO	YES	YES	YES	NO	NO	NO	YES	YES	YES

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

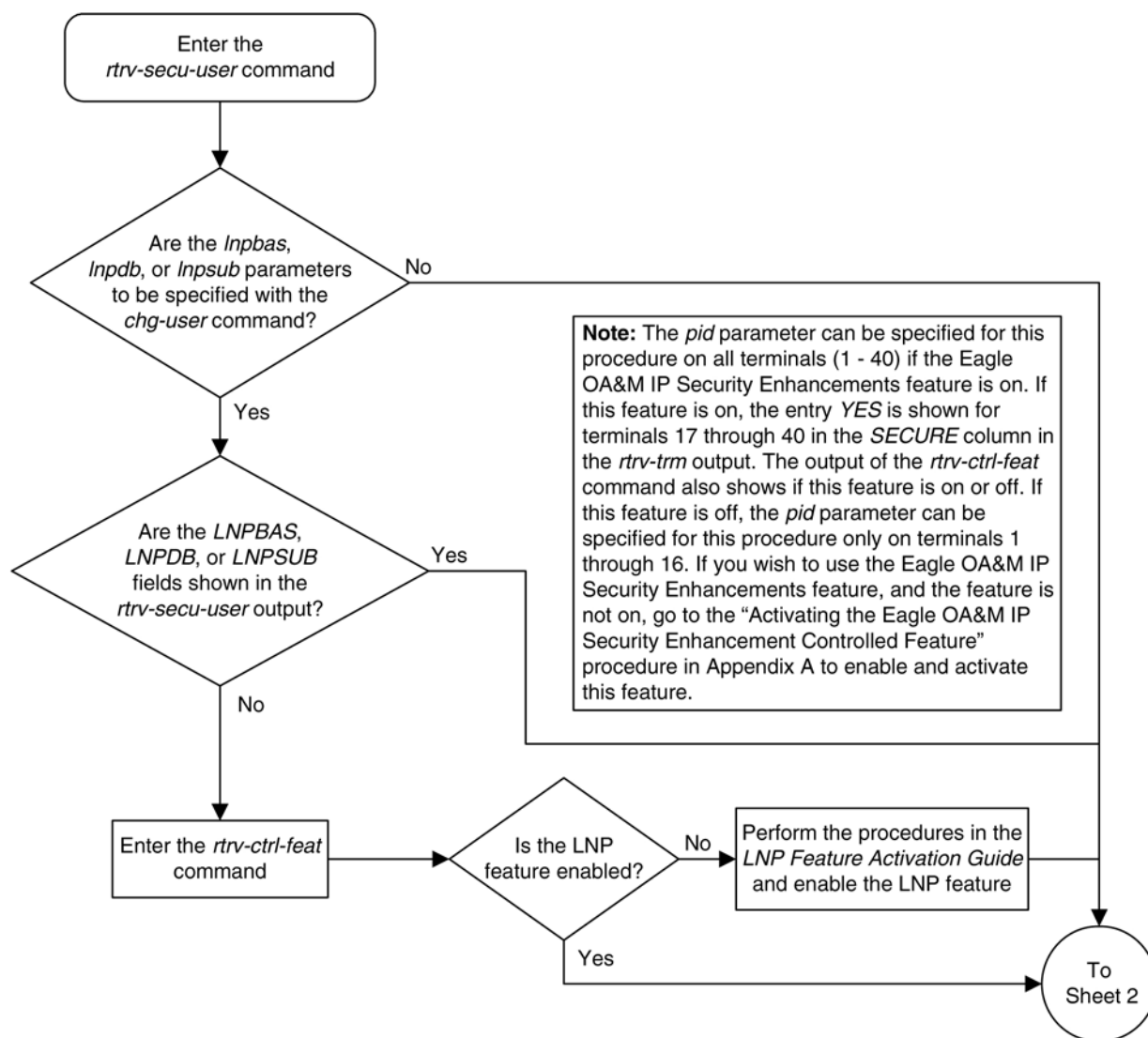
U17	U18	U19	U20	U21	U22	U23	U24	U25	U26	U27	U28	U29	U30	U31	U32
YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	YES

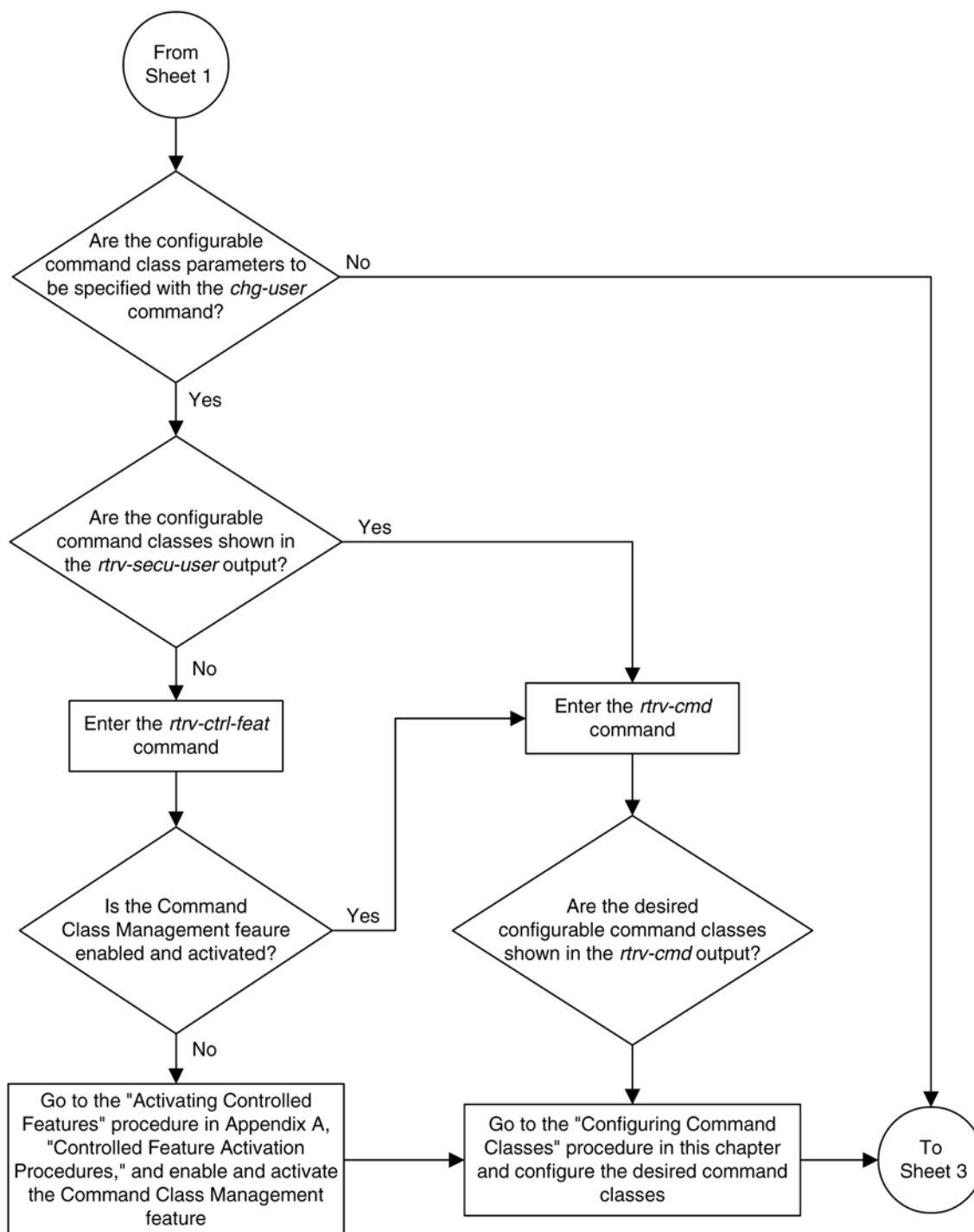
8. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

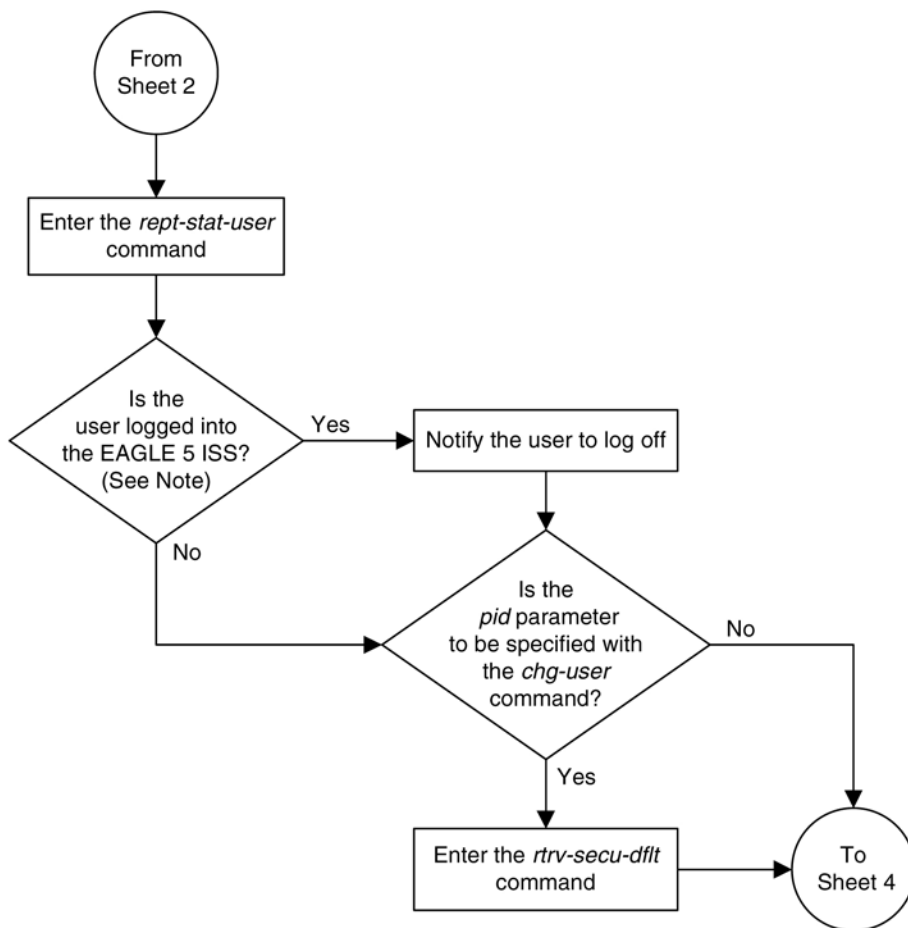
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
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.
```

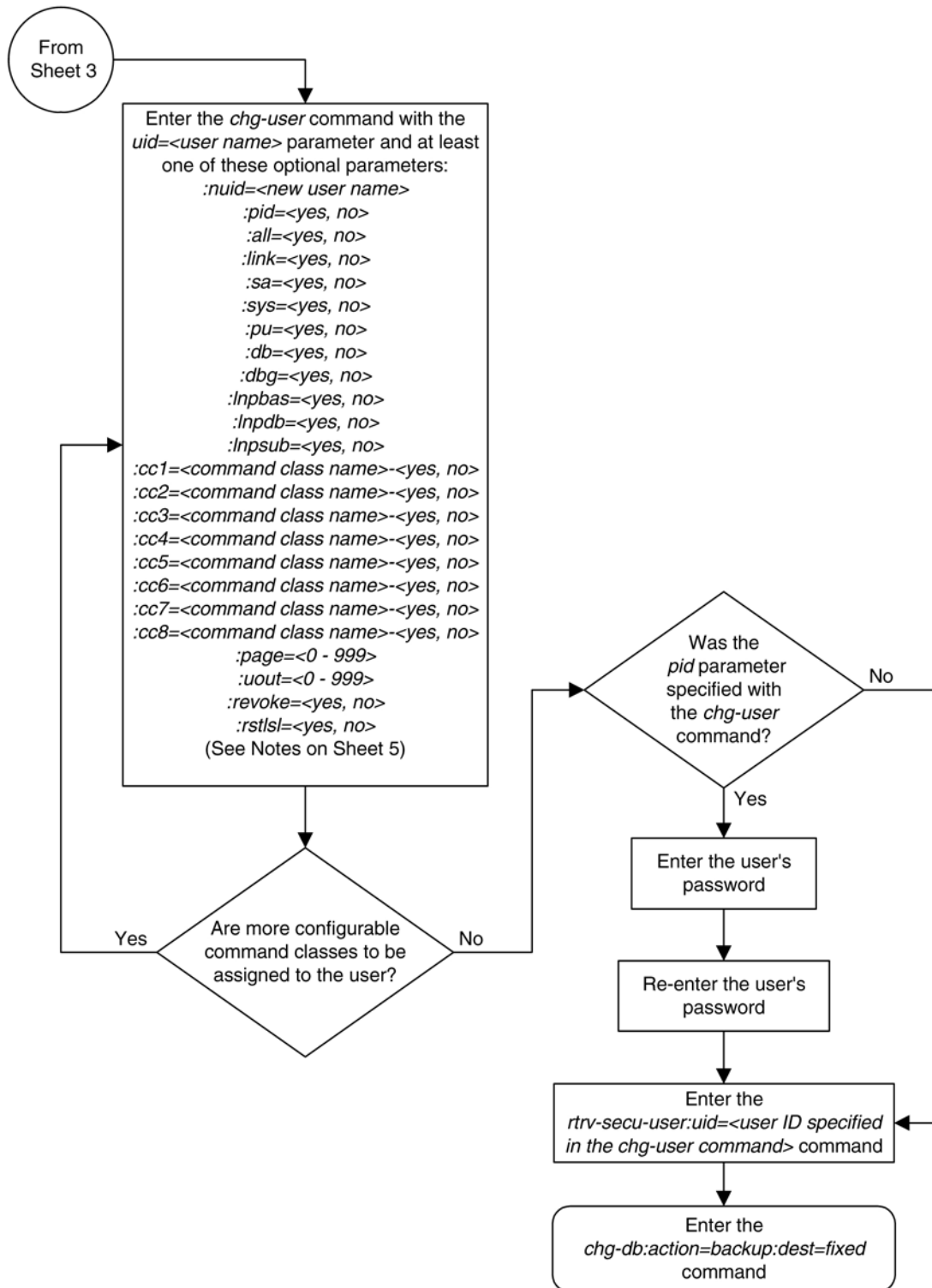
Flowchart 4-8. Changing User Information







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 *lnpbas*, *lnpdb*, or *lnpsub* parameters, the LNP feature must be enabled.
4. To specify the *cc1* through *cc8* parameters, the Command Class Management feature must be enabled and activated.
5. The user can have a maximum of 32 configurable command classes assigned.
6. The *all* parameter specifies whether or not all non-configurable command classes (*link*, *sa*, *sys*, *pu*, *db*, *dbg*, *lnpbas*, *lnpdb*, *lnpsub*) can be used by the user.
7. 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.
8. 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](#) procedure).

The rules for the format of the password are determined by the **chg-secu-dflt** command (see the [Changing the Security Defaults](#) 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](#) procedure to enable and activate this feature.

Procedure

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.

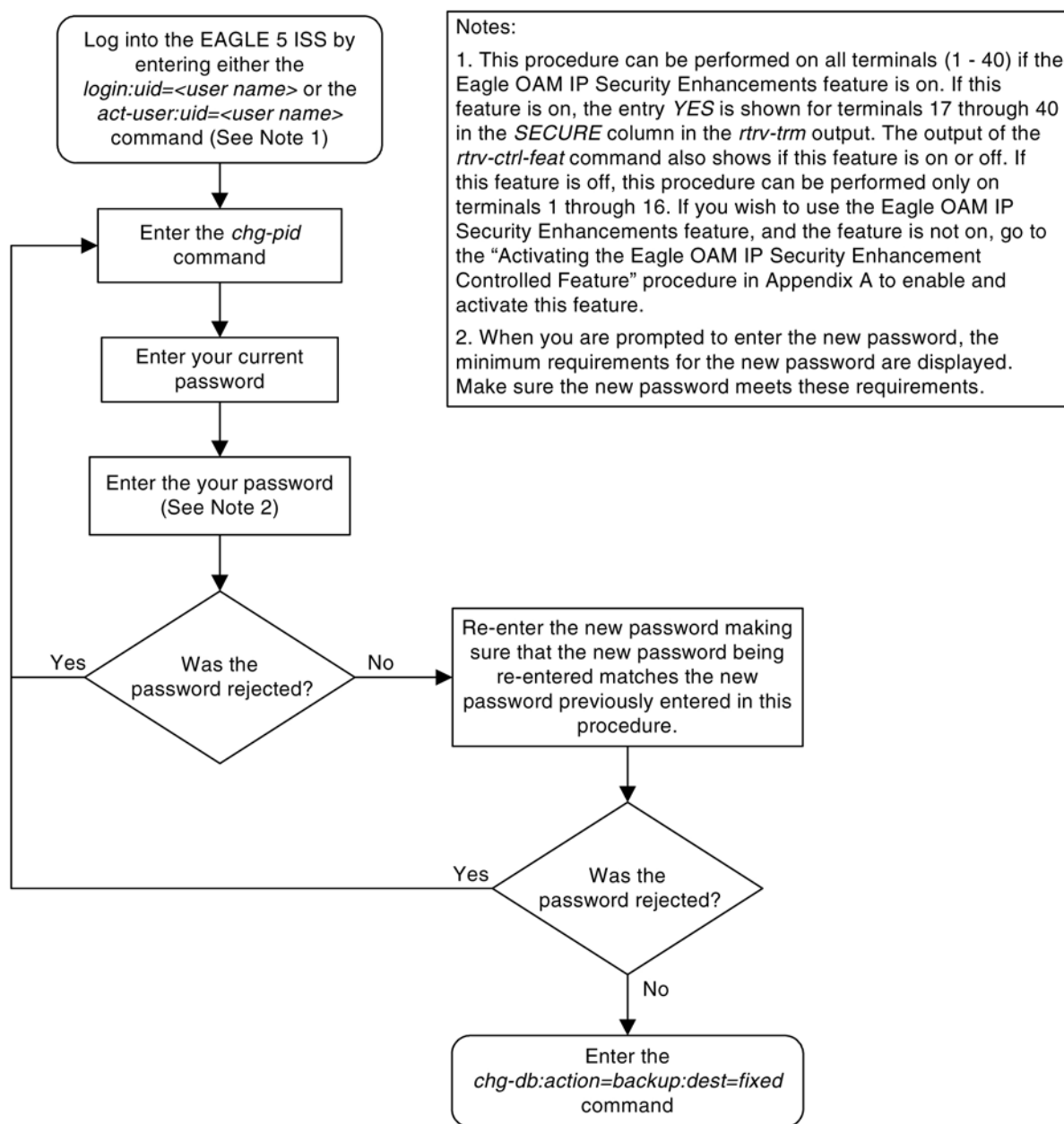
```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CHG-PID: MASP A - COMPLTD
```

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.
```

Flowchart 4-9. 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](#) 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](#) procedure. This procedure does not include any information about configuring SEAS terminals.

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)

:lnpdb – Specifies whether or not LNP database administration related unsolicited messages are displayed on the specified terminal (yes or no)

:lnpsub – Specifies whether or not LNP subscription related unsolicited messages are displayed on the specified terminal (yes or no)

NOTE: If the LNP ELAP Configuration feature is enabled and turned on, the **lnpsub** parameter cannot be specified with this **chg-trm** command.

: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)

:ggt – 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)

The messages assigned to the output message groups defined by the **traf**, **db**, **link**, **sa**, **sys**, **pu**, **lnpdb**, **lnpsub**, **uimrd**, **appserv**, **appss**, **card**, **clk**, **dbg**, **ggt**, **gws**, **meas**, **mon**, **mps**, **seas**, and **slan** parameters are listed in the *Maintenance 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 4-2](#) 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 *Maintenance Manual*.

Table 4-2. UIMRD Parameter Combinations

Value of the uimrd parameter with chg-trm command	Value of the uimrd parameter with chg-stpopts 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. Even though the uimrd parameter with the chg-trm command is set to yes , there are no messages in the UIM redirect output group because the uimrd parameter with the chg-stpopts command is set to no . 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](#) 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**, **lnpdb**, **lnpsub**, **uimrd**, **appserv**, **appss**, **card**, **clk**, **dbg**, **gtt**, **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 **lnpdb** parameter can only be specified if the LNP feature is enabled. Enter the **rtrv-ctrl-feat** command to verify the quantity the LNP feature is enabled for. The quantity of LNP telephone numbers is shown in the **LNP TNs** field of the **rtrv-ctrl-feat** command output. To enable the LNP feature, perform the procedures in the *LNP Feature Activation Guide* to enable the LNP feature. If the LNP ELAP Configuration feature is enabled and turned on, the **lnpsub** parameter cannot be specified in this procedure.

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**, **dural**) 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 and LNP features. 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 **emsalm**.

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**, **lnpdb**, **lnpsub**, **uimrd**, **appserv**, **appss**, **card**, **clk**, **dbg**, **gtt**, **gws**, **meas**, **mon**, **mps**, **seas**, **s1an**) 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: 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 **emsalm**, 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: 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 an EAGLE 5 ISS Containing 700 Signaling Links](#) procedure), it is recommended that this terminal is not changed to an EMSALM terminal.

When the terminal type is changed from **emsalm** 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, lnpsdb, lnpsub, 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, lnpsdb, lnpsub, 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 "Configuring SEAS Terminals for the Initial SEAS Configuration" procedure in Chapter 5, SEAS Over IP Configuration Procedures.

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 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
```

If the terminal is a telnet terminal (terminals 17 to 40) the **COMM** and **FC** fields are not displayed in the **rtrv-trm** output. The card location of the IPSM associated with the telnet terminals is displayed. The security status of the telnet terminal is displayed in the **SECURE** field. If the Eagle OA&M IP Security Enhancements feature is on, the telnet terminal is secure. The entry **yes** is shown in the **SECURE** field. If the Eagle OA&M IP Security Enhancements feature is off, the telnet terminal is not secure. The entry **no** is shown in the **SECURE** field.

[Appendix A Controlled Feature Activation Procedures](#) contains the procedures to enable and turn on, or turn off the Eagle OA&M IP Security Enhancements feature.

In this example, terminal 3 is running at 9600 baud with 7 data bits, even parity, and 1 stop bit.

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.

Procedure

1. Display the values of all terminals using the **rtrv-trm** command.

This is an example of the possible output.

```

r1ghncxa03w 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  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  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

```

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	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 the **Inpdb** parameter is not being specified in this procedure, or the **LNPDB** or **LNPSUB** fields are shown in the **rtrv-trm** output, skip this step, and go to step 3.

2. Verify that the LNP feature is enabled by entering the **rtrv-ctrl** feat command. If the LNP feature is enabled, a quantity shown in the LNP TNs field.

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 LNP feature is enabled, go to step 3.

If the LNP feature is not enabled, perform the procedures in the LNP Feature Activation Guide to enable the LNP feature.

If the ELAP Configuration feature is enabled and turned on, the **lnpsub** parameter cannot be specified in this procedure.

NOTE: If telnet terminals are not being added in this procedure, skip step 3, and go to step 4.

3. If the **rtrv-trm** output in step 1 shows terminals 1 to 16 and you wish to add telnet terminals (**type=telnet**, terminals 17 through 40), go to the [Adding an IPSM](#) 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 default values for the security (**tmout**, **mxinv**, **dural**) and output message group (**traf**, **db**, **link**, **sa**, **sys**, **pu**, **lnpdb**, **lnpsub**, **uimrd**, **appserv**, **appss**, **card**, **clk**, **dbg**, **gtt**, **gws**, **meas**, **mon**, **mps**, **seas**, **slan**) parameters, and the **telnet** terminal type.

The only actions that can be performed on terminals 17 through 40 is changing the terminal type to either **none**, **telnet**, or **emsalm**, and changing the security (**tmout**, **mxinv**, **dural**) and output message group (**traf**, **db**, **link**, **sa**, **sys**, **pu**, **lnpdb**, **lnpsub**, **uimrd**, **appserv**, **appss**, **card**, **clk**, **dbg**, **gtt**, **gws**, **meas**, **mon**, **mps**, **seas**, **slan**) parameters.

If terminals 17 through 40 are being changed, go to step 3.

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](#) “ procedure, this procedure is finished.

NOTE: If only the output message group or security parameters are being changed, skip steps 3 through 6, and go to step 7.

4. 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).

```
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.

5. If the communication attributes (**baud**, **sb**, **prty**, and **fc**) or the terminal type (**type**) 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. For this example, enter these commands.

```
rmv-trm:trm=4
```

```
rmv-trm:trm=8
```

```
rmv-trm:trm=19
```

```
rmv-trm:trm=23
```

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.

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.
```

NOTE: If the terminal type is not being changed to either printer or none, skip this step and go to step 7.

7. 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](#) procedure and change the command class assignment of another terminal to include the Security Administration command class.

8. Change the terminal characteristics using the **chg-trm** command.

For this example enter this command.

```
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:tmout=30
```

```
chg-trm:trm=8:type=emsalm
```

```
chg-trm:trm=23:type=emsalm
```

NOTE: If step 5 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**).



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: If a terminal dedicated to measurements collection is configured (see the [Configuring the Measurements Terminal for an EAGLE 5 ISS Containing 700 Signaling Links](#) 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
```

9. Verify the changes made in step 8 by using the **rtrv-trm** command with the terminal number specified in step 8.

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 36.0.0
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 36.0.0
TRM TYPE LOC TMOUT MXINV DURAL SECURE
21 TELNET 1201 30 5 00:30:00 yes

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
```

rtrv-trm:trm=23

```
rlghncxa03w 06-10-01 16:02:08 GMT EAGLE5 36.0.0
```

TRM	TYPE	LOC		TMOUT	MXINV	DURAL	SECURE
23	EMSALM	1201		60	5	00:30:00	yes

TRM	TRAF	LINK	SA	SYS	PU	DB	UIMRD
23	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 5, skip this step and go to step 10.

10. When the changes are complete, and if the terminal was inhibited in step 5, 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

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

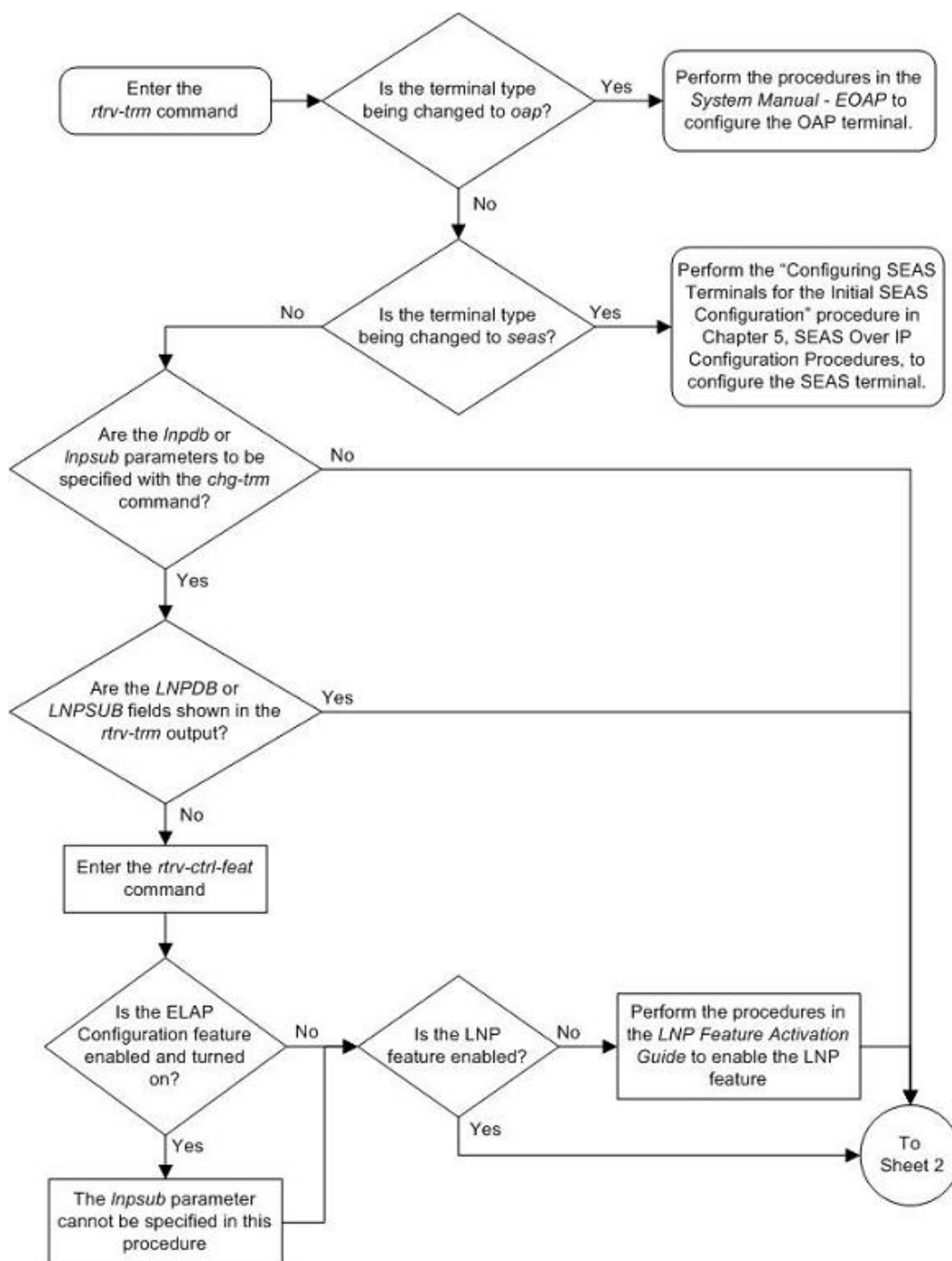
```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Allow message sent to terminal
```

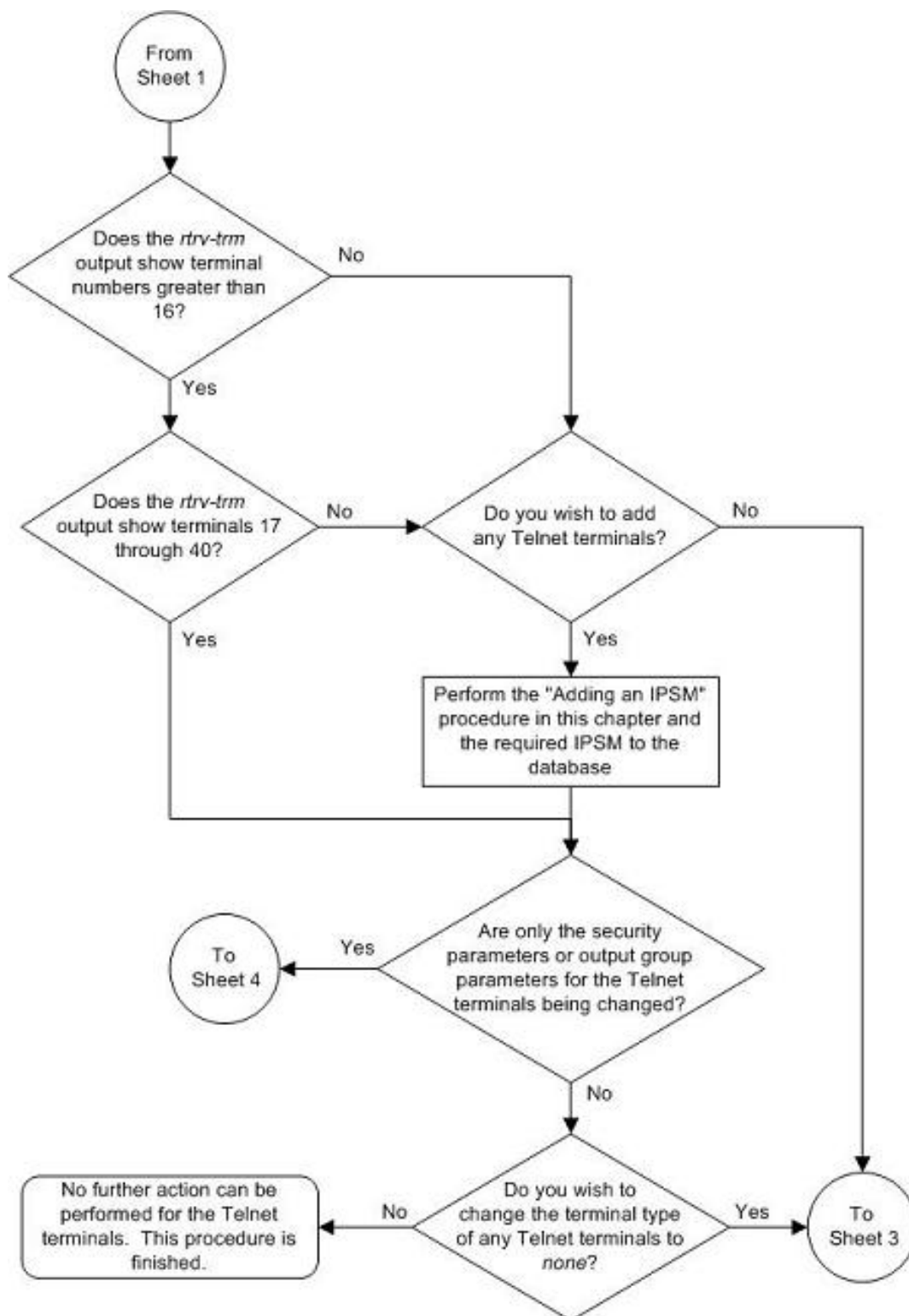
11. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

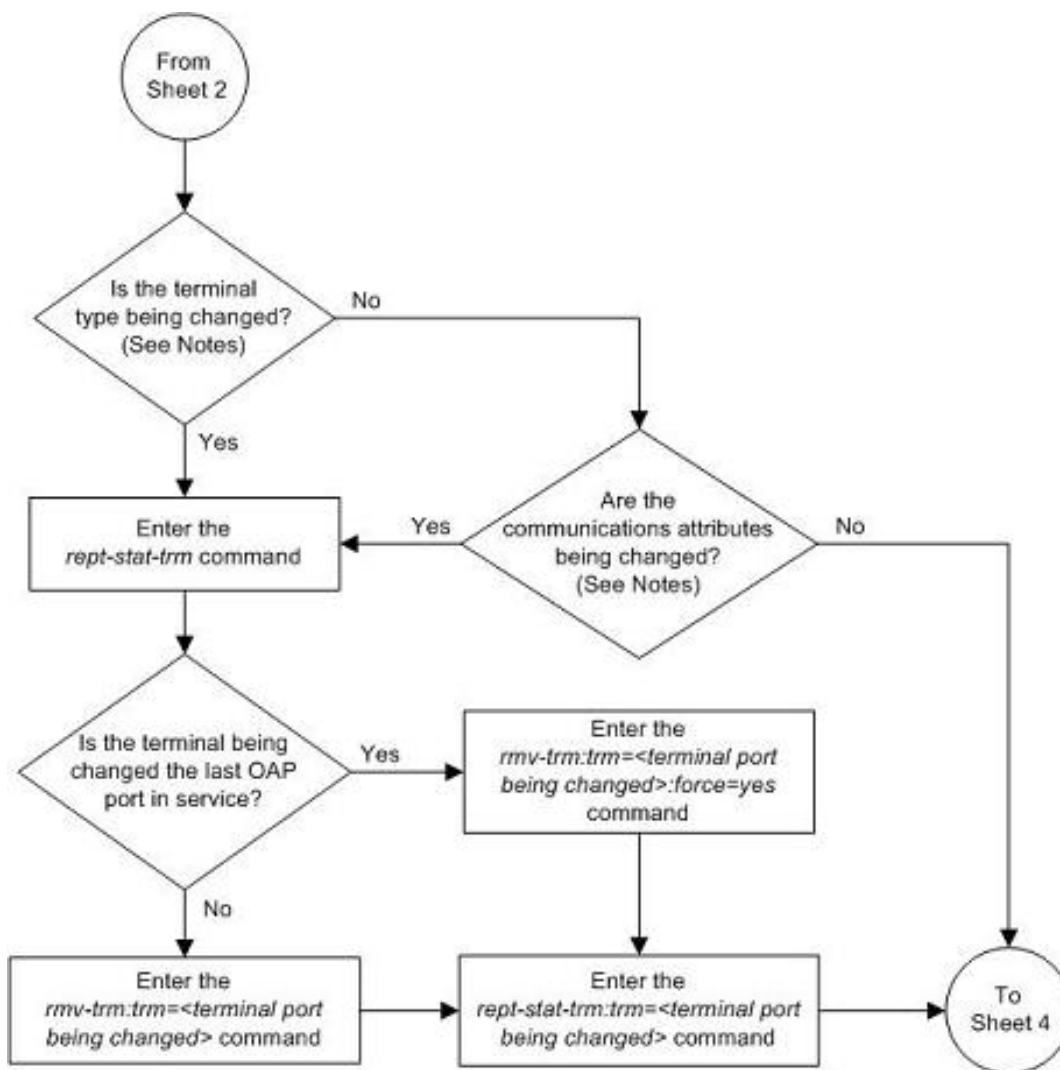
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
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.
```


Flowchart 4-10. Changing Terminal Characteristics

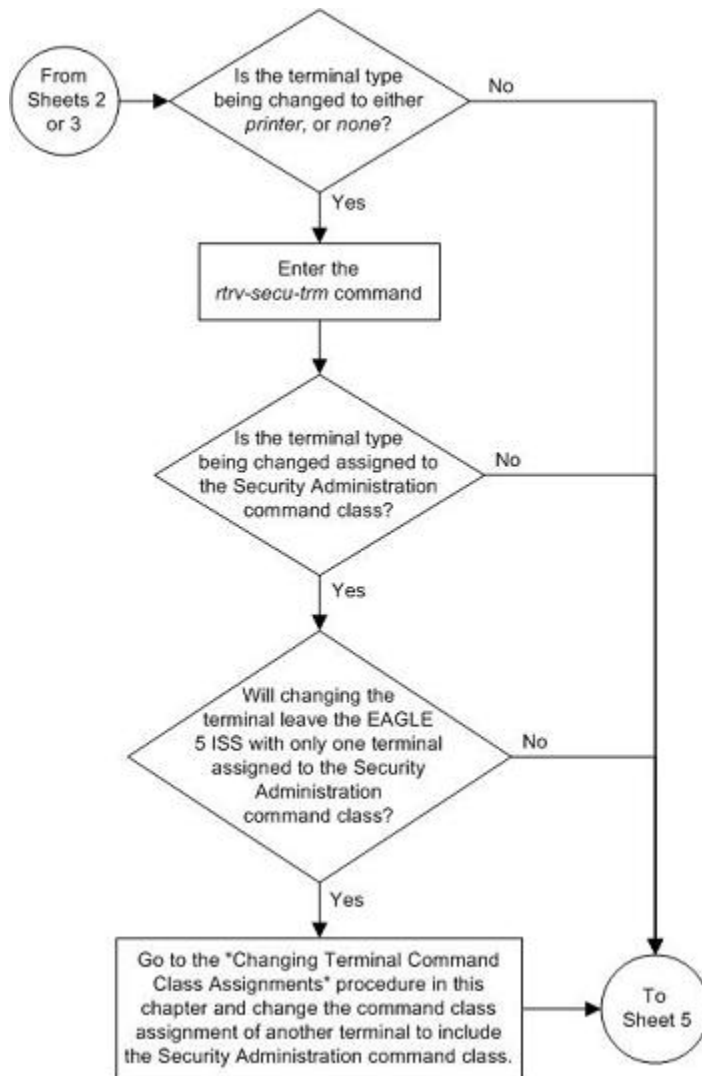


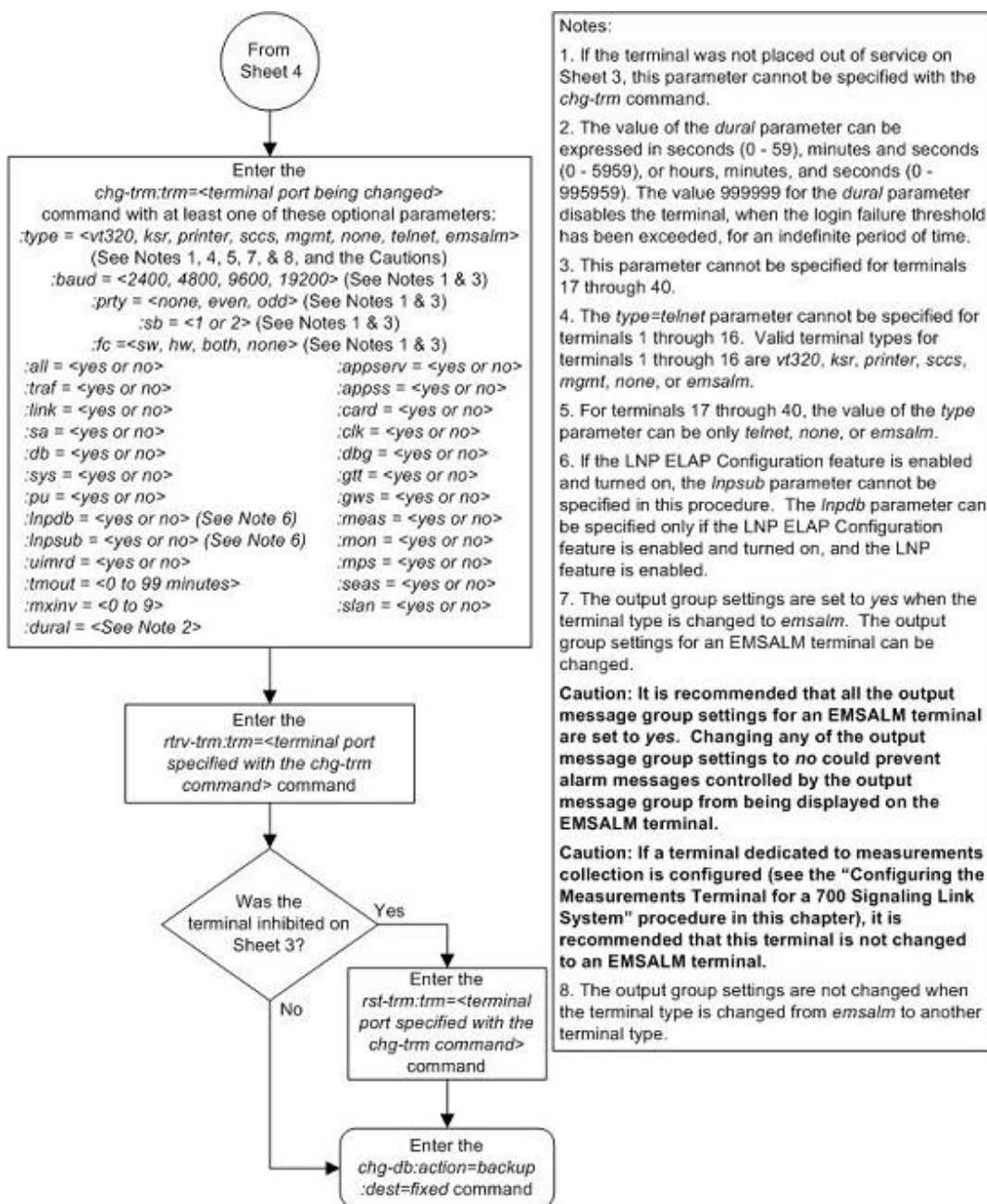




Notes:

1. If the terminal numbers are from 17 to 40, the values for the *type* parameter can be only *telnet*, *none*, or *emsa/m*. 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 *emsa/m*. 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).





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
- LNP Basic
- LNP Database Administration
- LNP Subscription

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**, and if the LNP feature is enabled, **lnpbas**, **lnpdb**, and **lnpsub** 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.

:lnpbas – LNP Basic commands can be entered on the specified terminal.

:lnpdb – LNP Database Administration commands can be entered on the specified terminal.

:lnpsub – LNP Subscription commands can be entered on the specified terminal. If the LNP ELAP Configuration feature is enabled and turned on, LNP Subscription commands cannot be performed from the EAGLE 5 ISS, and the **lnpsub** parameter cannot be specified with the **chg-secu-trm** command. LNP Subscription commands are available on the LSMS.

: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 activated. 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 activated, go to the [Activating Controlled Features](#) procedure to enable and activate 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 activated, 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](#) procedure.

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**, or **sys**, **lnpbas**, **lnpdb**, or **lnpsub** 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.

To assign the LNP Basic or LNP Database Administration command classes to a terminal, the LNP feature must be enabled. Enter the **rtrv-ctrl-feat** command to verify the quantity the LNP feature is enabled for. The quantity of LNP telephone numbers is shown in the LNP TNs field of the **rtrv-ctrl-feat** command output. To enable the LNP feature, perform the procedures in the LNP Feature Activation Guide to enable the LNP feature. If the LNP ELAP Configuration feature is enabled and turned on, LNP Subscription commands cannot be performed from the EAGLE 5 ISS, and the **lnpsub** parameter cannot be specified with the **chg-secu-trm** command. LNP Subscription commands are available on the LSMS.

The values of the **lnpbas**, **lnpdb**, and **lnpsub** parameters are shown in the **LNPBAS**, **LNPDDB**, and the **LNPSUB** fields of the **rtrv-secu-trm** command output. These fields can only be displayed if the LNP feature is enabled.

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.

Procedure

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

NOTE: If the **lnpbas** or **lnpdb** parameters are not being specified in this procedure, or the **LNPBAS**, **LNPDB** or **LNPSUB** fields are shown in the **rtrv-trm** output, skip this step, and go to step 3.

2. Verify that the LNP feature is enabled, by entering the **rtrv-ctrl-feat** command. If the LNP feature is enabled, a quantity shown in the LNP TNs field.

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 LNP feature is enabled, go to step 3.

If the LNP feature is not enabled, perform the procedures in the LNP Feature Activation Guide to enable the LNP feature.

If the ELAP Configuration feature is enabled and turned on, the **lnpsub** parameter cannot be specified in this procedure.

3. 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 activated (status = on), go to step 3. If the Command Class Management feature is not enabled or activated, go to the [Activating Controlled Features](#) procedure and enable and activate 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.

4. 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 06-10-01 21:15:37 GMT EAGLE5 36.0.0
CMD CLASS
alw-slk link, u11
ent-user sa
unhb-slk link
rtrv-attr-secu log sa, u31
inh-slk link, abc
rtrv-meas-sched link, abc, def
act-lbp link
act-dlk link
act-slk link
rtrv-secu log 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
rept-x25-meas link
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, go to the [Configuring Command Classes](#) procedure and configure the desired command classes.

5. 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 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
```

6. 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, 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

.

7. 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
```

8. Verify the changes made in step 7 by using the **rtrv-secu-trm** command with the port number specified in step 7.

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

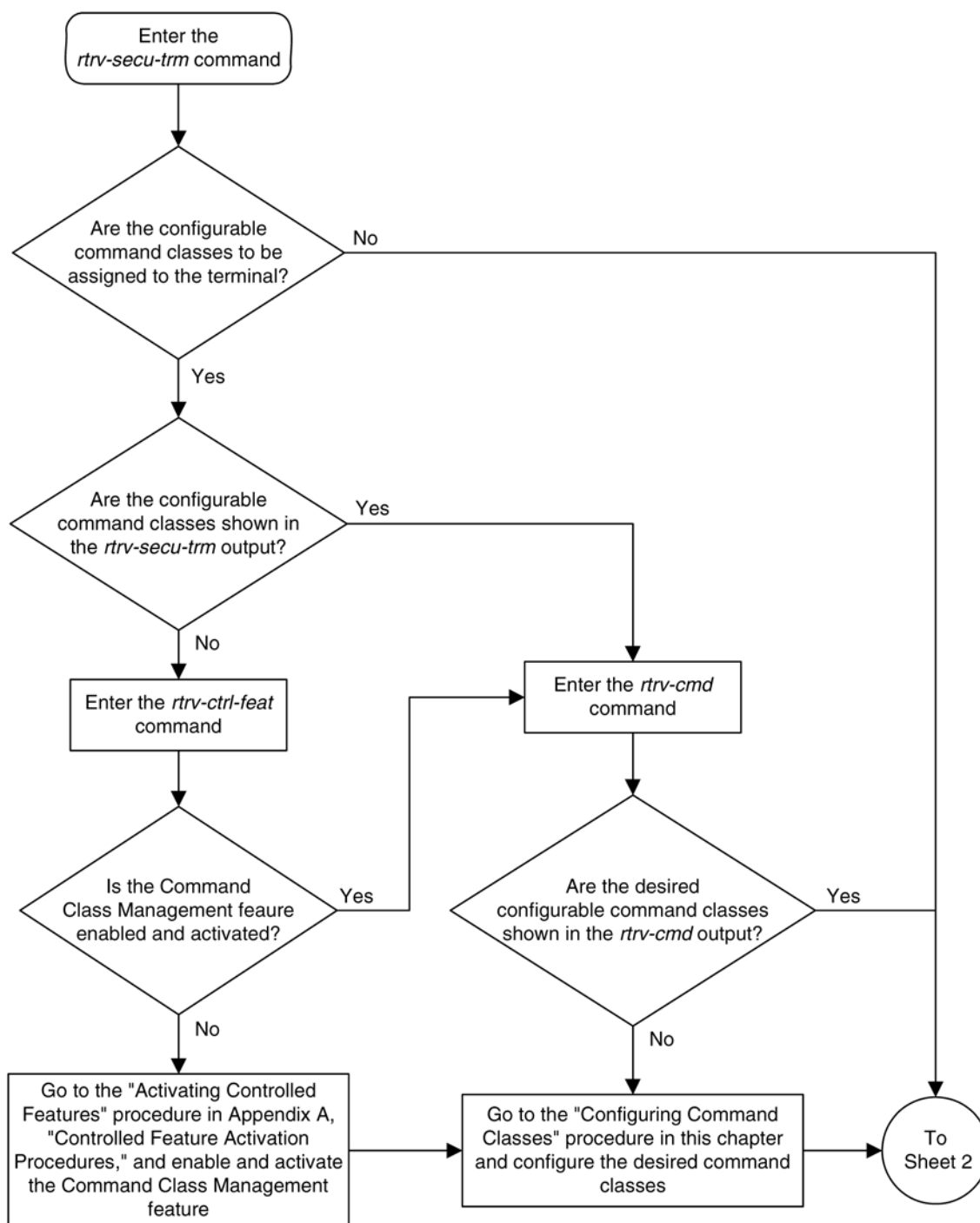
TRM   LINK SA  SYS  PU   DB   DBG
4     YES NO  NO   YES YES  NO
```

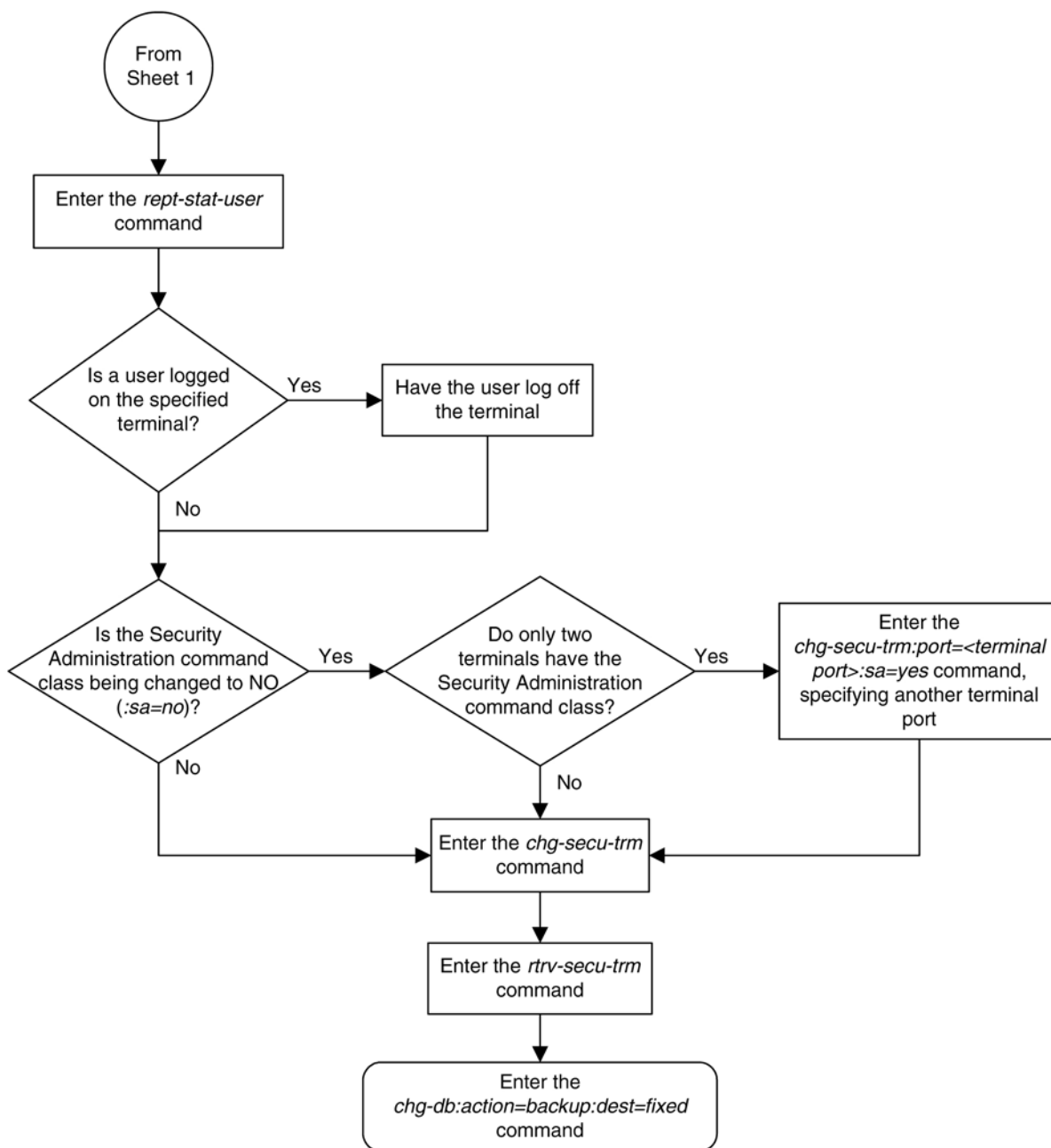
9. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

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.
```

Flowchart 4-11. 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 10 command classes: Basic, Database Administration, Debug, Link Maintenance, Program Update, Security Administration, System Maintenance, LNP Basic, LNP Database Administration, LNP Subscription.

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 activated. 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 activated, go to the [Activating Controlled Features](#) procedure to enable and activate the Command Class Management feature.

To add commands from the LNP Basic, LNP Database Administration, or LNP Subscription command classes, the LNP feature must be enabled. Enter the **rtrv-ctrl-feat** command to verify that the LNP feature is enabled. Perform the procedures in the *LNP Feature Activation Guide* to enable the LNP feature.

Procedure

1. Verify that the Command Class Management 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
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 activated (**status = on**), go to step 2.

If the Command Class Management feature is not enabled or activated, go to the [Activating Controlled Features](#) procedure and enable and activate 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.**

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 06-10-01 21:15:37 GMT EAGLE5 36.0.0
CMD          CLASS
alw-slk      link, u11
ent-user     sa
unhb-slk     link
rtrv-attr-secu log sa, u31
inh-slk      link, abc
rtrv-meas-sched link, abc, def
act-lbp      link
act-dlk      link
act-slk      link
rtrv-secu log 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
rept-x25-meas link
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, skip steps 3 and 4, and go to step 5.

3. Display the configurable command class descriptions by entering the **rtrv-cmdclass** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
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
lnpbas        lnp basic commands
lnpdb         lnp database commands
lnpsub        lnp subscription 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.

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
```

NOTE: If commands from the LNPBAS, LNPDB, or LNPSUB command classes are not being added to a configurable command class, or if the LNPBAS, LNPDB, and LNSUB command classes are shown in the rtrv-cmdclass output in step 3 or the rtrv-cmd output in step 2, skip this step, and go to step 7.

6. Verify that the LNP feature is enabled by entering the **rtrv-ctrl-feat** command.

If the LNP feature is enabled, the LNP telephone number quantity is shown in the **LNP TNS** field of the **rtrv-ctrl-feat** output.

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 LNP feature is enabled, go to step 7.

If the LNP feature is not enabled, perform the procedures in the *LNP Feature Activation Guide* to enable the LNP feature.

7. 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.

8. 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
```

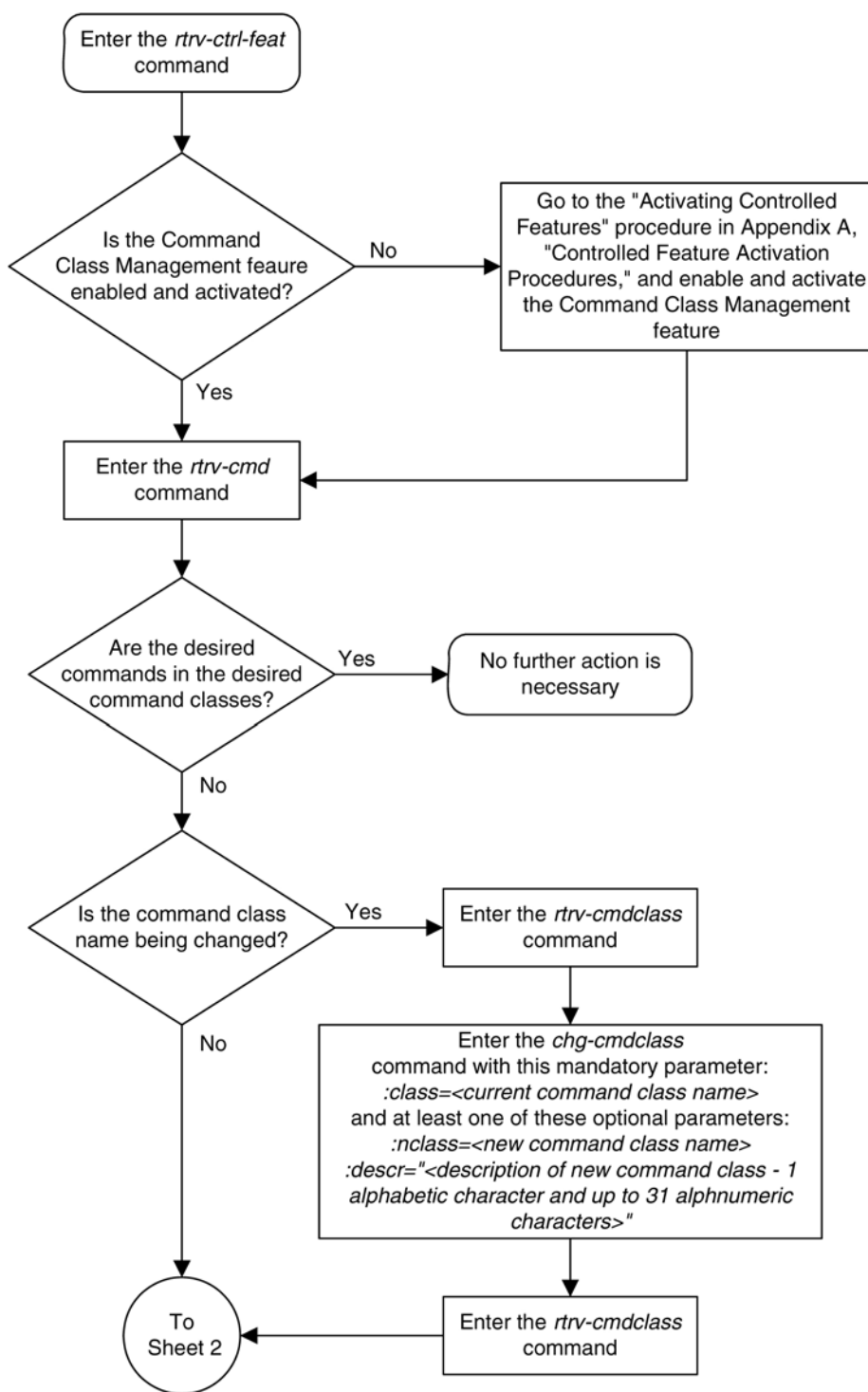

CMD	CLASS
tst-dlk	link

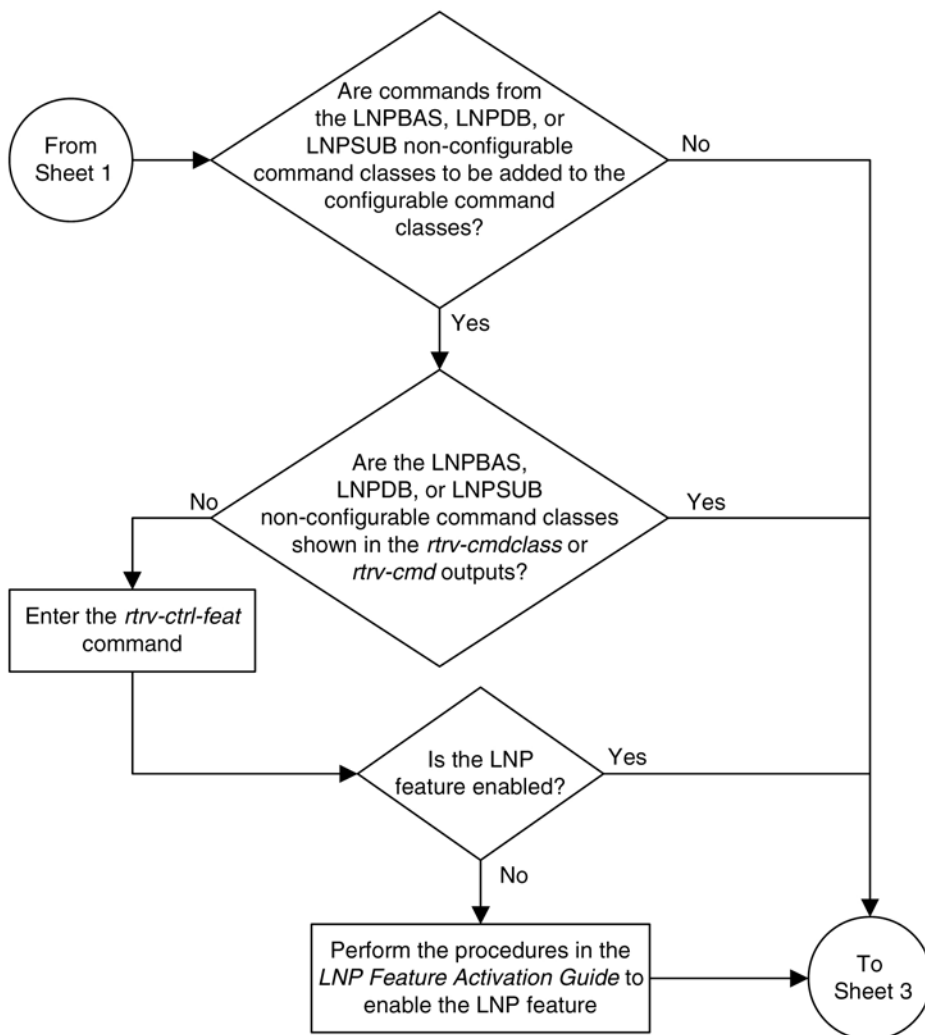
9. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

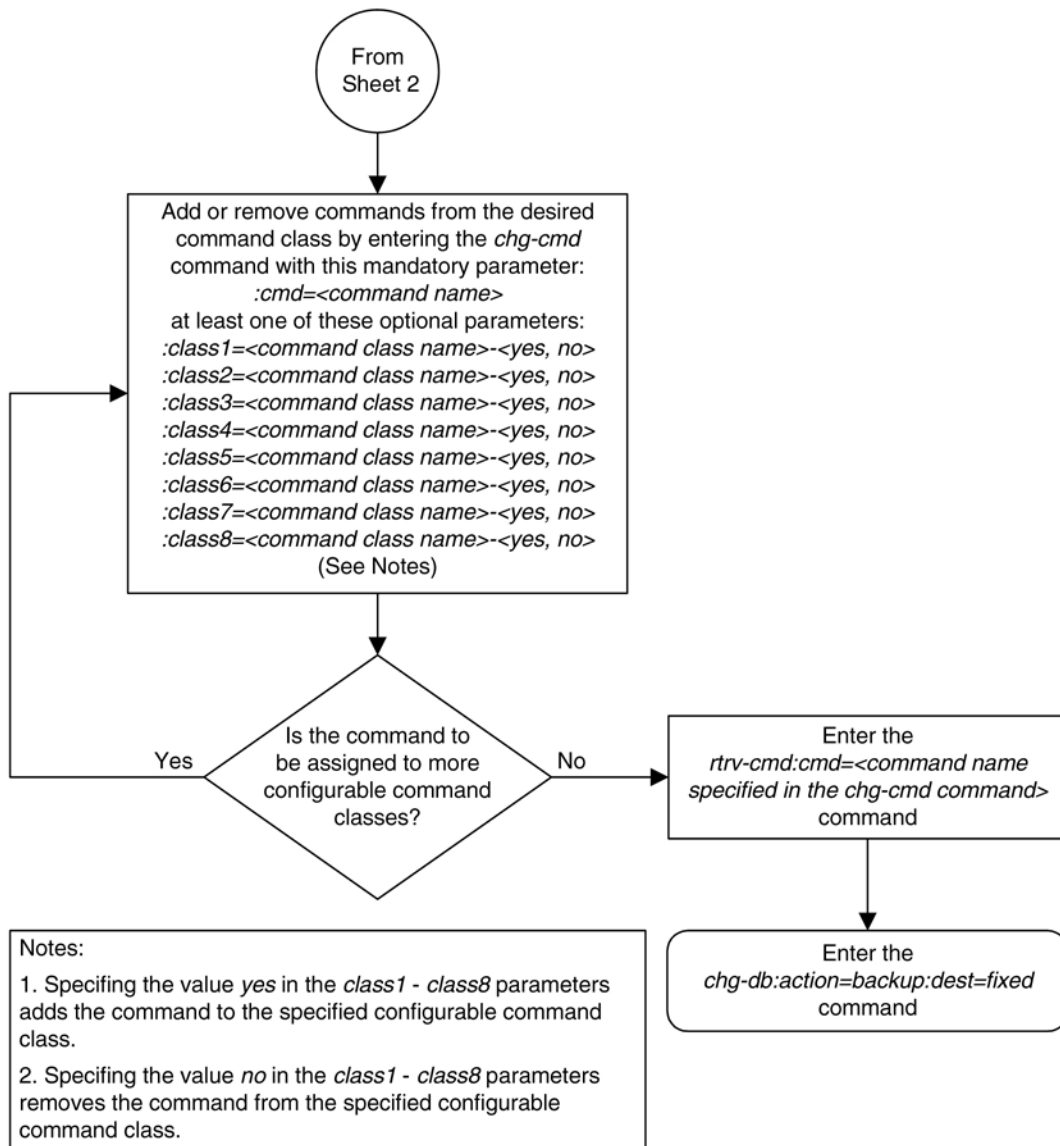
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
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.
```

Flowchart 4-12. 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.

Procedure

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.

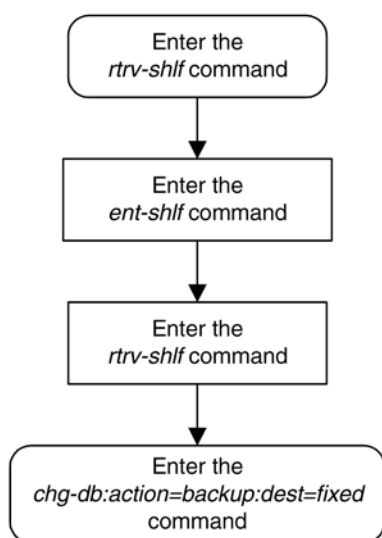
This is an example of the possible output.

```
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.
```

Flowchart 4-13. 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 4-3](#) shows the location of these procedures.

Table 4-3. Card Removal Procedures

Card Application	Procedure
SS7ANSI, ATMANSI, CCS7ITU, ATMITU	Removing an SS7 LIM "Removing an E1 Card in Appendix A, "E1 Interface," in the <i>Database Administration Manual - SS7</i> "Removing a T1 Card in Appendix B, "T1 Interface," in the <i>Database Administration Manual - SS7</i>
SS7GX25	"Removing an X.25 LIM in Chapter 2, "X.25 Gateway Configuration," in the <i>Database Administration Manual - Features</i>
SCCP	"Removing an SCCP Card in Chapter 2, "Global Title Translation (GTT) Overview," in the <i>Database Administration Manual - Global Title Translation</i>
VSCCP	
GLS	"Removing a GLS Card in Chapter 2, "Gateway Screening (GWS) Overview," in the <i>Database Administration Manual - Gateway Screening</i>
STPLAN	"Removing an STP LAN Card in Chapter 3, "STP LAN Configuration," in the <i>Database Administration Manual - Features</i>

Card Application	Procedure
EBDADCM	"Removing the DCM Applied to LSMS BLM-Based Operations" in the <i>LNP Feature Activation Guide</i>
EBDABLM	"Removing the BLM Applied to LSMS BLM-Based Operations" in the <i>LNP Feature Activation Guide</i>
IPLIM, IPLIMI, SS7IPGW, IPGWI	"Removing an IPLIMx Card" or "Removning an IPGWx Card" in the <i>Database Administration Manual - IP⁷ Secure Gateway</i>
EROUTE	"Removing an STC Card" in Chapter 6, Eagle 5 Integrated Monitoring Support Configuration," in the <i>Database Administration Manual - Features</i>
MCP	Removing an MCPM
IPS	Removing an IPSM



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 4-4](#) for a description of the effect that removing the last card type that is in service has on the EAGLE 5 ISS.

Table 4-4. 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, LIMOCU, LIMV35, LIME1, LIMT1, LIMCH	SS7ANSI	SS7 traffic is lost.
LIMATM	ATMANSI	
LIMDS0, LIMOCU, LIMV35, LIME1, LIMT1, LIMCH	CCS7ITU	ITU traffic is lost.
LIME1ATM	ATMITU	
LIMDS0, LIMOCU, LIMV35	SS7GX25	X.25 traffic is lost.
TSM	SCCP	Global title translation traffic is lost. If the LNP or EIRfeature is enabled, LNP or EIR traffic is lost. If the INP, G-POR, or DSM VSCCP G-FLEX features are on, INP, G-POR, or G-FLEX traffic also lost.
DSM	VSCCP	
TSM	GLS	Gateway screening feature is disabled.
ACMENET, DCM	STPLAN	STPLAN feature is disabled.
DCM	EBDADCM	High-speed bulk download of the LNP database from the LSMS is disabled
TSM	EBDABLM	
DCM	IPLIM	Point-to-point connectivity for IP ⁷ Secure Gateway functions in ANSI networks is disabled.
	IPLIMI	Point-to-point connectivity for IP ⁷ Secure Gateway functions in ITU networks is disabled.

Card type	Application assigned to card	Effect on the EAGLE 5 ISS
	SS7IPGW	Point-to-multipoint connectivity for IP ⁷ Secure Gateway functions in ANSI networks is disabled.
	IPGWI	Point-to-multipoint connectivity for IP ⁷ Secure Gateway functions in ITU networks is disabled.
STC	EROUTE	Monitoring of the EAGLE 5 ISS by the STCEROUT Sentinel is disabled.
MCPM	MCP	The Measurements Platform feature is disabled.
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](#) 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.

Procedure

1. Display the cards in the database using the **rtrv-card** command.

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
1101    TSM          SCCP
1102    TSM          GLS
1113    GSPM          EOAM
1114    TDM-A
1115    GSPM          EOAM
1116    TDM-B
1117    MDAL
1201    LIMDS0       SS7ANSI    sp2            A      0      sp1            B      0
1202    LIMV35       SS7ANSI    sp4            A      0
1203    LIMDS0       SS7ANSI    sp3            A      0
1204    LIMDS0       SS7ANSI    sp3            A      1
1205    LIMDS0       CCS7ITU    nsp3           A      0      nsp4           B      0
1206    LIMDS0       SS7ANSI    nsp3           A      1      nsp4           B      1
1207    LIMV35       SS7GX25    nsp1           A      0
1208    LIMV35       SS7GX25    nsp1           A      1
1211    TSM          SCCP
1212    TSM          GLS
1213    TSM          EBDABLM
1215    DCM          VXWSLAN
1217    DCM          EBDADCM
1301    LIMATM       ATMANSI    lsnatm1        A      0
1305    DCM          VXWSLAN
1307    LIMDS0       SS7ANSI    sp2            A      1      nsp3           B      2
1308    LIMATM       ATMANSI    lsnatm1        A      1
1317    DCM          VXWSLAN
2101    LIMDS0       SS7ANSI    sp5            A      0      sp8            B      0
2102    LIMV35       SS7ANSI    sp7            A      0
2103    LIMDS0       SS7ANSI    sp6            A      0
2104    LIMDS0       SS7ANSI    sp6            A      1
2105    LIMDS0       CCS7ITU    nsp3           A      0      nsp5           B      0
2106    LIMDS0       SS7ANSI    nsp3           A      1      nsp5           B      1
2107    LIMV35       SS7GX25    nsp2           A      0
2108    LIMV35       SS7GX25    nsp2           A      1

```


In this example, these cards must be removed from the database: 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2111, 2121, 2113, 2115, and 2117.

2. Based on the application assigned to the cards in the shelf to be removed, perform the appropriate procedures shown in [Table 4-3](#) 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.

```
r1ghncxa03w 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.

```
r1ghncxa03w 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](#) 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.

dlr-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
```

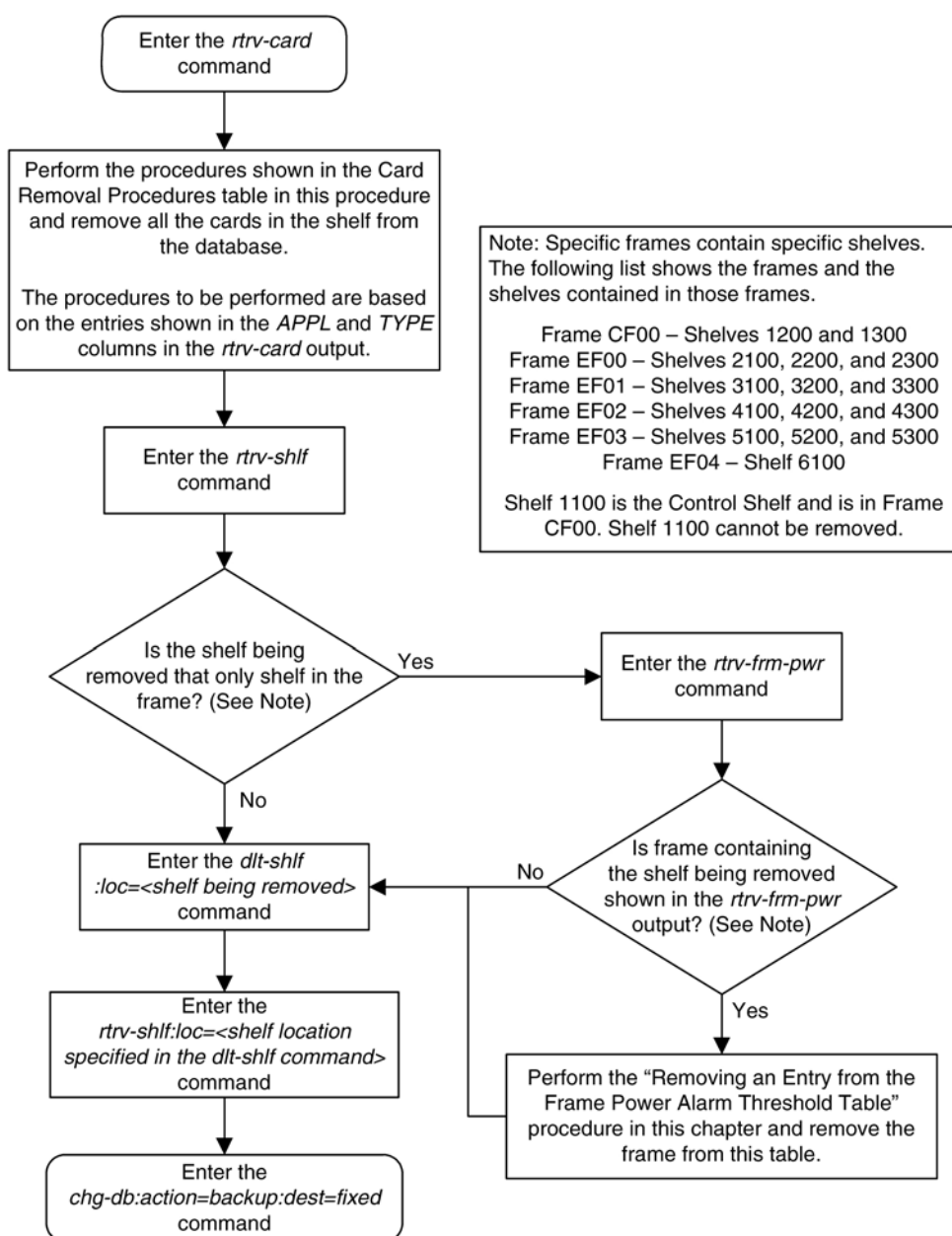
This shelf is UNEQUIPPED in the database.

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.
```

Flowchart 4-14. 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.

NOTE 1: LIM-T1 or LIMCH cards for T1 signaling links are configured in the database using the procedures in Appendix B, “T1 Interface,” in the *Database Administration Manual - SS7*.

NOTE 2: LIM-T1 or LIMCH cards for T1 signaling links are configured in the database using the procedures in Appendix B, “T1 Interface,” in the *Database Administration Manual - SS7*.

NOTE 3: IP cards (DCMs used for IP links) are configured in the database using the procedures in the *Database Administration Manual - IP⁷ Secure Gateway*.

NOTE 4: IP cards (DCMs used for IP links) are configured in the database using the procedures in the *Database Administration Manual - IP⁷ Secure Gateway*.

NOTE: X.25 LIMs are configured in the database using the procedures in the *Database Administration Manual - Features*.

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.

:appl – The application software that is assigned to the card.

:force – 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.

[Table 4-5](#) shows the valid card type (**type**) and card application (**appl**) combinations for the SS7 LIMs being added to the database and the names and part numbers of the hardware. This can be used to verify that the SS7 LIM being added to the database matches the card physically installed in the EAGLE 5 ISS. 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.

Table 4-5. SS7 LIM Card Types

Card Name	Part Number	Card Type (:type)	Application Type (:appl)
LIM or LIM-AINF *	870-1014-XX 870-1488-XX	limds0, limocu, limv35	ss7ansi, ccs7itu
EILA *	870-2049-XX	limds0, limocu, limv35	ss7ansi, ccs7itu
LIM-DS0 *	870-1009-XX 870-1485-XX	limds0	ss7ansi, ccs7itu
LIM-OCU *	870-1010-XX 870-1486-XX	limocu	ss7ansi, ccs7itu
LIM-V.35 *	870-1012-XX 870-1487-XX	limv35	ss7ansi, ccs7itu
MPL	870-2061-XX	limds0	ss7ansi
* These cards are not supported by the Origin-Based MTP Routing, Proxy Point Code, or Multiple Linksets to Single Adjacent PC features. The status of these features are shown in the rtrv-ctrl-feat output.			

The LIM, LIM-AINF, or EILA is a link interface module using the AINF interface and can be installed in place of the LIM-DS0, LIM-OCU, or LIM-V.35. It is configured in the database as either a LIM-DS0, LIM-OCU, or LIM-V.35 card.

The MPL is the Muliport LIM. The MPL contains eight SS7 signaling links as opposed to the LIM-DS0, LIM-OCU, LIM-V.35, LIM, LIM-AINF, or EILA, which contains only two SS7 signaling links.

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](#) procedure.

The examples in this procedure are used to add the cards shown in [Table 4-6](#) to the database.

Table 4-6. Example Card Configuration

Card Type	Application	Card Location
limds0	ss7ansi	1305
limocu	ccs7itu	1205
limv35	ss7ansi	1202
limds0 (MPL)	ss7ansi	1311

1. Display the cards in the database using the **rtrv-card** command.

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
1101   TSM        SCCP
1102   TSM        GLS
1113   GSPM        EOAM
1114   TDM-A
1115   GSPM        EOAM
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
1207   LIMV35     SS7GX25   nsp1          A      0
1208   LIMV35     SS7GX25   nsp1          A      1
1216   ACMENET     STPLAN
1301   TSM        SCCP
1308   LIMDS0     SS7ANSI   sp6           A      1      sp7           B      0
1314   LIMDS0     SS7ANSI   sp7           A      1      sp5           B      1
1317   ACMENET     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.

- If cards with these part numbers: 870-1014-XX, 870-1009-XX, 870-1010-XX, 870-1012-XX, 870-1485-XX, 870-1486-XX, 870-1487-XX, 870-1488-XX, and 870-2049-XX will be provisioned in this procedure, go to step 2.
- If cards with this part number, 870-2061-XX, will be provisioned in this procedure, skip step 2 and go to step 3.

2. Display the status of the controlled features by entering the **rtrv-ctrl-feat** command. The following is an example of the possible output.

```
rlghncxa03w 07-05-01 21:15:37 GMT EAGLE5 37.0.0
The following features have been permanently enabled:

Feature Name      Partnum      Status      Quantity
```

IPGWx Signaling TPS	893012814	on	20000
ISUP Normalization	893000201	on	----
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.	

The cards with these part numbers: 870-1014-XX, 870-1009-XX, 870-1010-XX, 870-1012-XX, 870-1485-XX, 870-1486-XX, 870-1487-XX, 870-1488-XX, and 870-2049-XX are not supported if the Origin-Based MTP Routing, Proxy Point Code, or Multiple Linksets to Single Adjacent PC features are enabled.

If the Origin-Based MTP Routing feature is enabled, the entry **Origin-Based MTP Routing** is shown in the **rtrv-ctrl-feat** output.

If the Proxy Point Code feature is enabled, the entry **Proxy Point Code** is shown in the **rtrv-ctrl-feat** output.

If the Multiple Linksets to Single Adjacent PC feature is enabled, the entry **Multiple Linkset to APC** is shown in the **rtrv-ctrl-feat** output.

If the Origin-Based MTP Routing, Proxy Point Code, or Multiple Linksets to Single Adjacent PC features are enabled, continue this procedure with step 3 by provisioning the MPL, part number 870-2061-XX.

- Using [Table 4-5](#) as a reference, verify that the card has been physically installed into the proper location.
- Add the card using the **ent-card** command.

For this example, enter these commands.

```
ent-card:loc=1202:type=limv35:appl=ss7ansi
```

```
ent-card:loc=1205:type=limocu:appl=ccs7itu
```

```
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
```

- 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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD   TYPE      APPL      LSET NAME      LINK SLC LSET NAME      LINK SLC
1202   LIMV35      SS7ANSI
```

rtrv-card:loc=1205

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
1205   LIMOCU     CCS7ITU
```

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.

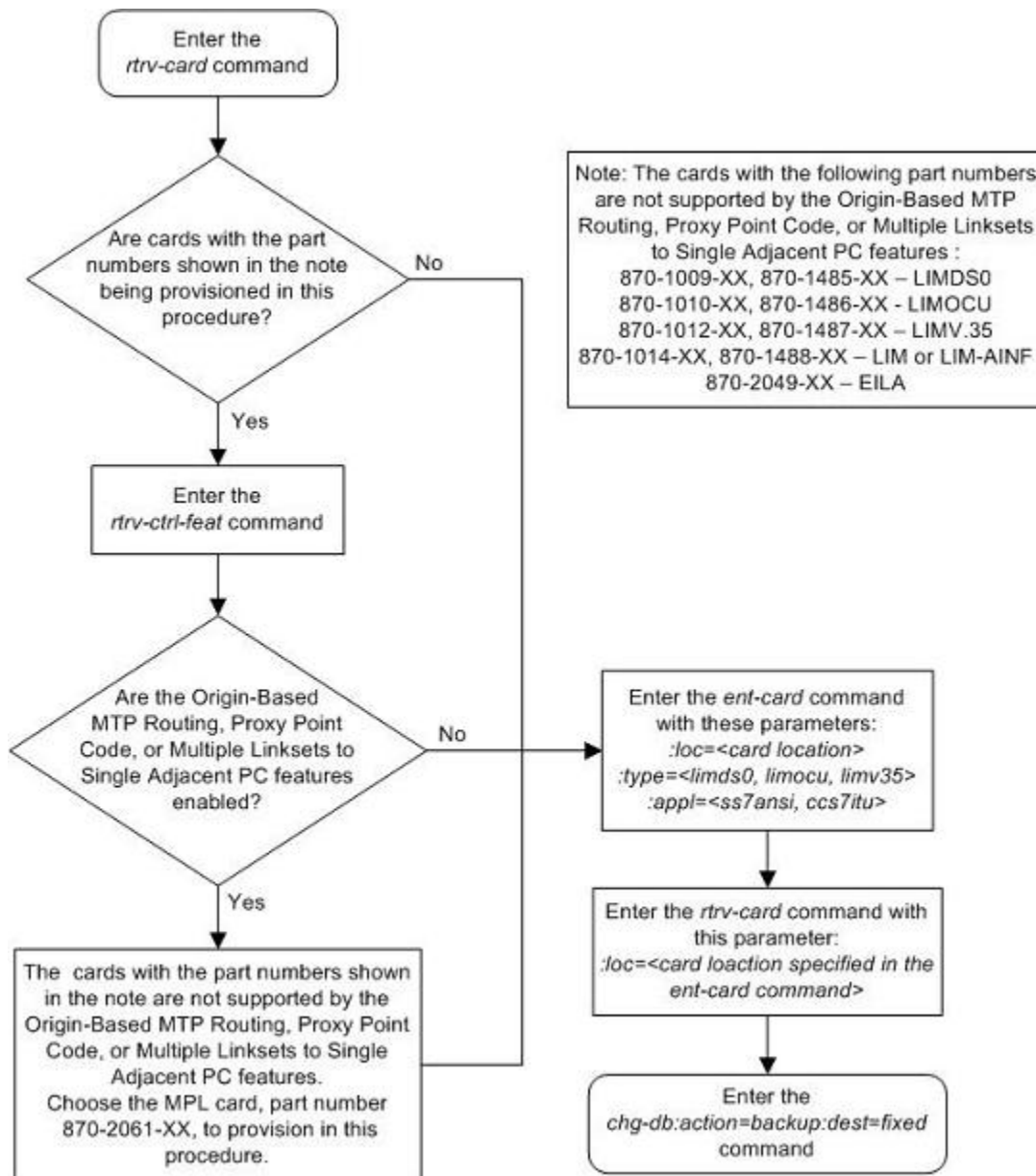
```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD   TYPE      APPL      LSET NAME      LINK SLC  LSET NAME      LINK SLC
1311   LIMDS0     SS7ANSI
```

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.
```

Flowchart 4-15. 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 - IP⁷ Secure Gateway*.

4. X.25 LIMs are removed from the database using the procedures in Chapter 2, "X.25 Gateway Configuration," in the *Database Administration Manual - Features*.

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*.

Procedure

1. Display the cards in the database using the **rtrv-card** command.

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
1101   TSM        SCCP
1102   TSM        GLS
1103   DCM        VXWLAN
1113   GSPM        EOAM
1114   TDM-A
1115   GSPM        EOAM
1116   TDM-B
1117   MDAL
1201   LIMDS0     SS7ANSI    sp2            A      0      sp1            B      0
1202   LIMDS0     SS7ANSI    sp2            A      1      nsp3           B      0
1202   LIMV35     SS7GX25    lsngwy         A      0
1203   LIMDS0     SS7ANSI    sp3            A      0
1204   LIMDS0     SS7ANSI    sp3            A      1
1205   LIMOCU     CCS7ITU    itu1           A      0
1206   LIMDS0     SS7ANSI    nsp3           A      1      nsp4           B      0
1207   LIMV35     SS7GX25    nsp1           A      0
1208   LIMV35     SS7GX25    nsp1           A      1
```

1212	TSM	SCCP							
1214	TSM	GLS							
1215	DCM	VXWLAN							
1301	LIMATM	ATMANSI	lsnatm1	A	0				
1305	DCM	VXWLAN							
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 06-10-01 16:43:42 GMT EAGLE5 36.0.0
CARD  VERSION  TYPE  APPL  PST      SST      AST
1101  113-003-000 TSM   SCCP   IS-NR     Active   ---
1102  113-003-000 TSM   GLS    IS-NR     Active   ---
1103  113-002-000 ACMENET STPLAN IS-NR     Active   ---
1104  113-002-000 ACMENET STPLAN IS-NR     Active   ---
1109  113-003-000 HMUX   BPHMUX IS-NR     Active   ---
```

```

1110 113-003-000 HMUX BPHMUX IS-NR Active ---
1201 113-003-000 LIMDS0 SS7ANSI IS-NR Active ---
1202 113-002-000 LIMV35 SS7GX25 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 LIMOCU CCS7ITU IS-NR Active ---
1206 113-003-000 LIMDS0 SS7ANSI IS-NR Active ---
1207 113-002-000 LIMV35 SS7GX25 IS-NR Active ---
1208 113-002-000 LIMV35 SS7GX25 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 TSM SCCP IS-NR Active ---
1214 113-003-000 TSM GLS IS-NR Active ---
1216 113-002-000 ACMENET STPLAN IS-NR Active ---
1301 113-003-000 LIMATM ATMANSI IS-NR Active ---
1304 113-002-000 ACMENET 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 ACMENET 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-slks** command.

To verify this, enter the **rtrv-ls** command with the linkset name shown in step 1 (**LSETNAME** 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    SET  BPS  MODE TSET  ECM  N1  N2
1311 B    0    LIMDS0    1    56000 ---  ---  BASIC ---  -----
1311 B    0    LIMDS0    1    56000 ---  ---  BASIC ---  -----

LOC  LINK  SLC  TYPE      LP      ATM      VCI  VPI  LL
SET  BPS  TSEL

LOC  LINK  SLC  TYPE      LP      ATM      VCI  VPI  E1ATM
SET  BPS  TSEL          CRC4 SI SN

LOC  LINK  SLC  TYPE      IPLIML2

LOC  LINK  SLC  TYPE

LOC  LINK  SLC  TYPE      L2T      PCR  PCR  E1  E1
SET  BPS  ECM  N1  N2  LOC  PORT TS

LOC  LINK  SLC  TYPE      L2T      PCR  PCR  T1  T1
SET  BPS  ECM  N1  N2  LOC  PORT TS

```

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)	SCRN	L3T	SLT	BEI	LST	LNKS	GWS	GWS	GWS	ACT	MES	DIS	SLSCI	NIS
sp2	240-030-000		scr1	1	1	yes	A	3	off	off	off	yes	yes	yes	yes	off

CLLI	TFATCABMLQ	MTPRSE	ASL8
----- 2		yes	yes

IPGWAPC	MATELSN	IPTPS	LSUSEALM	SLKUSEALM	GTTMODE
no	-----	---	---	---	CdPA

LOC	LINK	SLC	TYPE	L2T	BPS	L1	MODE	TSET	ECM	PCR	PCR
1201	A	0	LIMDS0	1	56000	---	---	---	BASIC	N1	N2
1202	A	1	LIMDS0	1	56000	---	---	---	BASIC	---	---
1311	A	2	LIMDS0	1	56000	---	---	---	BASIC	---	---

LOC	LINK	SLC	TYPE	LP	BPS	ATM	TSEL	VCI	VPI	LL
LOC <td>LINK</td> <td>SLC</td> <td>TYPE</td> <td>LP</td> <td>BPS</td> <td>ATM</td> <td>TSEL</td> <td>VCI</td> <td>VPI</td> <td>LL</td>	LINK	SLC	TYPE	LP	BPS	ATM	TSEL	VCI	VPI	LL

LOC	LINK	SLC	TYPE	LP	BPS	ATM	TSEL	VCI	VPI	E1ATM
LOC <td>LINK</td> <td>SLC</td> <td>TYPE</td> <td>LP</td> <td>BPS</td> <td>ATM</td> <td>TSEL</td> <td>VCI</td> <td>VPI</td> <td>E1ATM</td>	LINK	SLC	TYPE	LP	BPS	ATM	TSEL	VCI	VPI	E1ATM

LOC	LINK	SLC	TYPE	IPLIML2
LOC <td>LINK</td> <td>SLC</td> <td>TYPE</td> <td>IPLIML2</td>	LINK	SLC	TYPE	IPLIML2

LOC	LINK	SLC	TYPE	L2T	BPS	ECM	PCR	PCR	E1	E1
LOC <td>LINK</td> <td>SLC</td> <td>TYPE</td> <td>SET</td> <td>BPS</td> <td>ECM</td> <td>N1</td> <td>N2</td> <td>LOC</td> <td>PORT TS</td>	LINK	SLC	TYPE	SET	BPS	ECM	N1	N2	LOC	PORT TS

LOC	LINK	SLC	TYPE	L2T	BPS	ECM	PCR	PCR	T1	T1
LOC <td>LINK</td> <td>SLC</td> <td>TYPE</td> <td>SET</td> <td>BPS</td> <td>ECM</td> <td>N1</td> <td>N2</td> <td>LOC</td> <td>PORT TS</td>	LINK	SLC	TYPE	SET	BPS	ECM	N1	N2	LOC	PORT TS

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	ACT	MES	DIS	SLSCI	NIS
lsnatm1	240-040-000		scr1	1	1	yes	A	2	off	off	off	yes	yes	yes	yes	off

CLLI	TFATCABMLQ	MTPRSE	ASL8
----- 2		yes	yes

IPGWAPC	MATELSN	IPTPS	LSUSEALM	SLKUSEALM	GTTMODE
no	-----	---	---	---	CdPA

LOC	LINK	SLC	TYPE	L2T	BPS	L1	MODE	TSET	ECM	PCR	PCR
LOC <td>LINK</td> <td>SLC</td> <td>TYPE</td> <td>SET</td> <td>BPS</td> <td>MODE</td> <td>TSET</td> <td>---</td> <td>---</td> <td>N1</td> <td>N2</td>	LINK	SLC	TYPE	SET	BPS	MODE	TSET	---	---	N1	N2

LOC	LINK	SLC	TYPE	LP	BPS	ATM	TSEL	VCI	VPI	LL
1301	A	0	LIMATM	3	1544000	INTERNAL	---	35	15	---
1318	A	1	LIMATM	5	1544000	LINE	---	5	0	---

LOC	LINK	SLC	TYPE	LP	BPS	ATM	TSEL	VCI	VPI	E1ATM
LOC <td>LINK</td> <td>SLC</td> <td>TYPE</td> <td>LP</td> <td>BPS</td> <td>ATM</td> <td>TSEL</td> <td>VCI</td> <td>VPI</td> <td>E1ATM</td>	LINK	SLC	TYPE	LP	BPS	ATM	TSEL	VCI	VPI	E1ATM

LOC	LINK	SLC	TYPE	IPLIML2
LOC <td>LINK</td> <td>SLC</td> <td>TYPE</td> <td>IPLIML2</td>	LINK	SLC	TYPE	IPLIML2

LOC	LINK	SLC	TYPE
LOC <td>LINK</td> <td>SLC</td> <td>TYPE</td>	LINK	SLC	TYPE

LOC	LINK	SLC	TYPE	L2T SET	BPS	ECM	PCR N1	PCR N2	E1 LOC	E1 PORT	TS
LOC	LINK	SLC	TYPE	L2T SET	BPS	ECM	PCR N1	PCR N2	T1 LOC	T1 PORT	TS

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
                                L3T SLT
LSN      APCA (SS7)  SCRNL SET SET 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 L1 PCR PCR
SET BPS MODE TSET ECM N1 N2
1203 A 0 LIMDS0 1 56000 --- --- BASIC --- -----
1204 A 1 LIMDS0 1 56000 --- --- BASIC --- -----
1311 B1 2 LIMDS0 1 56000 --- --- BASIC --- -----

LOC LINK SLC TYPE LP ATM PCR PCR
SET BPS TSEL VCI VPI LL
LOC LINK SLC TYPE LP ATM PCR PCR
SET BPS TSEL VCI VPI CRC4 SI SN
LOC LINK SLC TYPE IPLIML2
LOC LINK SLC TYPE

LOC LINK SLC TYPE L2T L1 PCR PCR
SET BPS ECM N1 N2 LOC PORT TS
LOC LINK SLC TYPE L2T L1 PCR PCR
SET BPS ECM N1 N2 LOC PORT TS
```

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
                                L3T SLT                                GWS GWS GWS
LSN      APCA (SS7)  SCRNL SET SET BEI LST LNKS ACT MES DIS 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 L1 PCR PCR
SET BPS MODE TSET ECM N1 N2
1308 B 0 LIMDS0 1 56000 --- --- BASIC --- -----
1311 A1 1 LIMDS0 1 56000 --- --- BASIC --- -----
1315 A 2 LIMDS0 1 56000 --- --- BASIC --- -----
```

LOC	LINK	SLC	TYPE	LP SET	BPS	ATM TSEL	VCI	VPI	LL	
LOC	LINK	SLC	TYPE	LP SET	BPS	ATM TSEL	VCI	VPI	E1ATM CRC4 SI SN	
LOC	LINK	SLC	TYPE	IPLIML2						
LOC	LINK	SLC	TYPE							
LOC	LINK	SLC	TYPE	L2T SET	BPS	ECM	PCR N1	PCR N2	E1 LOC	E1 PORT TS
LOC	LINK	SLC	TYPE	L2T SET	BPS	ECM	PCR N1	PCR N2	T1 LOC	T1 PORT TS

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.

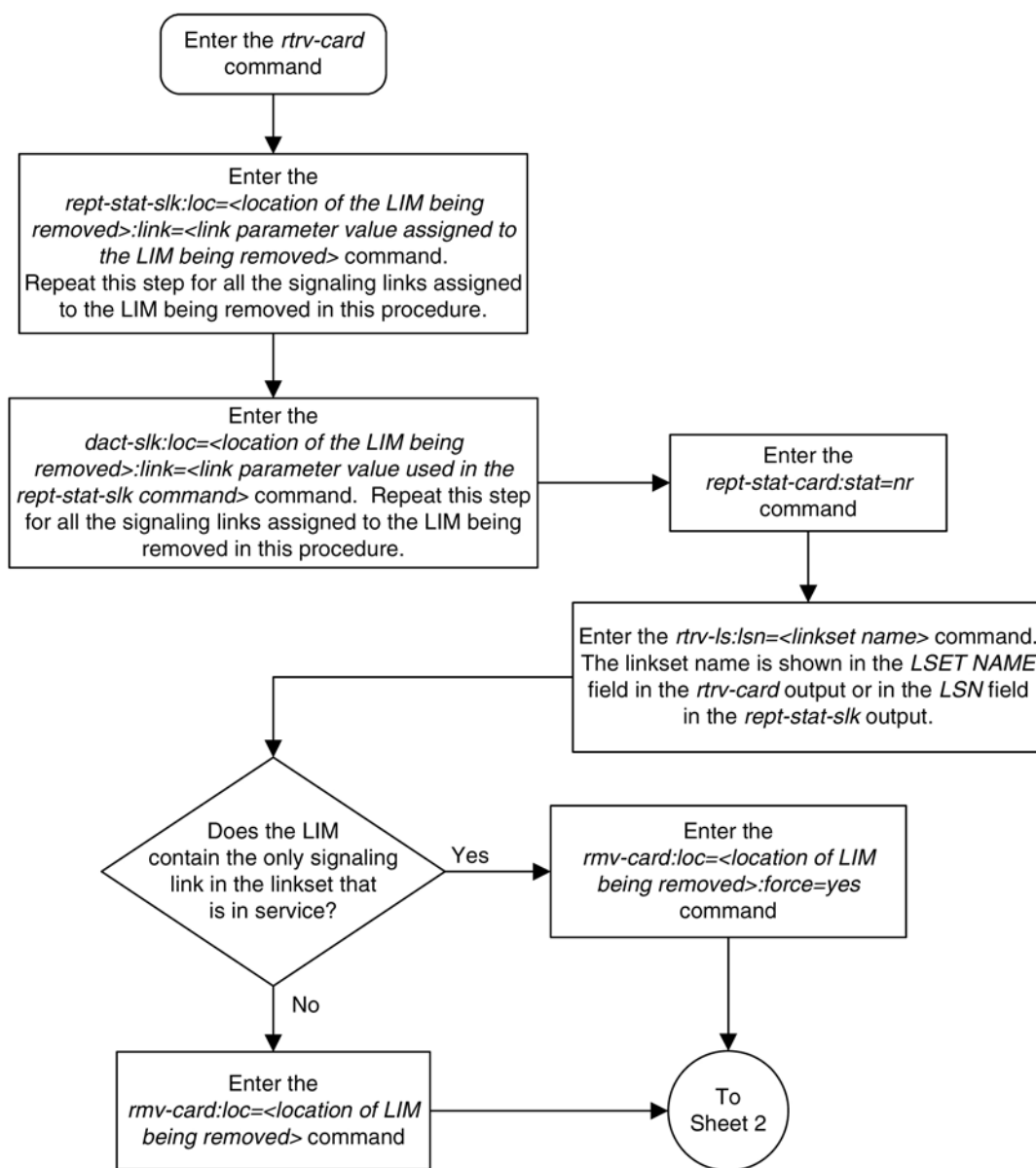
```
E2144 Cmd Rej: Location invalid for hardware configuration
```

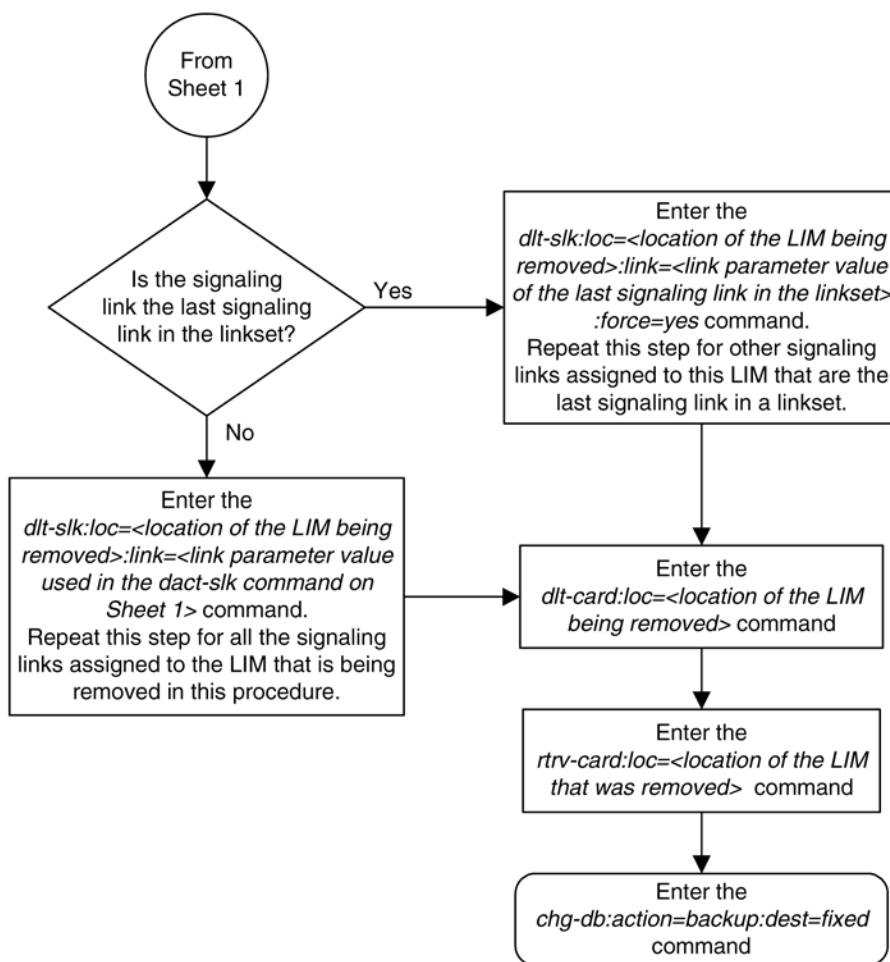
10. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

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.
```


Flowchart 4-16. 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 *Maintenance 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 4-7](#).

Table 4-7. 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

Procedure

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.

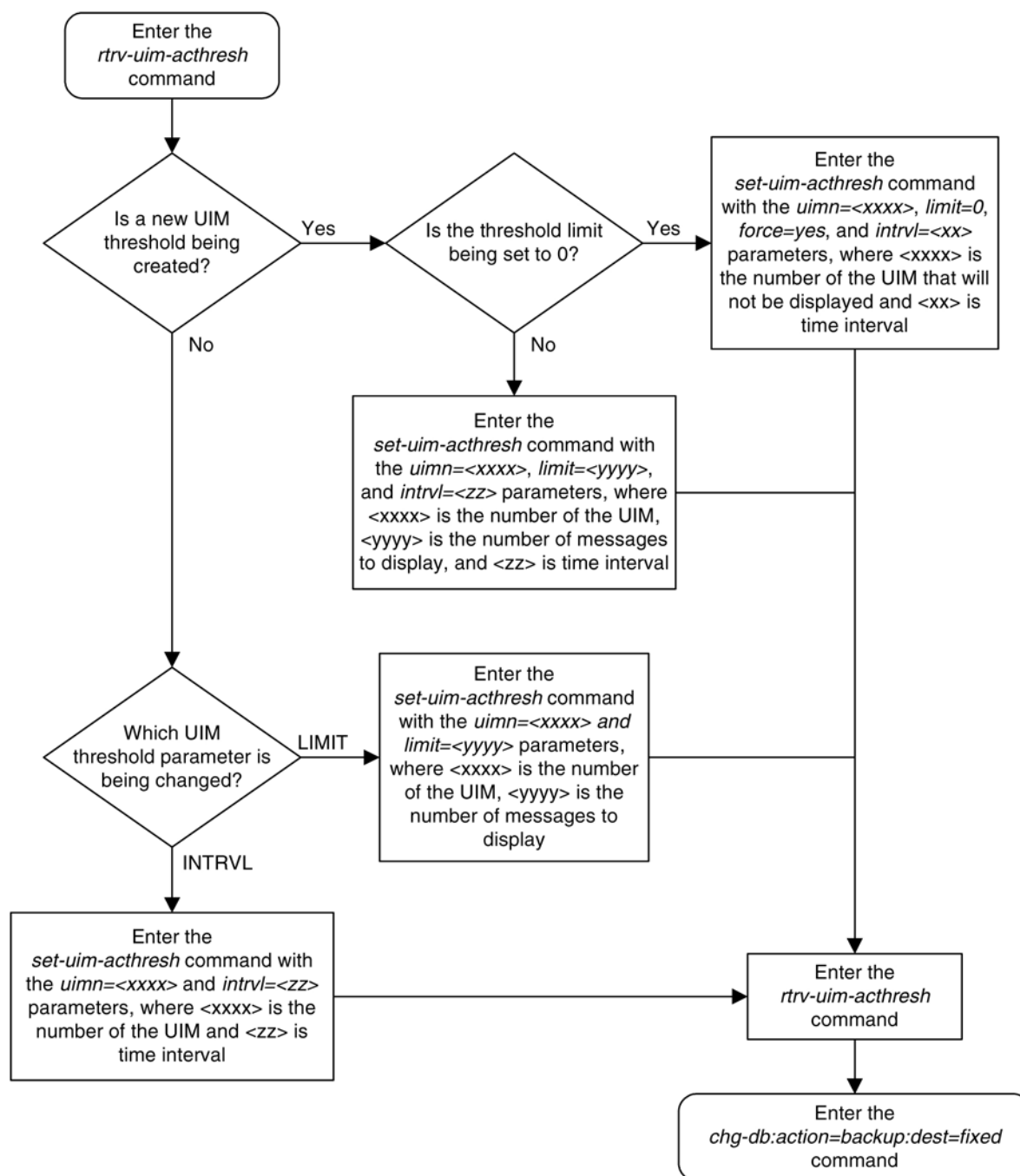
4. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

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.
```

Flowchart 4-17. 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.

Procedure

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
```

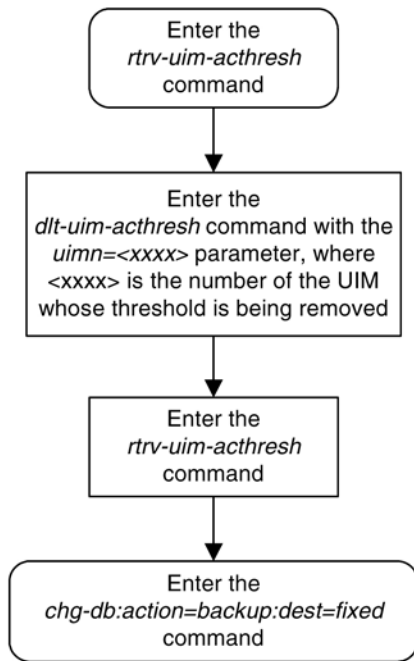
The UIM Threshold Table is (3 of 499) 1% full.

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.
```

Flowchart 4-18. 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 1: 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 *Maintenance 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 port).

: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](#) 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 *Maintenance Manual*.

The **tmout**, **dural**, and **mxinv** parameters can be applied to this terminal. See the "Security Parameters" section in the [Changing Terminal Characteristics](#) 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

                                LNP LNP
TRM  TRAF LINK SA  SYS PU  DB  DB  SUB  UIMRD
3    NO  YES  NO  YES NO  YES YES 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

```

This example shows an **rtrv-trm** command output when the LNP feature is enabled for a quantity of 2 to 12 million numbers. If the LNP feature is not enabled, or the ELAP Configuration feature is enabled and activated, the fields **LNPDB**, and **LNPSUB** are not shown in the **rtrv-trm** command output.

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.

Procedure

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  DB  SUB  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 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	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	NO
12	NO	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	NO
14	NO	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	NO
16	NO	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.

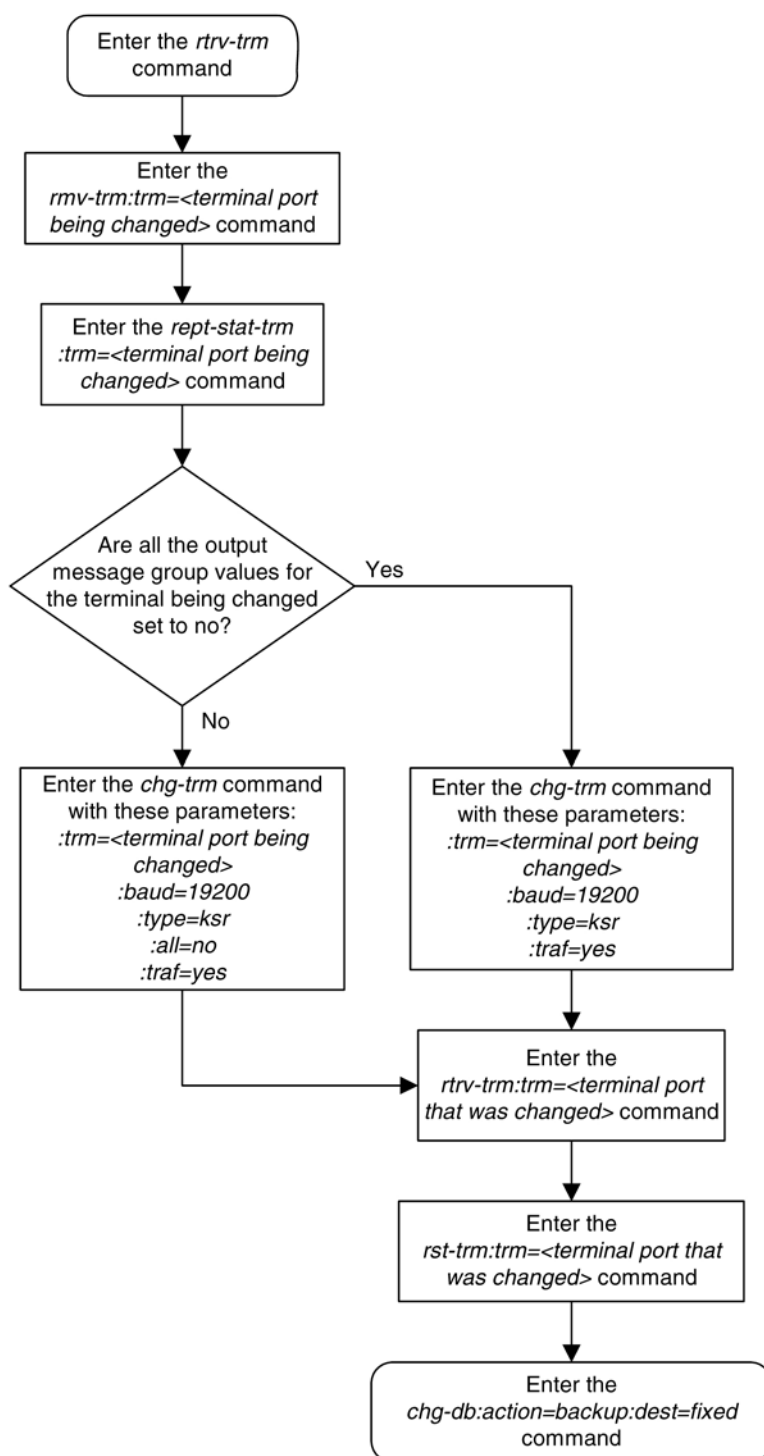
```
rlghncxa03w 06-10-01 15:08:45 GMT EAGLE5 36.0.0
Allow message sent to terminal
```

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.
```

Flowchart 4-19. Configuring the Measurements Terminal for an EAGLE 5 ISS Containing 700 Signaling Links



Adding an MCPM

This procedure is used to add an MCPM (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 SCCP cards 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](#) procedure.

After all required MCPMs have been configured in the database, go to the [Configuring the Measurements Platform Feature](#) 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.

Procedure

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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
CARD  TYPE      APPL      LSET NAME      LINK SLC LSET NAME      LINK SLC
1101   TSM        SCCP
1102   TSM        GLS
1103   DCM        VXWLAN
1113   GSPM        EOAM
1114   TDM-A
1115   GSPM        EOAM
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	LIMOCU	CCS7ITU	itu1	A	0			
1206	LIMDS0	SS7ANSI	nsp3	A	1	nsp4	B	0
1207	LIMV35	SS7GX25	nsp1	A	0			
1208	LIMV35	SS7GX25	nsp1	A	1			
1212	TSM	SCCP						
1214	TSM	GLS						
1215	DCM	VXWSLAN						
1301	LIMATM	ATMANSI	lsnatm1	A	0			
1303	STC	EROUTE						
1305	DCM	VXWSLAN						
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.

4. 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 1: 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.

5. 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
```

6. 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
```

7. 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=fixed** command.

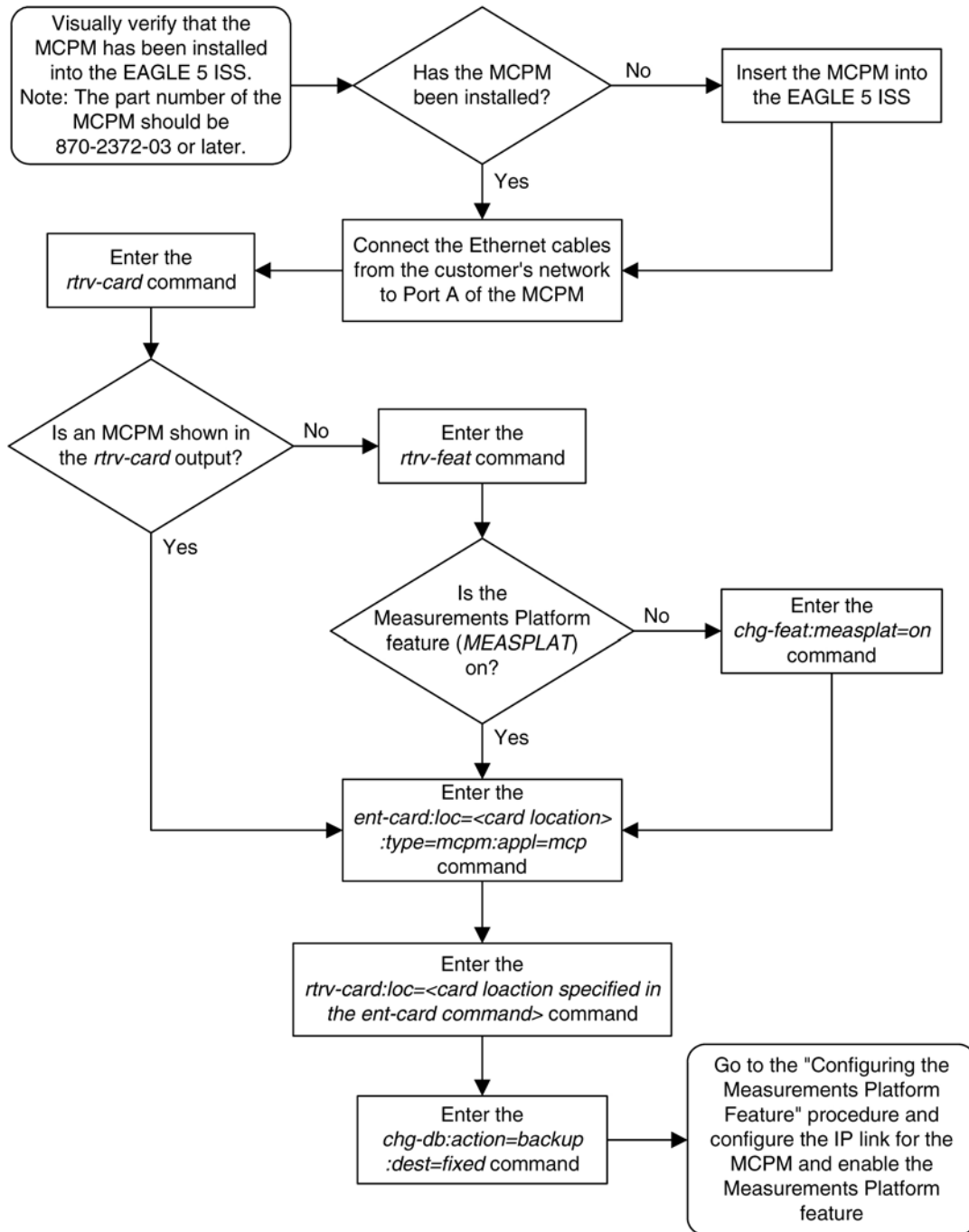
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
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.
```

9. Go to the [Configuring the Measurements Platform Feature](#) procedure and configure the IP links for these MCPMs and enable the Measurement Platform feature, if necessary.

Flowchart 4-20. 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: 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*.

Procedure

1. Display the cards in the database using the **rtrv-card** command.

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
1101    TSM          SCCP
1102    TSM          GLS
1103    DCM          VXWLAN
1113    GSPM         EOAM
1114    TDM-A
1115    GSPM         EOAM
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    LIM0CU       CCS7ITU   itu1           A    0
1206    LIMDS0       SS7ANSI   nsp3           A    1    nsp4           B    0
1207    LIMV35       SS7GX25   nsp1           A    0
1208    LIMV35       SS7GX25   nsp1           A    1
1212    TSM          SCCP
1214    TSM          GLS
1215    DCM          VXWLAN
1301    LIMATM       ATMANSI   lsnatm1       A    0
1303    STC          EROUTE
1305    DCM          VXWLAN
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 06-10-01 16:43:42 GMT EAGLE5 36.0.0
```

```
MEAS SS          PST      SST      AST
          IS-NR      Active      -----
          ALARM STATUS = No Alarms
CARD  VERSION =  TYPE  PST      SST      AST
2107 P 101-9-000  MCPM  IS-NR      Active      -----
      IP Link A              IS-NR      Active      Available
2108 101-9-000  MCPM  IS-NR      Active      -----
      IP Link A              IS-NR      Active      Available
2111 101-9-000  MCPM  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.

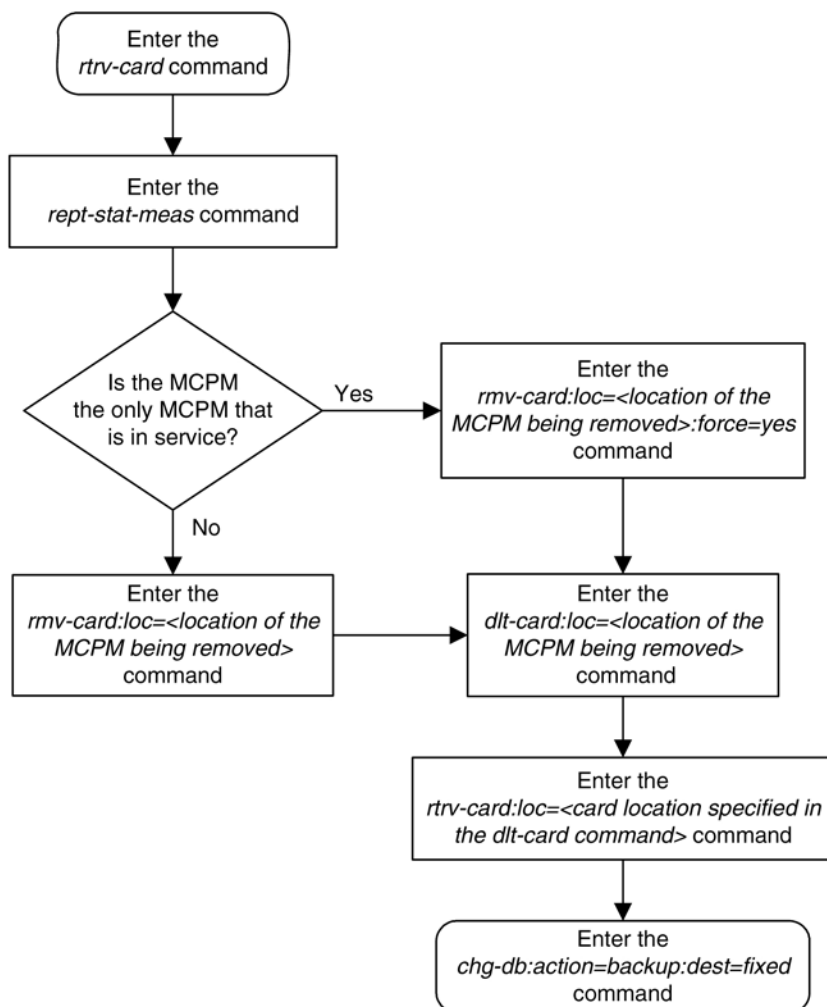
```
E2144 Cmd Rej: Location invalid for hardware configuration
```

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.

Flowchart 4-21. 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](#)
- [Changing an FTP Server](#)

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** parameter values of the **chg-netopts** command. The **pvn** and **pvnmask** 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** parameter values of the **chg-netopts** command.

Procedure

1. Display the cards in the database using the **rtrv-card** command.

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
1101   TSM        SCCP
1102   TSM        GLS
1103   DCM        VXWLAN
1113   GSPM        EOAM
1114   TDM-A
1115   GSPM        EOAM
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   LIMOCU     CCS7ITU  itu1           A    0
1206   LIMDS0     SS7ANSI  nsp3           A    1    nsp4           B    0
1207   LIMV35     SS7GX25  nsp1           A    0
1208   LIMV35     SS7GX25  nsp1           A    1
1212   TSM        SCCP
1214   TSM        GLS
1215   DCM        VXWLAN
1301   LIMATM     ATMANSI  lsnatm1       A    0
1303   STC        ERROUTE
1305   DCM        VXWLAN
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        ERROUTE
2103   STC        ERROUTE
2105   STC        ERROUTE
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](#) 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 06-10-01 16:43:42 GMT EAGLE5 36.0.0

MEAS SS          PST          SST          AST
          IS-NR          Active          -----
          ALARM STATUS = No Alarms
CARD  VERSION      TYPE      PST          SST          AST
2107  101-9-000    MCPM     IS-NR        Active        -----
      IP Link A      IS-NR        Active        Available
2108  P 101-9-000    MCPM     IS-NR        Active        -----
      IP Link A      IS-NR        Active        Available
2111  101-9-000    MCPM     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
```

NOTE: If the status of the MCPM that the IP Link is being assigned to is OOS-MT OSBLD, 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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
LOC 2107
  SRCHORDR  SRVR
  DNSA      -----
  DNSB      -----
  DEFROUTER -----
  DOMAIN    -----
LOC 2108
  SRCHORDR  LOCAL
  DNSA      150.1.1.2
  DNSB      -----
  DEFROUTER 150.1.1.25
  DOMAIN    NC.TEKELEC.COM
LOC 2111
  SRCHORDR  LOCAL
  DNSA      150.1.1.3
  DNSB      -----
  DEFROUTER 150.1.1.28
  DOMAIN    NC.TEKELEC.COM
```

- 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=150.1.1.5
0
```

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** parameter values of the **chg-netopts** command.

Display the **pvn** and **pvnmask** 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** and **pvnmask** parameters are not configured. Go to step 7.

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
```

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** parameter values of the **chg-netopts** command. Go to step 7.

- Display the IP link assignments using the **rtrv-ip-lnk** command.

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      -----
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      -----
2111  B      -----
```

- 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:m
cast=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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
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 512) 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 06-10-01 16:43:42 GMT EAGLE5 36.0.0

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

CARD  VERSION    TYPE  PST      SST      AST
2107 P 101-9-000 MCPM  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](#) 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](#) 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.

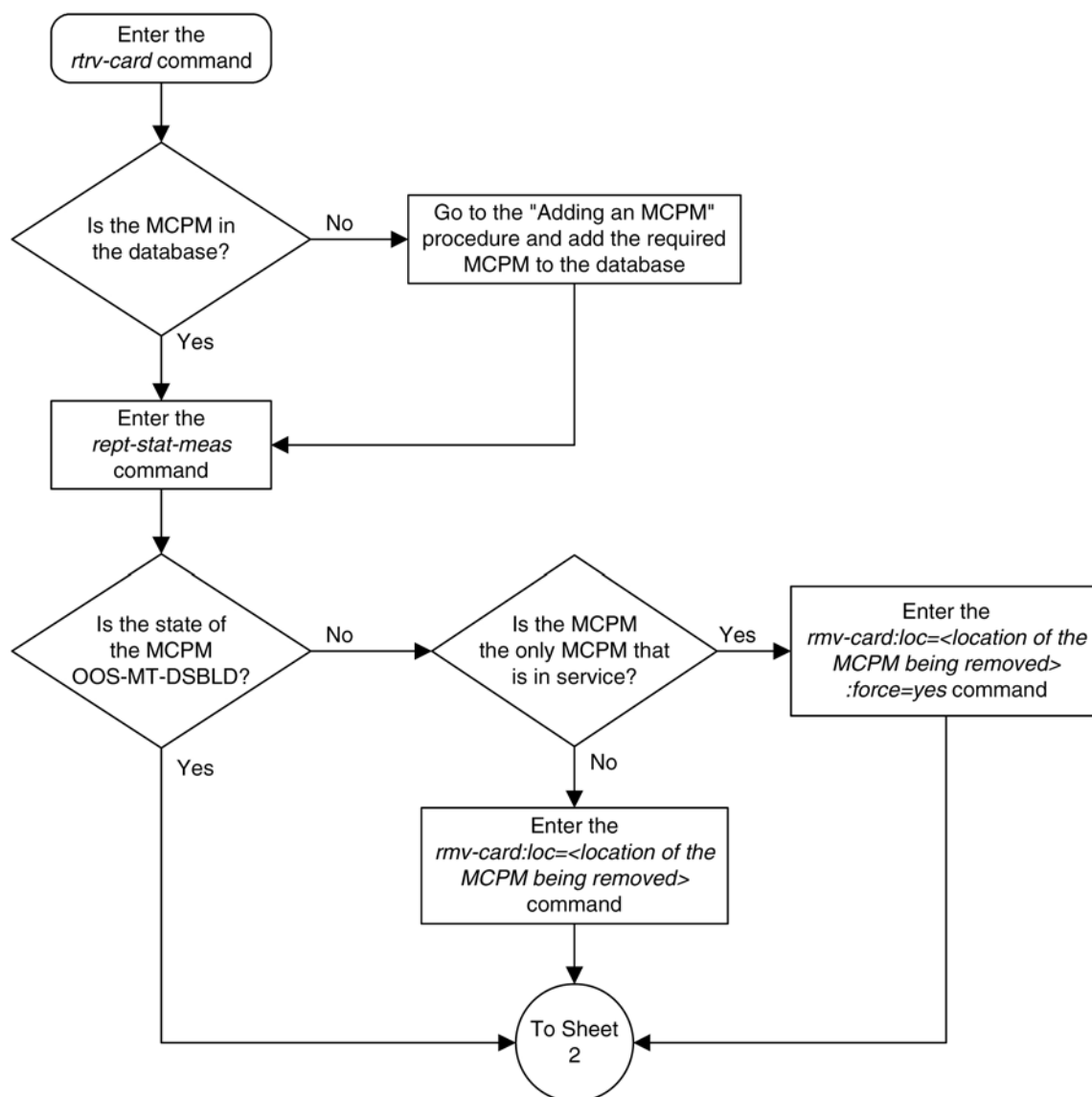
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

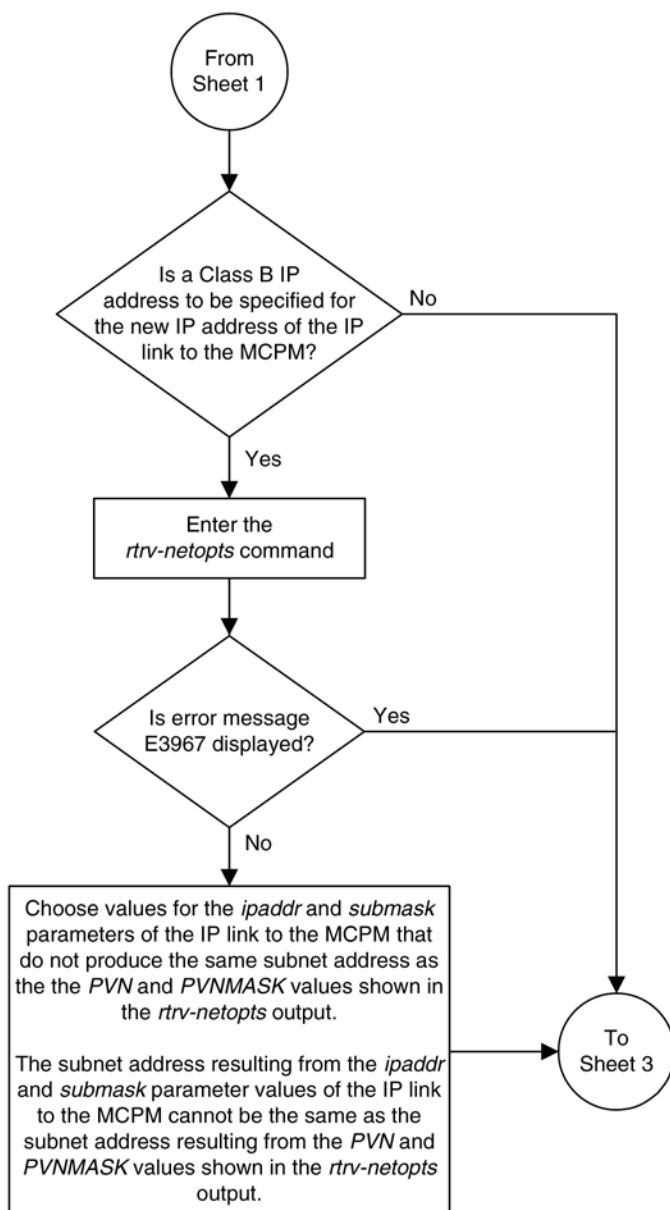
```

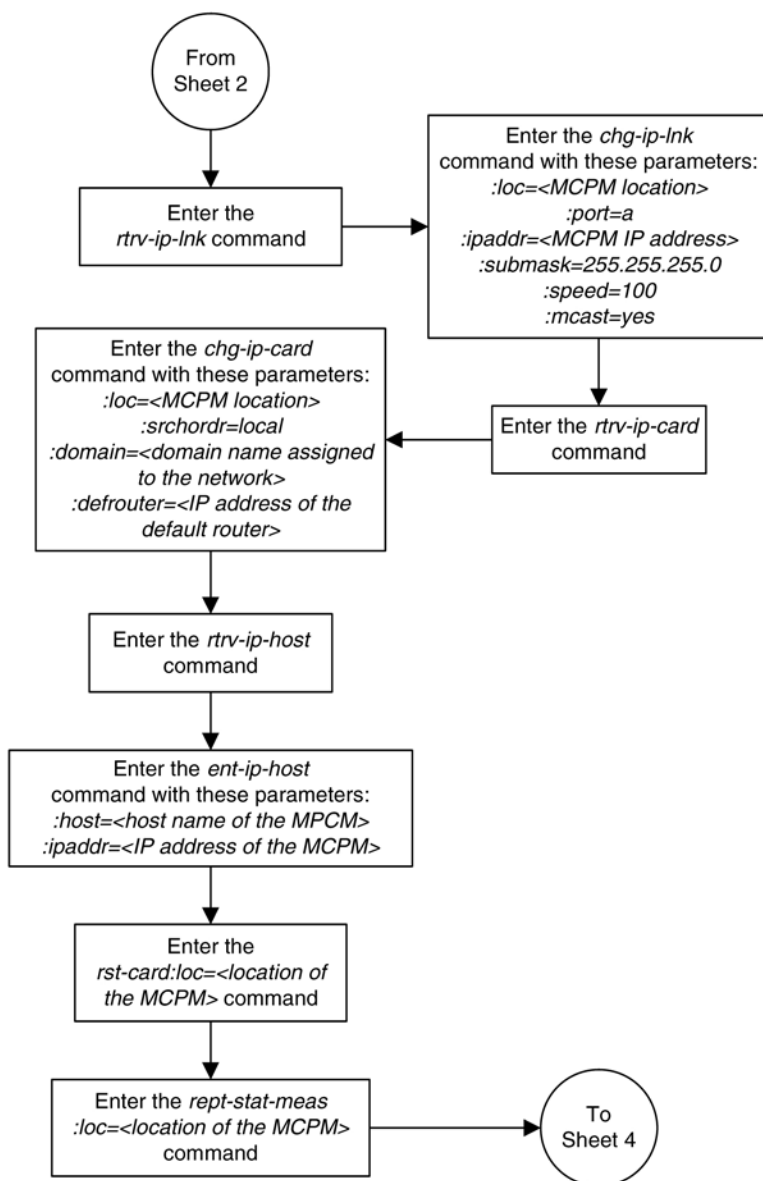
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.

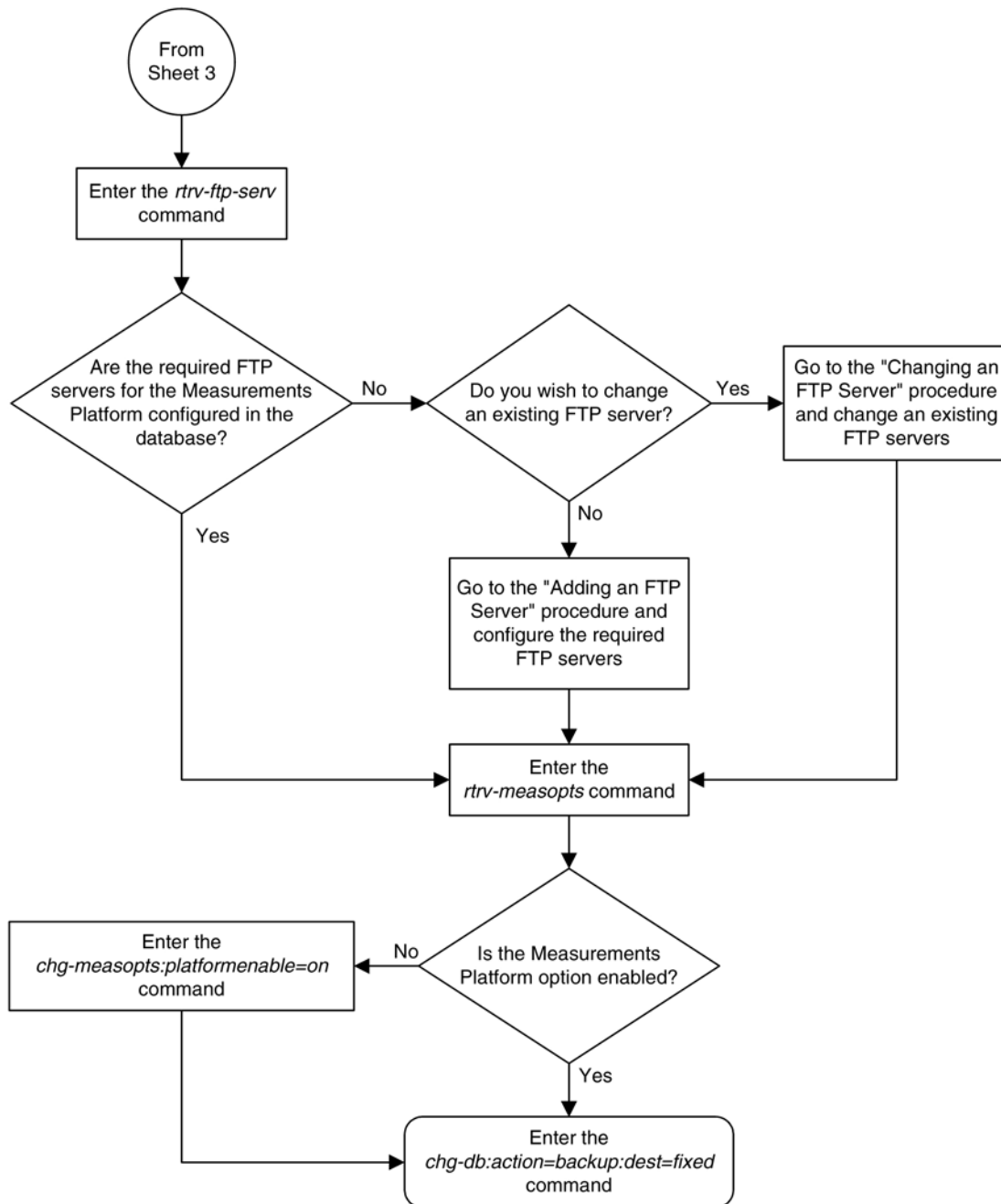
```


Flowchart 4-22. 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 two values for the **app** parameter:

- **meas** – The FTP servers for the Measurements Platform
- **user** – The FTP servers for the FTP Retrieve and Replace feature.



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.

Only two FTP servers can be configured for the Measurements Platform feature.

Only two FTP servers can be configured for the FTP Retrieve and Replace feature.

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.

Procedure

1. Display the FTP servers in the database using the **rtrv-ftp-serv** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
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 this command.

```
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"
```



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 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 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 using the **rtrv-ftp-serv** command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
FTP Client Security: ON
```

APP	IPADDR	LOGIN	PRI0
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 (4 of 10) 40% full
```

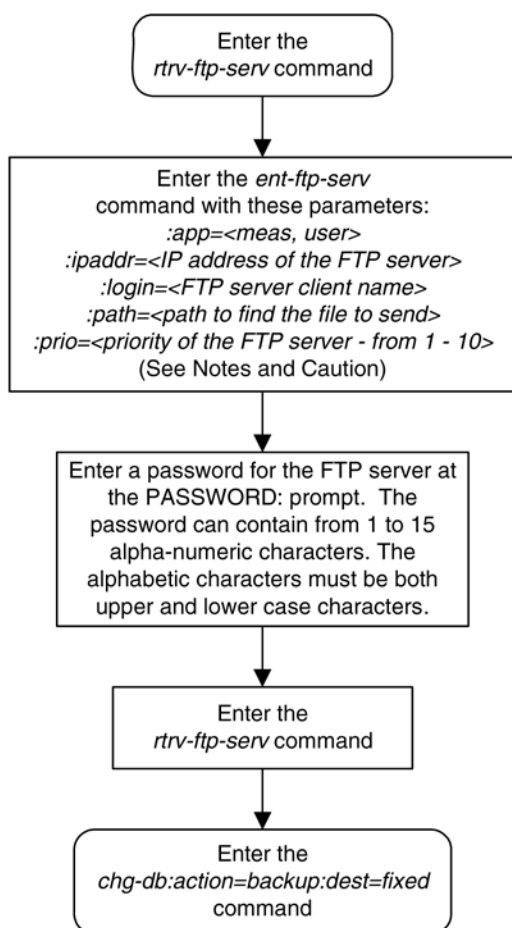
5. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

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.
```

Flowchart 4-23. Adding an FTP Server



Notes:

1. Only 2 FTP servers for the Measurement Platform (:app=meas) can be configured in the database.
2. Only 2 FTP servers for the FTP Retrieve and Replace feature (:app=user) can be configured in the database.
3. The login parameter value can contain from 1 to 15 alpha-numeric characters. The alphabetic characters can be both upper and lower case characters.
4. The path parameter value is a mixed-case quoted character string with a valid FTP path format that can contain up to 100 characters.
5. 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.
6. 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 two values for the **app** parameter:

- **meas** – The FTP servers for the Measurements Platform
- **user** – The FTP servers for the FTP Retrieve and Replace feature.

:ipaddr – The IP address of the FTP server.



CAUTION: Removing all FTP servers for an application will disable the feature supported by the FTP servers.

Procedure

1. Display the FTP servers in the database using the **rtrv-ftp-serv** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
FTP Client Security: ON
```

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		
user	1.255.0.100	ftpuser1	3
Path:	mp\user		
user	1.255.0.102	ftpuser5	7
Path:	mp\backup\user		

FTP SERV table is (4 of 10) 40% 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 06-10-01 21:18:37 GMT EAGLE5 36.0.0
FTP SERV table is (1 of 10) 10% full
DLT-FTP-SERV: MASP A - COMPLTD
```

3. Display the changes using the **rtrv-ftp-serv** command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
FTP Client Security: ON
```

APP	IPADDR	LOGIN	PRI0
meas	1.255.0.100	ftpmeas3	3
Path:	~meas\local		
user	1.255.0.100	ftpuser1	3
Path:	mp\user		
user	1.255.0.102	ftpuser5	7
Path:	mp\backup\user		

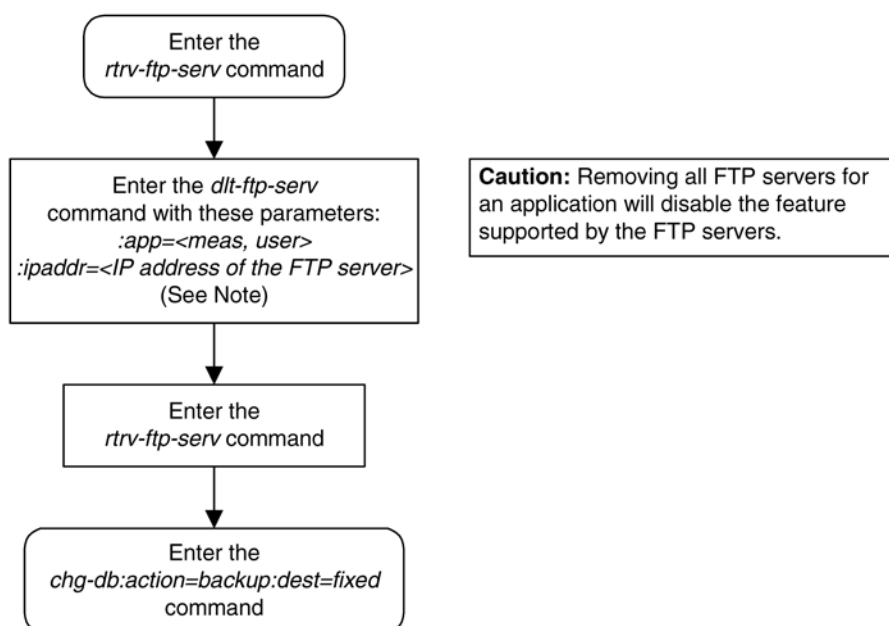
FTP SERV table is (3 of 10) 30% full

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.
```


Flowchart 4-24. 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 two values for the **app** parameter:

- **meas** – The FTP servers for the Measurements Platform
- **user** – The FTP servers for the FTP Retrieve and Replace feature.



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](#) procedure, then re-entered with the new IP address using the [Adding an FTP Server](#) 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.

Procedure

1. Display the FTP servers in the database using the **rtrv-ftp-serv** command.

This is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
FTP Client Security: ON
```

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		
user	1.255.0.100	ftpuser1	3
Path:	mp\user		
user	1.255.0.102	ftpuser5	7
Path:	mp\backup\user		

FTP SERV table is (4 of 10) 40% 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 06-10-01 21:18:37 GMT EAGLE5 36.0.0
CHG-FTP-SERV: MASP A - COMPLTD
```

NOTE: If the login parameter was not specified in step 2, skip this step, and go to step 4.

3. Enter a password for the FTP server changed in step 2 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 using the **rtrv-ftp-serv** command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-01 09:12:36 GMT EAGLE5 36.0.0
FTP Client Security: ON
```

APP	IPADDR	LOGIN	PRI0
meas	1.255.0.100	ftpmeas3	3
Path:	~meas\local		
meas	1.255.0.101	meas25	1
Path:	mp\measurements\backup\dat		
user	1.255.0.100	ftpuser1	3
Path:	mp\user		
user	1.255.0.102	ftpuser5	7
Path:	mp\backup\user		

FTP SERV table is (4 of 10) 40% full

5. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

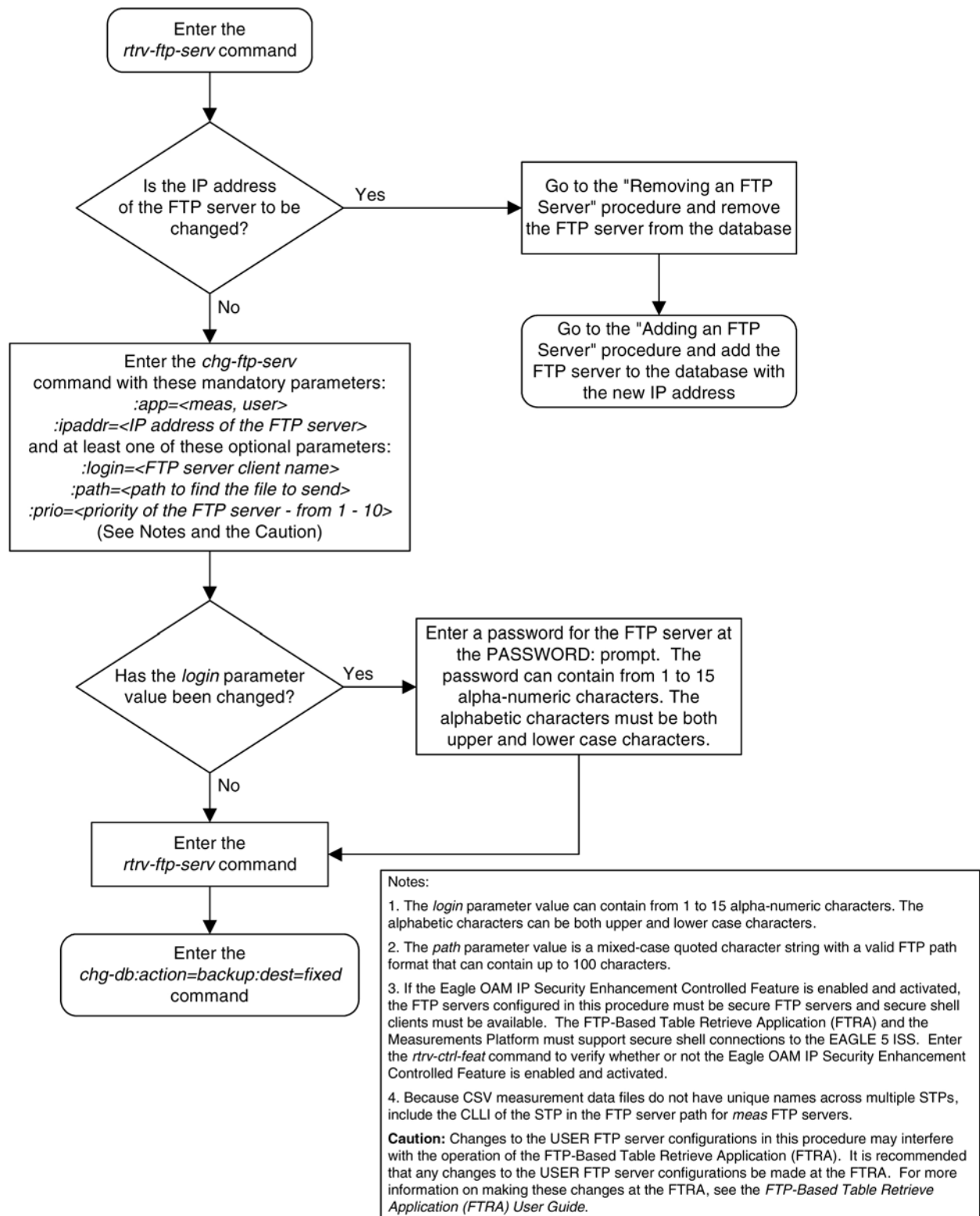
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```

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.

```

Flowchart 4-25. Changing an FTP Server



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 4-8](#).

Table 4-8. 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 SCCP cards 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](#) 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](#) 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 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*.

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](#) 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** parameter values of the **chg-netopts** command. The **pvn** and **pvnmask** 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** parameter values of the **chg-netopts** command.

The examples in this procedure are used to add an IPSM in card location 2107.

Procedure

1. Display the cards in the database using the **rtrv-card** command.

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
1101    TSM          SCCP
1102    TSM          GLS
1103    DCM          VXWLAN
1113    GSPM          EOAM
1114    TDM-A
1115    GSPM          EOAM
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    LIMOCU       CCS7ITU    itu1           A    0
1206    LIMDS0       SS7ANSI    nsp3           A    1    nsp4           B    0
1207    LIMV35       SS7GX25    nsp1           A    0
1208    LIMV35       SS7GX25    nsp1           A    1
1212    TSM          SCCP
1214    TSM          GLS
1215    DCM          VXWLAN
1301    LIMATM       ATMANSI    lsnatm1       A    0
1303    STC          EROUTE
1305    DCM          VXWLAN
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 1: 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.

2. 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.

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 FTSA, the public host key fingerprint displayed in UIM 1493 must be added to the **hosts.xml** file in the FTSA. Record the public host key fingerprint information displayed in UIM 1493 if a secure connection to the FTSA will be made. For more information about editing the **hosts.xml** file on the FTSA, see the *FTP-Based Table Retrieve Application (FTSA) 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 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	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	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	APP	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	NO
2	YES	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	YES	NO	NO
4	YES	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	YES	NO	NO
6	YES	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	YES	NO	NO
8	YES	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	YES
10	YES	YES	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	NO	NO
12	NO	NO	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	NO	NO
14	NO	NO	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	NO	NO
16	NO	NO	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	NO	NO
18	NO	NO	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	NO	NO
20	NO	NO	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	NO	NO
22	NO	NO	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 NO
24 NO NO NO NO NO NO NO NO NO NO NO NO NO

```

If you wish to change the output parameter values for the telnet terminals added in this procedure, perform the [Changing Terminal Characteristics](#) 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.

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` parameter values of the `chg-netopts` command.

Display the `pvn` and `pvnmask` 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` 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

```

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` parameter values of the `chg-netopts` command. Go to step 8.

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

```

9. 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 06-10-01 09:12:36 GMT EAGLE5 36.0.0
IPADDR          HOST

IP Host table is (2 of 512) 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 06-10-01 21:20:37 GMT EAGLE5 36.0.0
LOC 2107
SRCHORDR  SRVR
DNSA      -----
DNSB      -----
DEFROUTER -----
DOMAIN    -----
```

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 06-10-01 21:20:37 GMT EAGLE5 36.0.0
LOC 2107
SRCHORDR   LOCAL
DNSA       -----
DNSB       -----
DEFROUTER  150.1.1.250
DOMAIN     ip.nc.tekelec.com
```

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](#) 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](#) 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
```

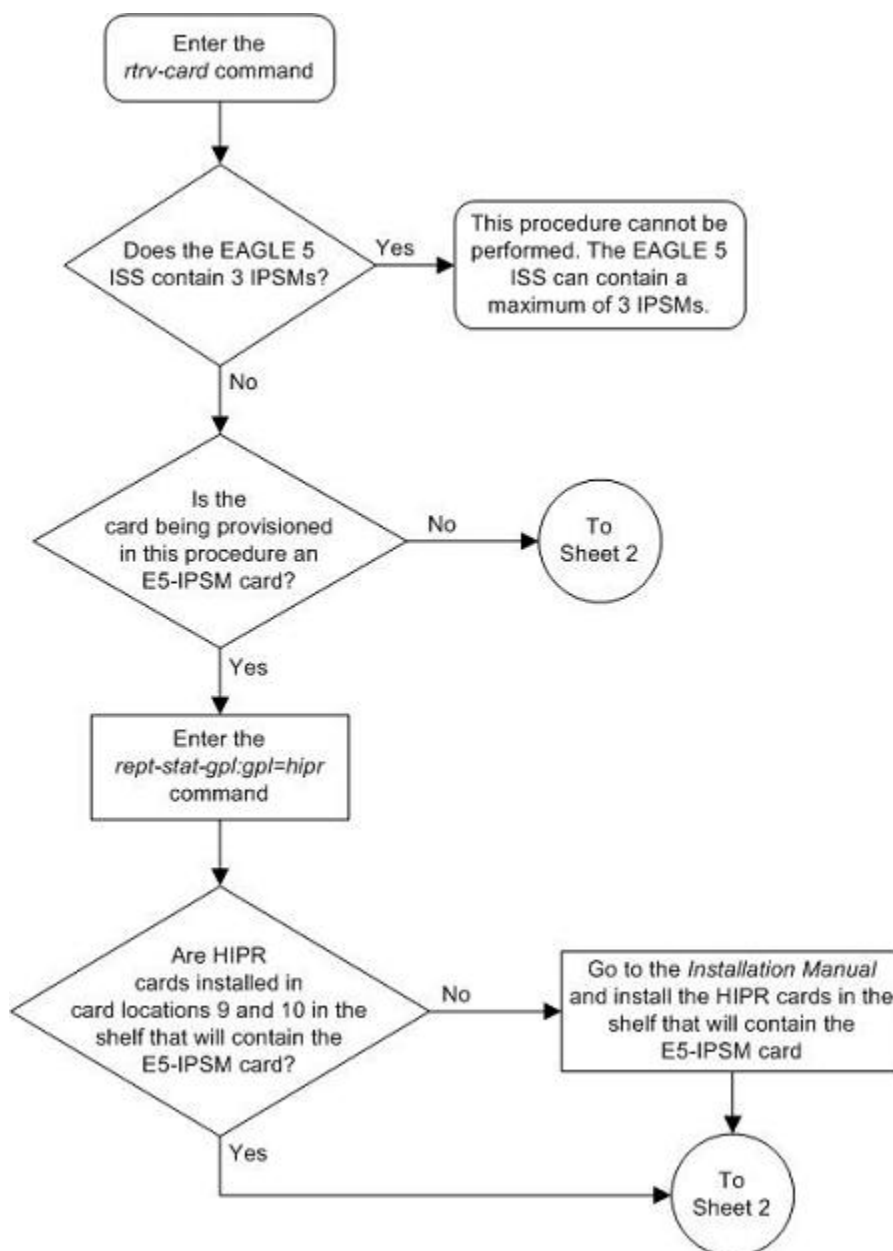
```
rlghncxa03w 07-05-01 15:08:45 GMT EAGLE5 37.0.0
Command Completed.
```

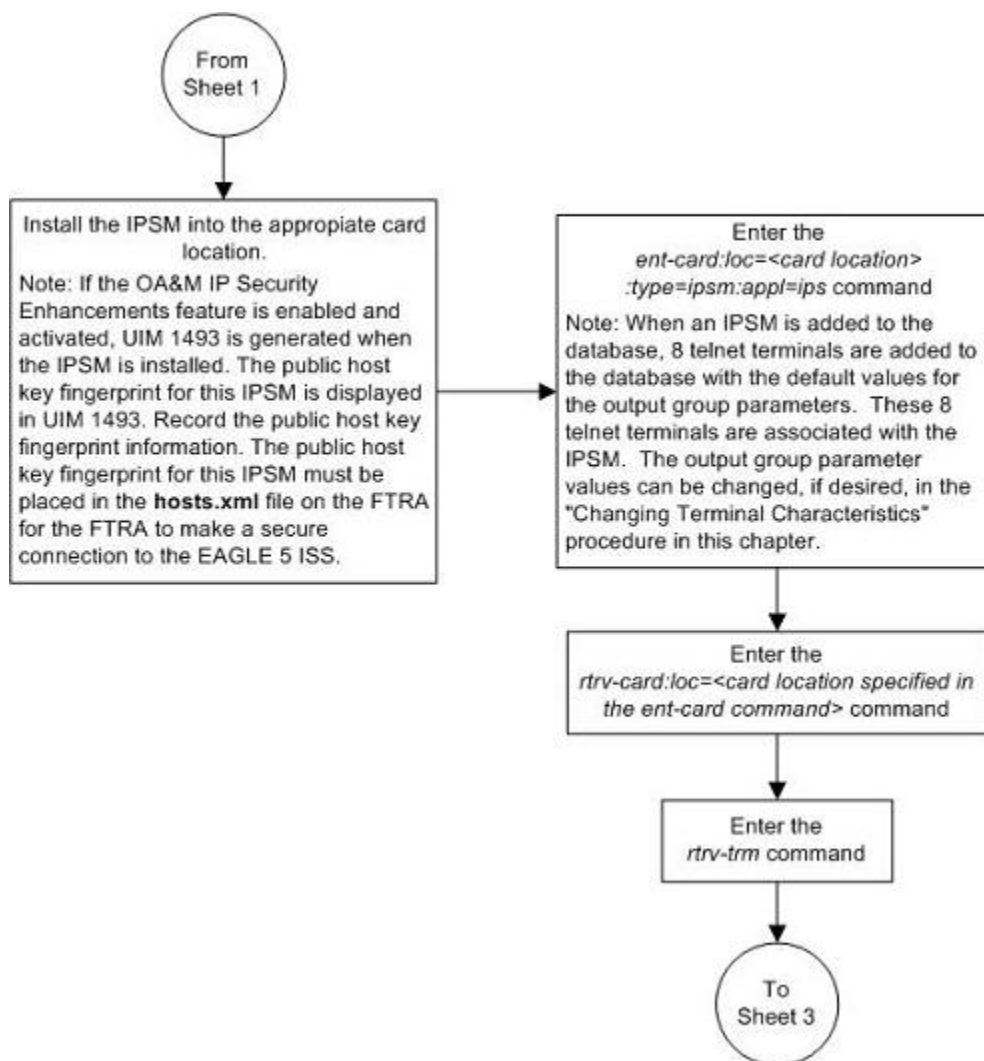
19. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

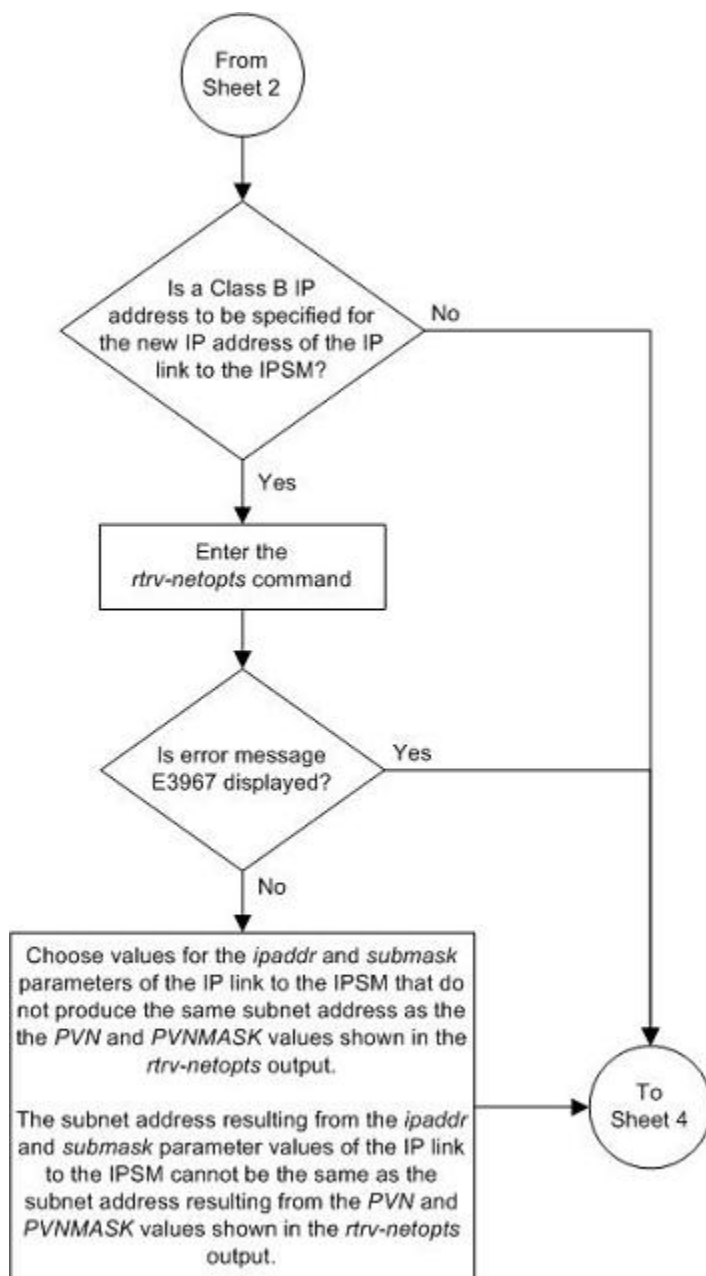
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

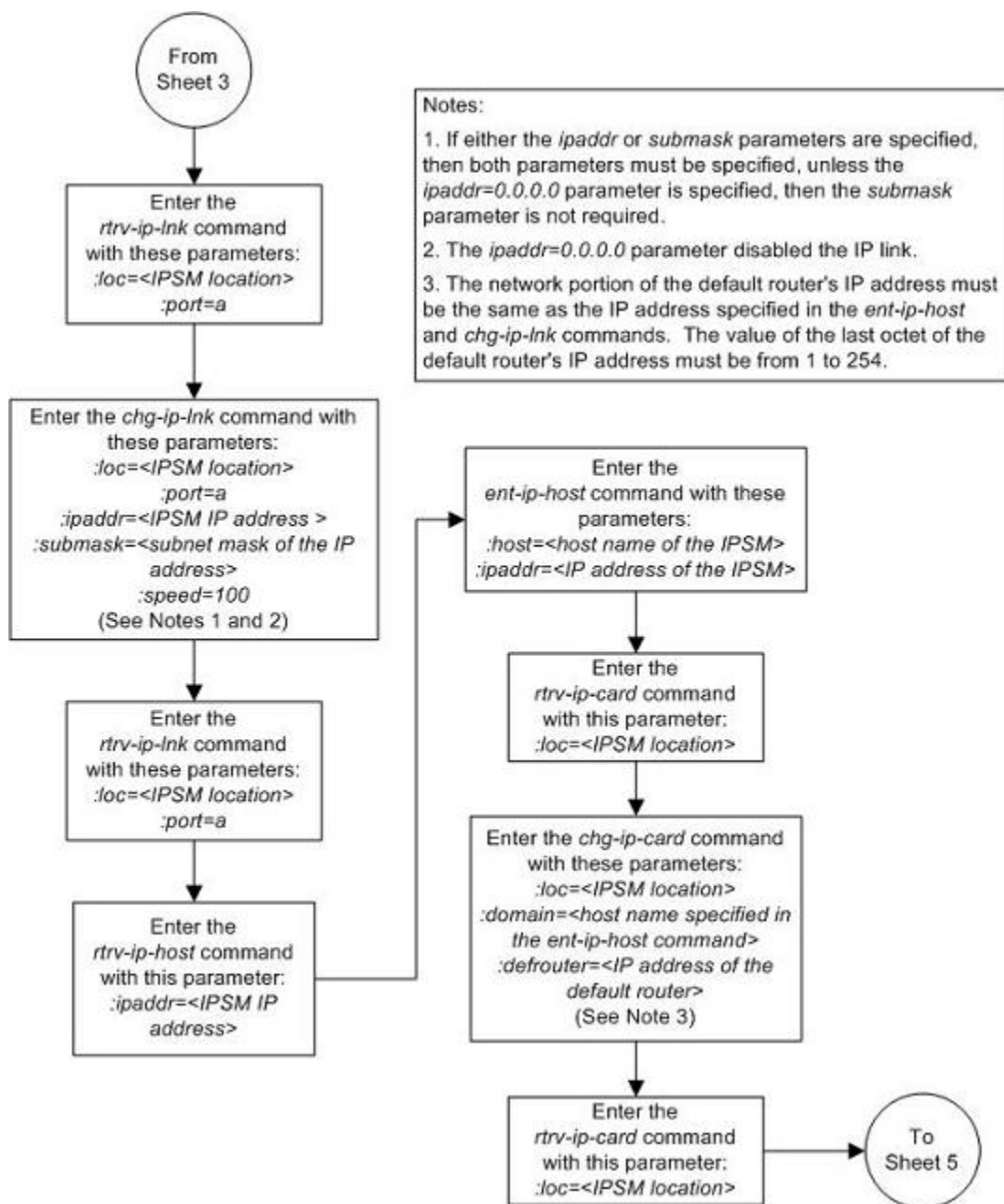
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

Flowchart 4-26. Adding an IPSM











4-141



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*.

Procedure

1. Display the cards in the database using the **rtrv-card** command.

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
1101   TSM        SCCP
1102   TSM        GLS
1103   DCM        VXWLAN
1113   GSPM        EOAM
1114   TDM-A
1115   GSPM        EOAM
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   LIMOCU     CCS7ITU   itu1          A    0
1206   LIMDS0     SS7ANSI   nsp3          A    1    nsp4          B    0
1207   LIMV35     SS7GX25   nsp1          A    0
1208   LIMV35     SS7GX25   nsp1          A    1
1212   TSM        SCCP
1214   TSM        GLS
1215   DCM        VXWLAN
1301   LIMATM     ATMANSI   lsnatm1       A    0
1303   STC        EROUTE
1305   DCM        VXWLAN
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 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      APPL      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 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  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	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	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

.

.

.

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.

- 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.
```

- 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.
```

- 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.

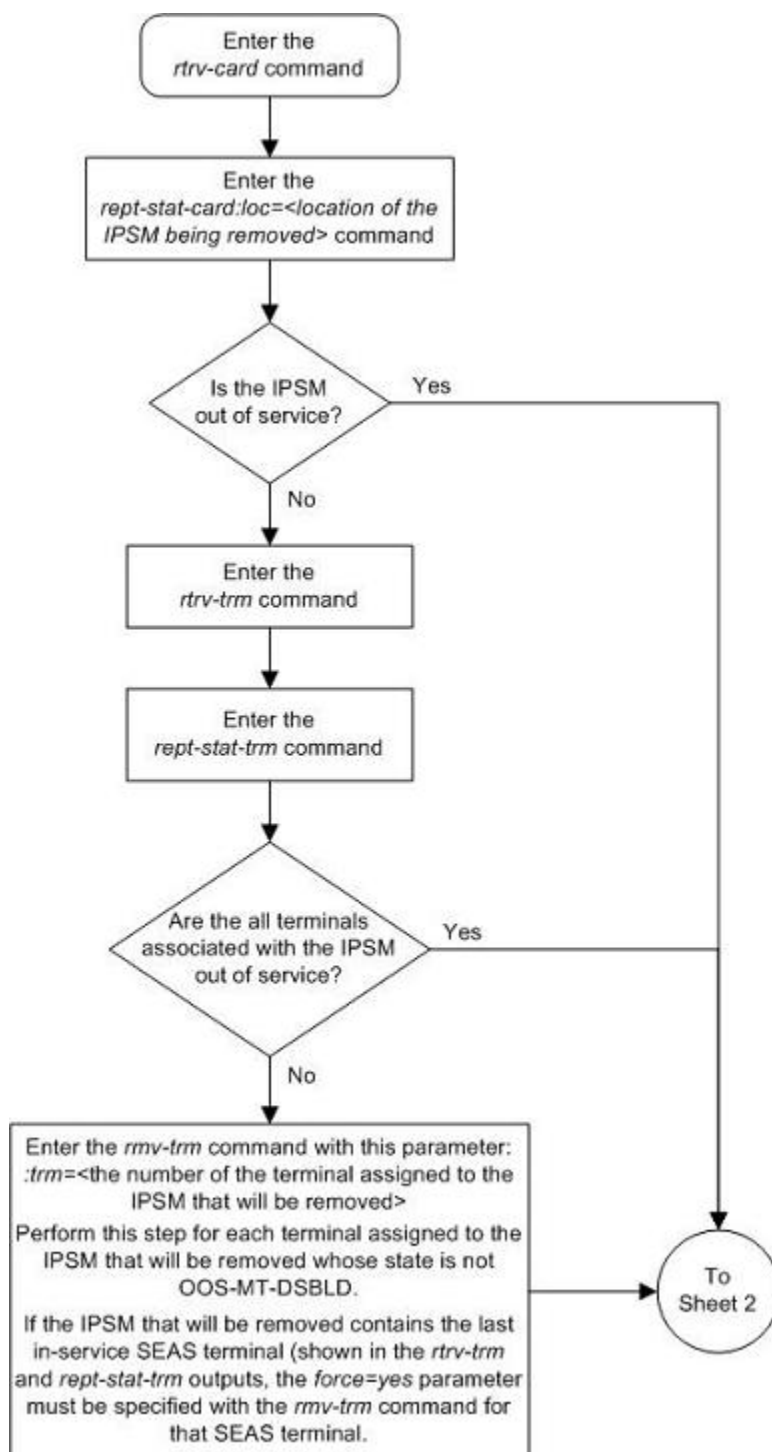
```
E2144 Cmd Rej: Location invalid for hardware configuration
```

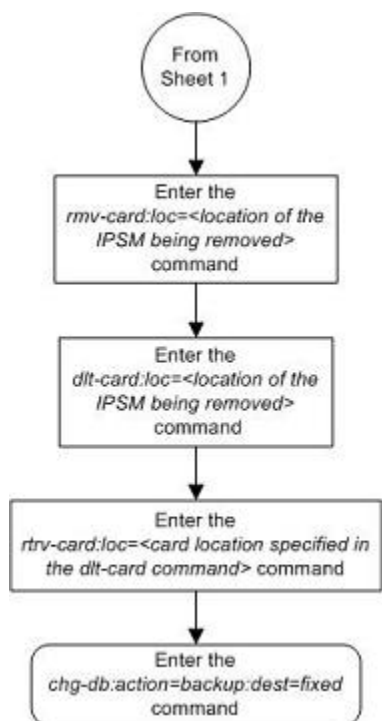
9. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

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.
```

Flowchart 4-27. 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](#) 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.

Procedure

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 1: 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](#) procedure and enable and activate the Network Security Enhancements feature.



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.

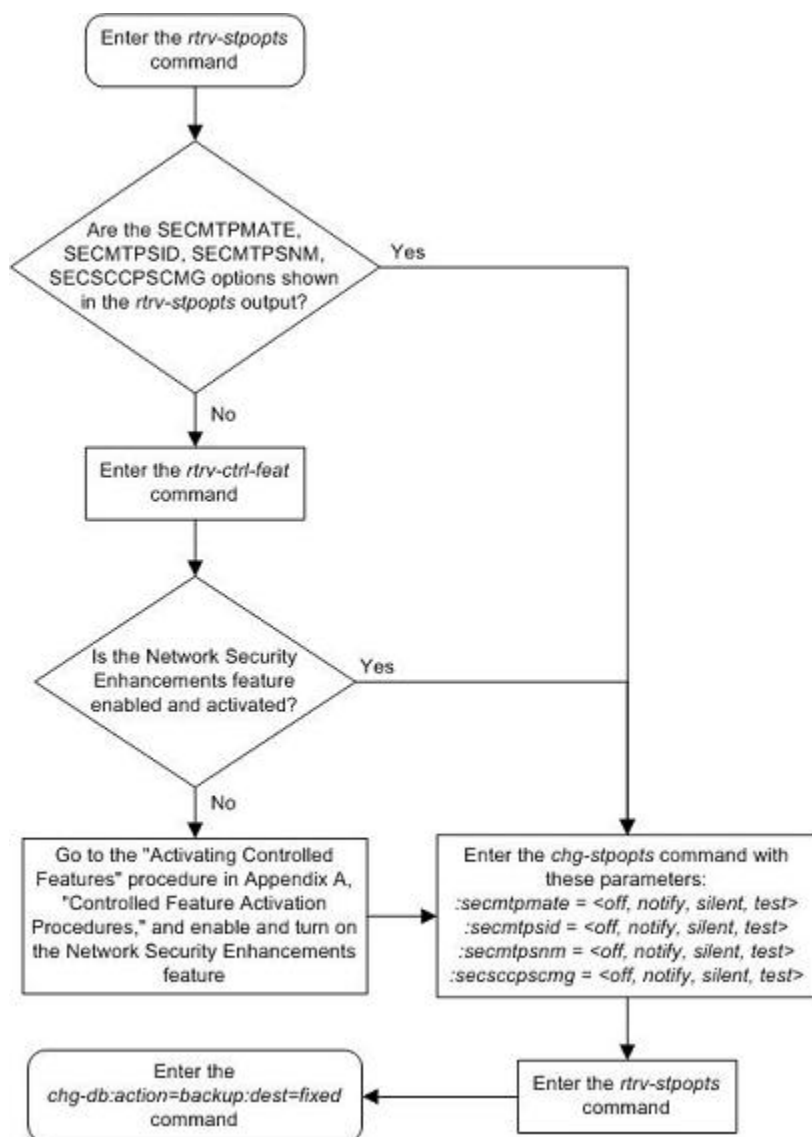
```
rlghncxa03w 06-10-01 16:02:05 GMT EAGLE5 36.0.0
STP OPTIONS
-----
SECMTPSID          silent
SECMTPMATE         notify
SECMTPSNM          notify
SECMTPSCMG         notify
```

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.
```

Flowchart 4-28. 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
```

Procedure

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
```

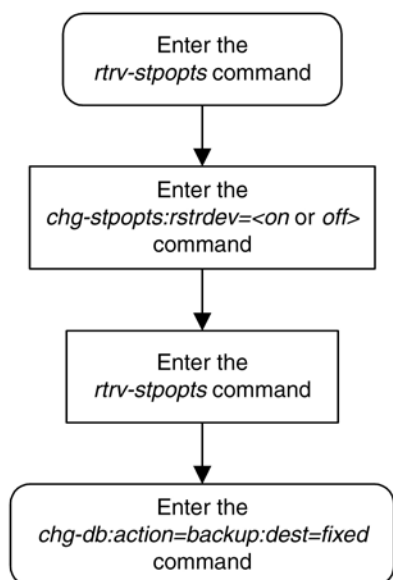
NOTE: The **rtrv-stpopts command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the **rtrv-stpopts** command, see the **rtrv-stpopts** command description in the *Commands Manual*.**

4. Backup the new changes using the **chg-db:action=backup:dest=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.
```

Flowchart 4-29. 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 *Maintenance 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 4-9](#) 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 4-9. 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.

Procedure

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 4-9](#) 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](#) procedure. To change an entry in the Frame Power Alarm Threshold table, perform the [Changing an Entry in the Frame Power Alarm Threshold Table](#) 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 (Amps)	(Watts)	Power Consumption (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.

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

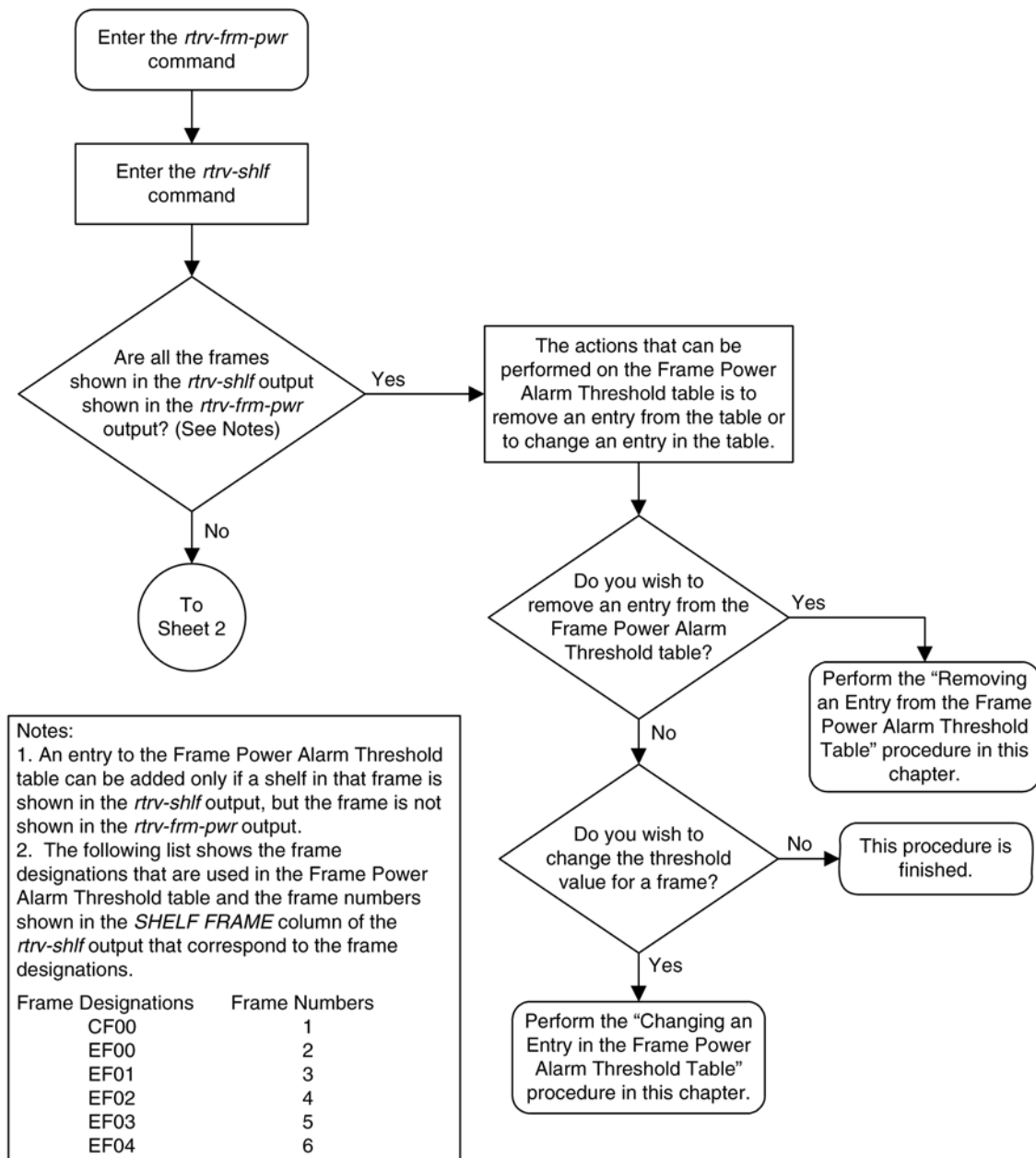
Frame          Power Threshold (Amps)
-----
ef01                      35

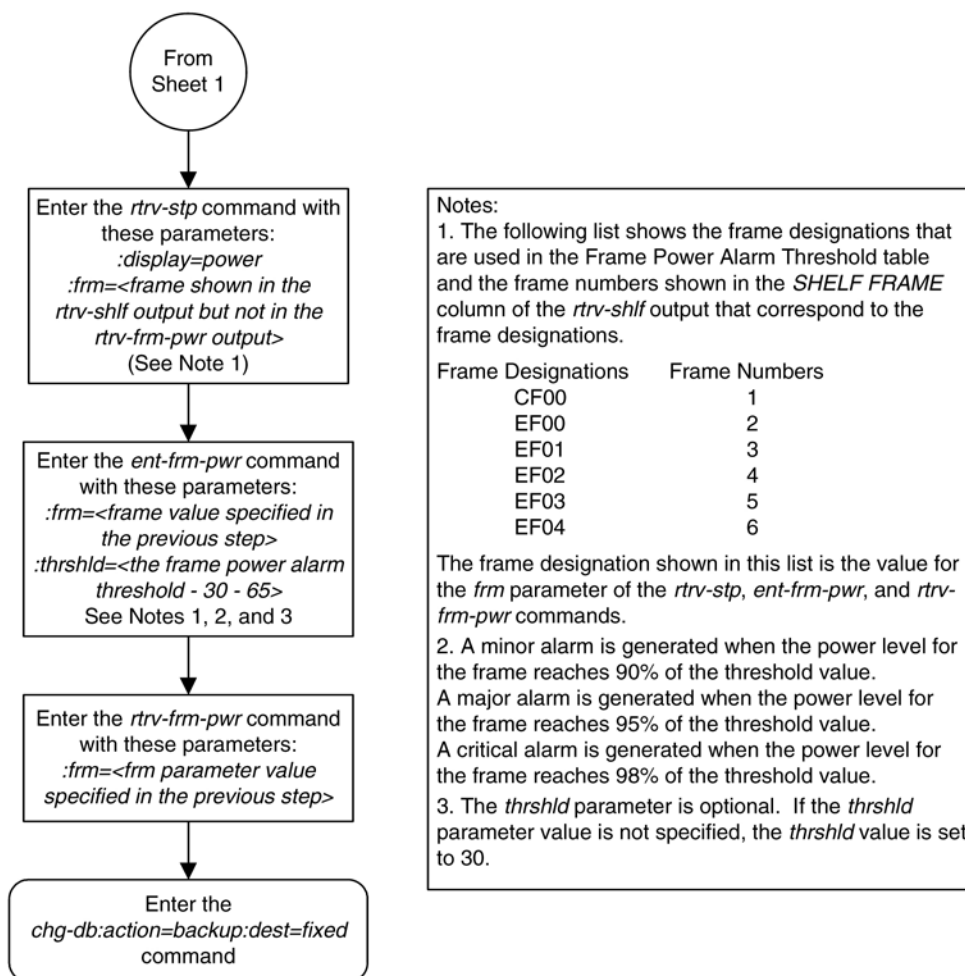
FRAME POWER THRESHOLD table is (3 of 10) 30% full;
RTRV-FRM-PWR: MASP A - COMPLTD
```

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.
```


Flowchart 4-30. 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 *Maintenance 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.

Procedure

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
-----
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
```

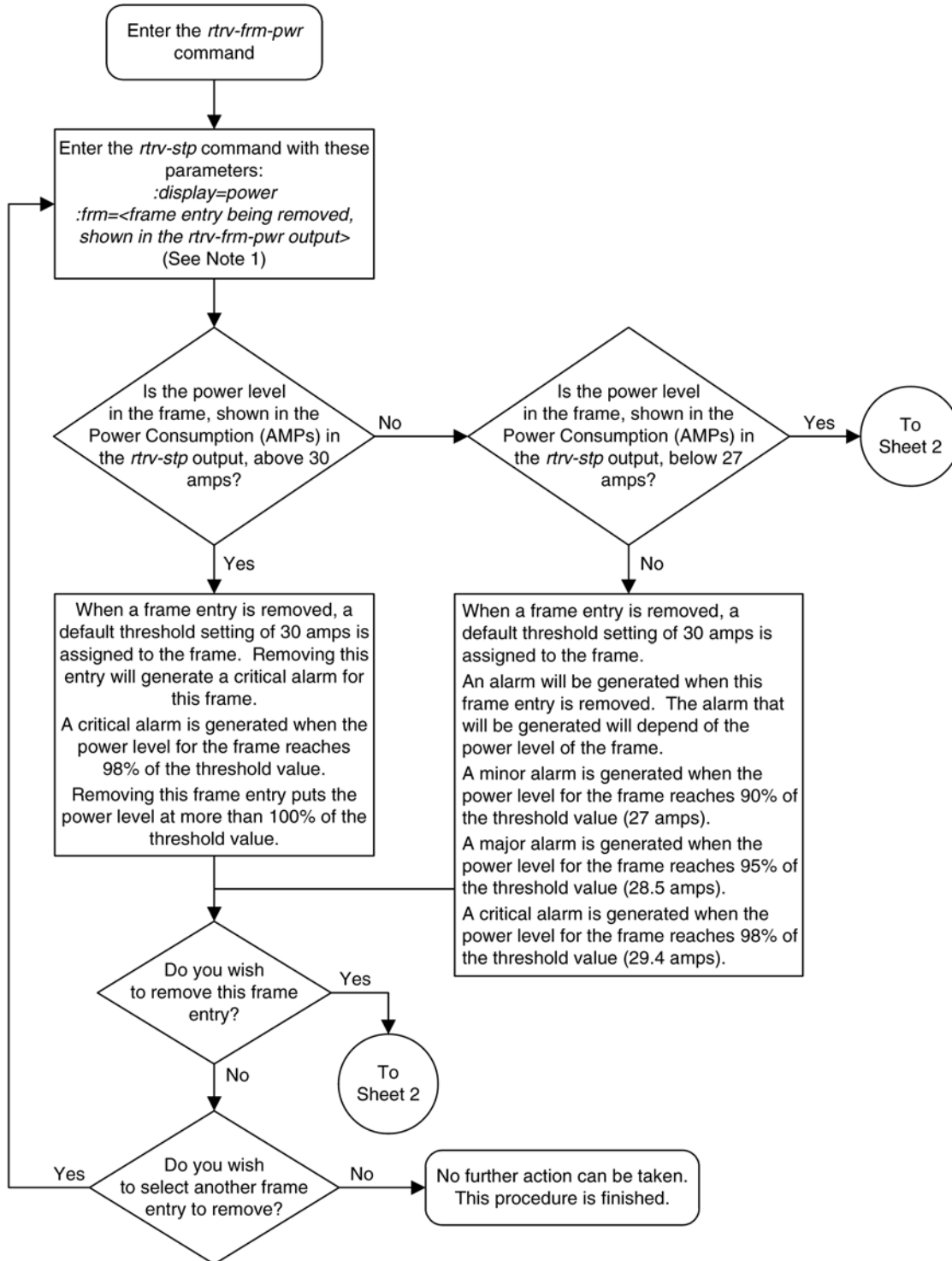
- Backup the new changes using the **chg-db:action=backup:dest=fixed** command.

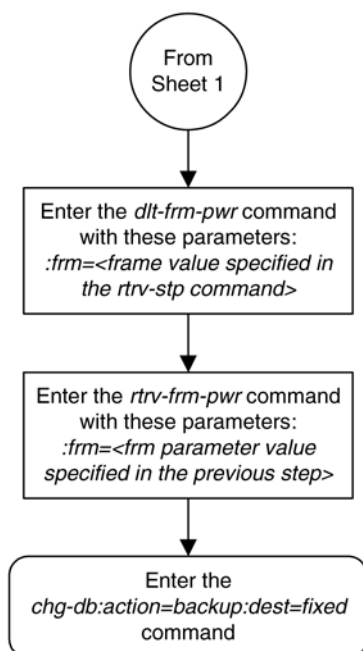
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
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.

Flowchart 4-31. 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 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 *Maintenance 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 **rtv-stp** output. The threshold value should also be high enough to avoid generating any alarms.

Table 4-10 shows selected threshold values and the power levels for a frame that would generate a minor alarm for that threshold value.

Table 4-10. 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

Procedure

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.				

- 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 4-10](#) 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
```

- 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

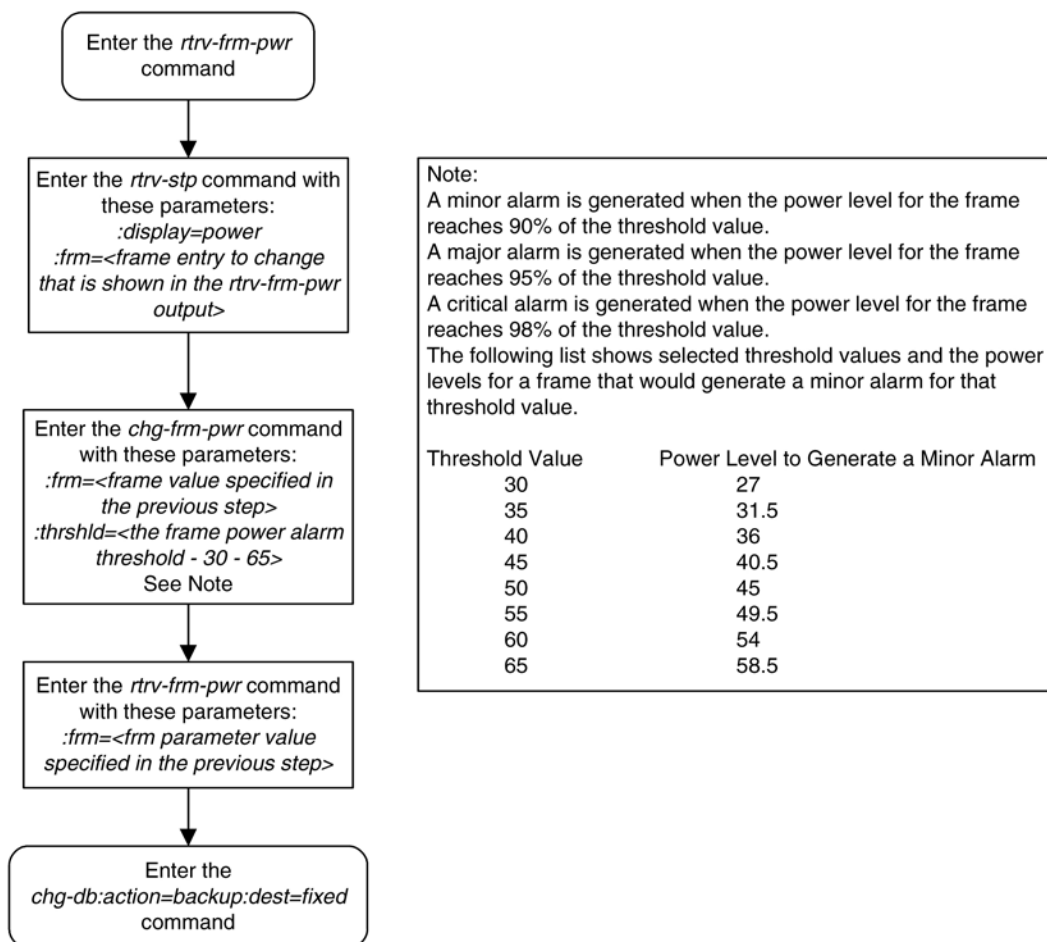
FRAME POWER THRESHOLD table is (3 of 10) 30% full;
RTRV-FRM-PWR: MASP A - COMPLTD
```

- 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.
```

Flowchart 4-32. Changing an Entry in the Frame Power Alarm Threshold Table



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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

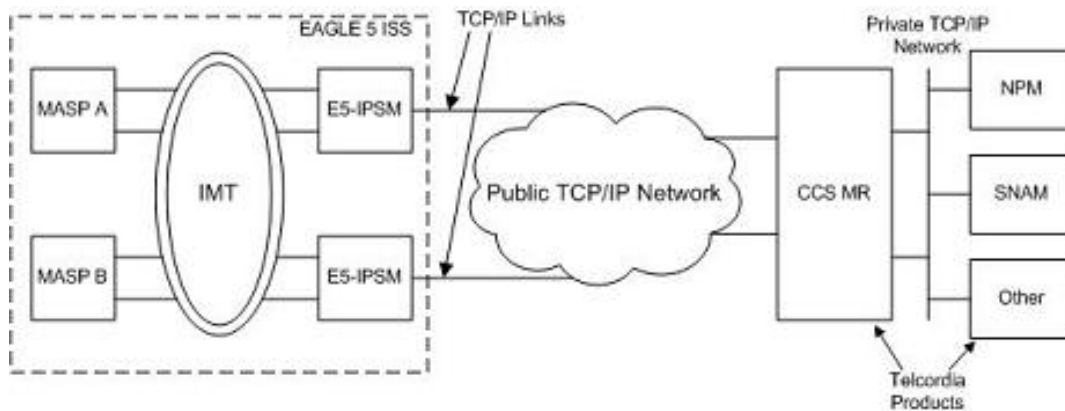
The SEAS over IP feature supports three configurations"

- 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 5-1](#) . 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.

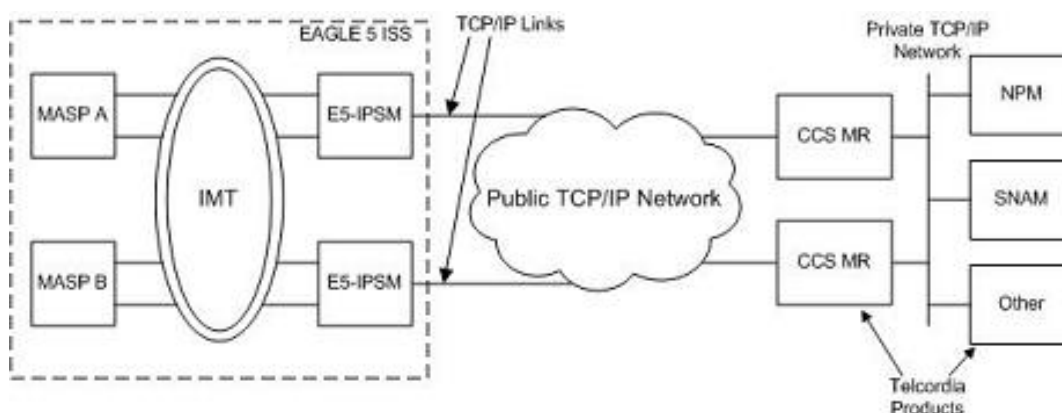
Figure 5-1. Dual SEAS Terminals with Single CCS MR SEAS Configuration



Dual SEAS Terminals with Dual CCS MRs SEAS Configuration

When the two SEAS terminals are connected to two CCS MRs, as shown in [Figure 5-2](#) , 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:

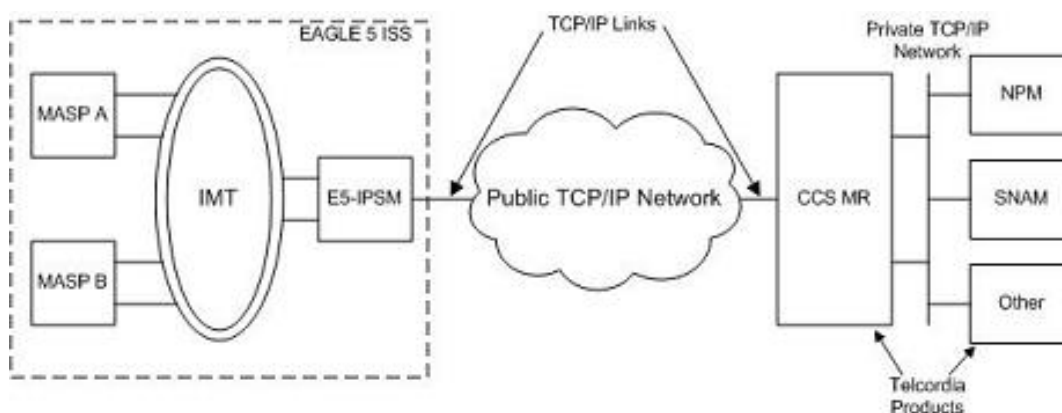
- Each SEAS terminal is configured with a connection to one of the CCS MRs.
- The pair of CCS MRs operate in a round robin manner if they each have an active connection to a SEAS terminal. When the EAGLE 5 ISS receives a command request from a CCS MR, the response to the command request is sent to the CCS MR on the same TCP connection that the CCS MR used to send the command request.

Figure 5-2. 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 *Maintenance Manual* for more information on UAM 0348.

Figure 5-3. 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](#) procedure.

2. Enable the SEAS over IP feature using the **enable-ctrl-feat** command. Perform the [Activating the SEAS over IP Feature](#) procedure.
3. Configure the SEAS connections using the **chg-seas-config** command. Perform the [Performing the Initial SEAS Configuration](#) procedure.
4. Configure the SEAS terminals using the **chg-trm** command. Perform the [Configuring SEAS Terminals](#) procedure.
5. Turn the SEAS over IP feature on using the **chg-ctrl-feat** command. Perform the [Activating the SEAS over IP Feature](#) 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.

: partnum – 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](#) 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 **seasccli** 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](#)
- [Configuring SEAS Terminals](#)

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](#) procedure.

The status of the SEAS over IP and Telnet features is shown with the **rtrv-ctrl-feat** command.



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.

Procedure

1. Display the status of the controlled features by entering the **rtrv-ctrl-feat** command.

The following is an example of the possible output.

```
rlghnxa03w 06-10-01 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
```

Feature Name	Partnum	Status	Quantity
IPGWx Signaling TPS	893012814	on	20000
HC-MIM SLK Capacity	893012707	on	64
ISUP Normalization	893000201	on	----
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](#) 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](#) 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 seasccli 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](#)
- [Configuring SEAS Terminals](#)

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](#) 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](#) 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: When the SEAS over IP feature 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

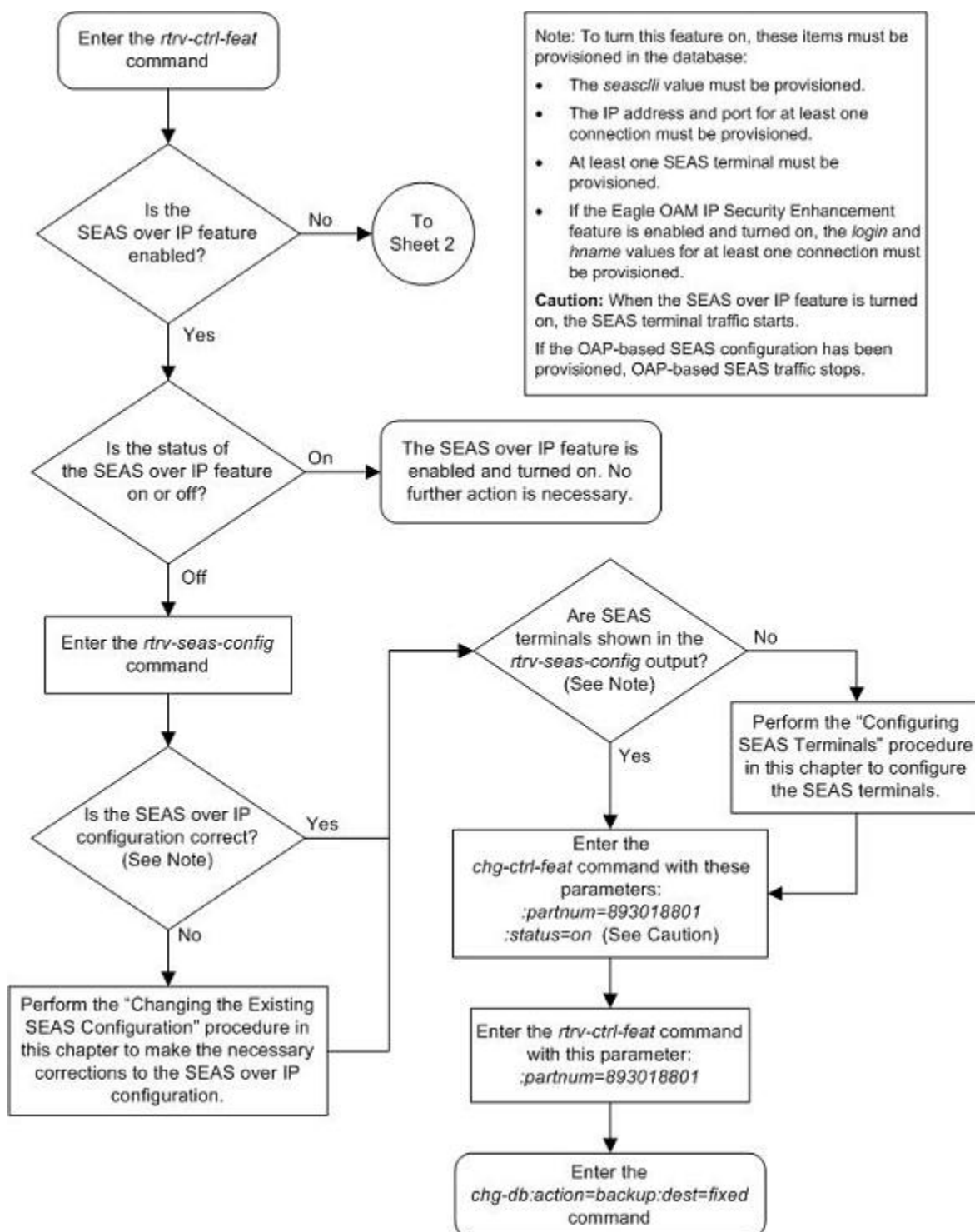
.

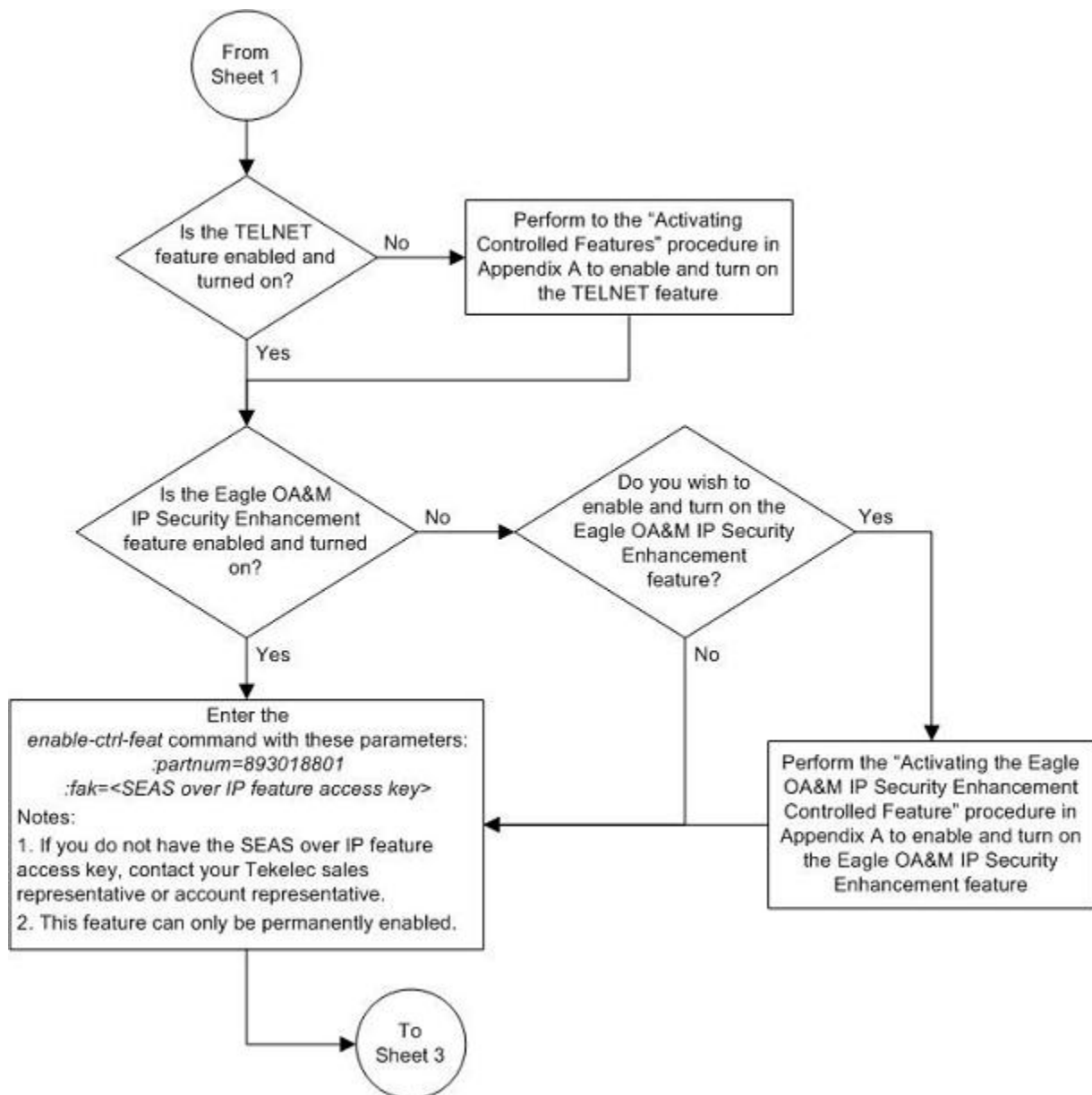
```

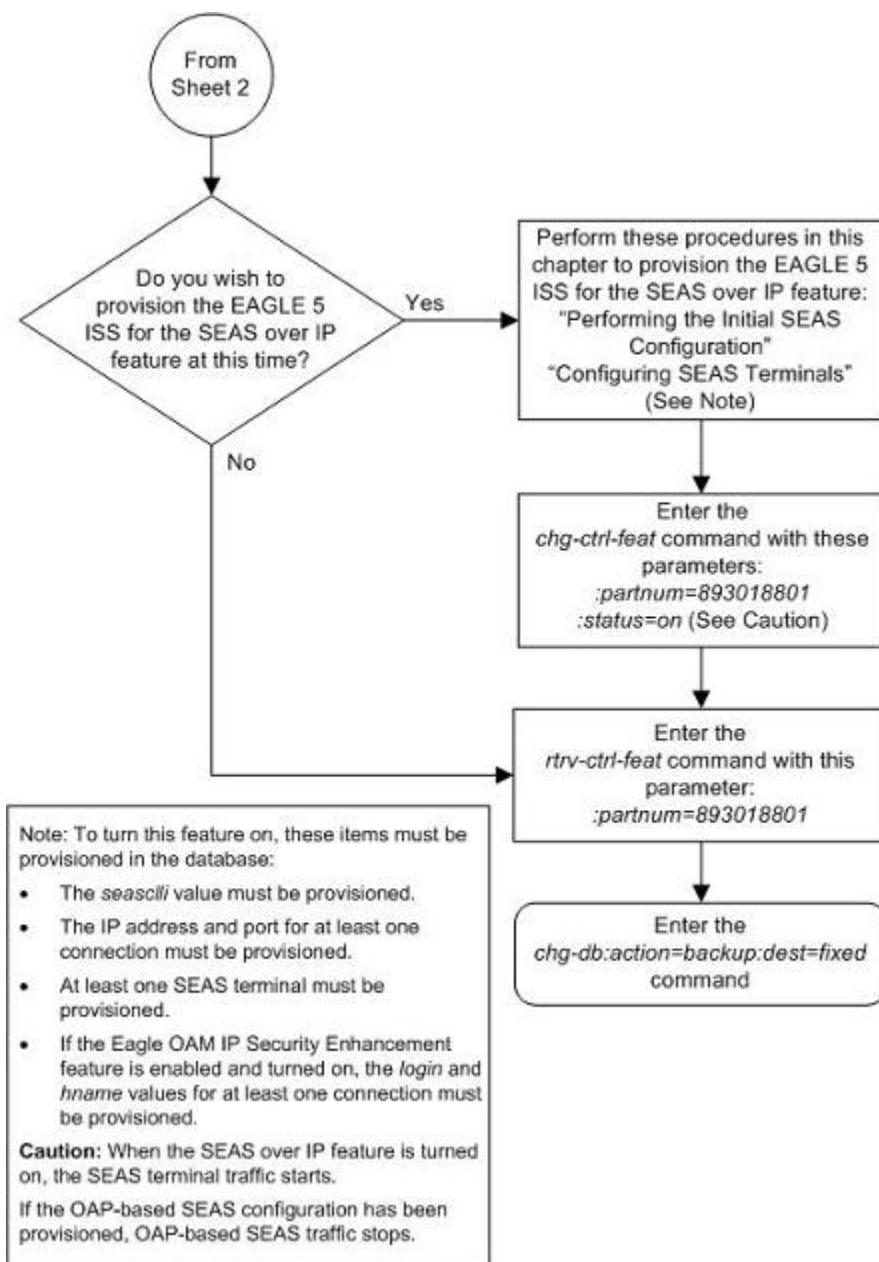
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.

```

Flowchart 5-1. 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](#) 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 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 **ccli** 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.



CAUTION: The IP address and port value combination for each SEAS connection must be unique or the **chg-seas-config** command will be rejected.

Procedure

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](#) 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
SEASCLI 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: 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: 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

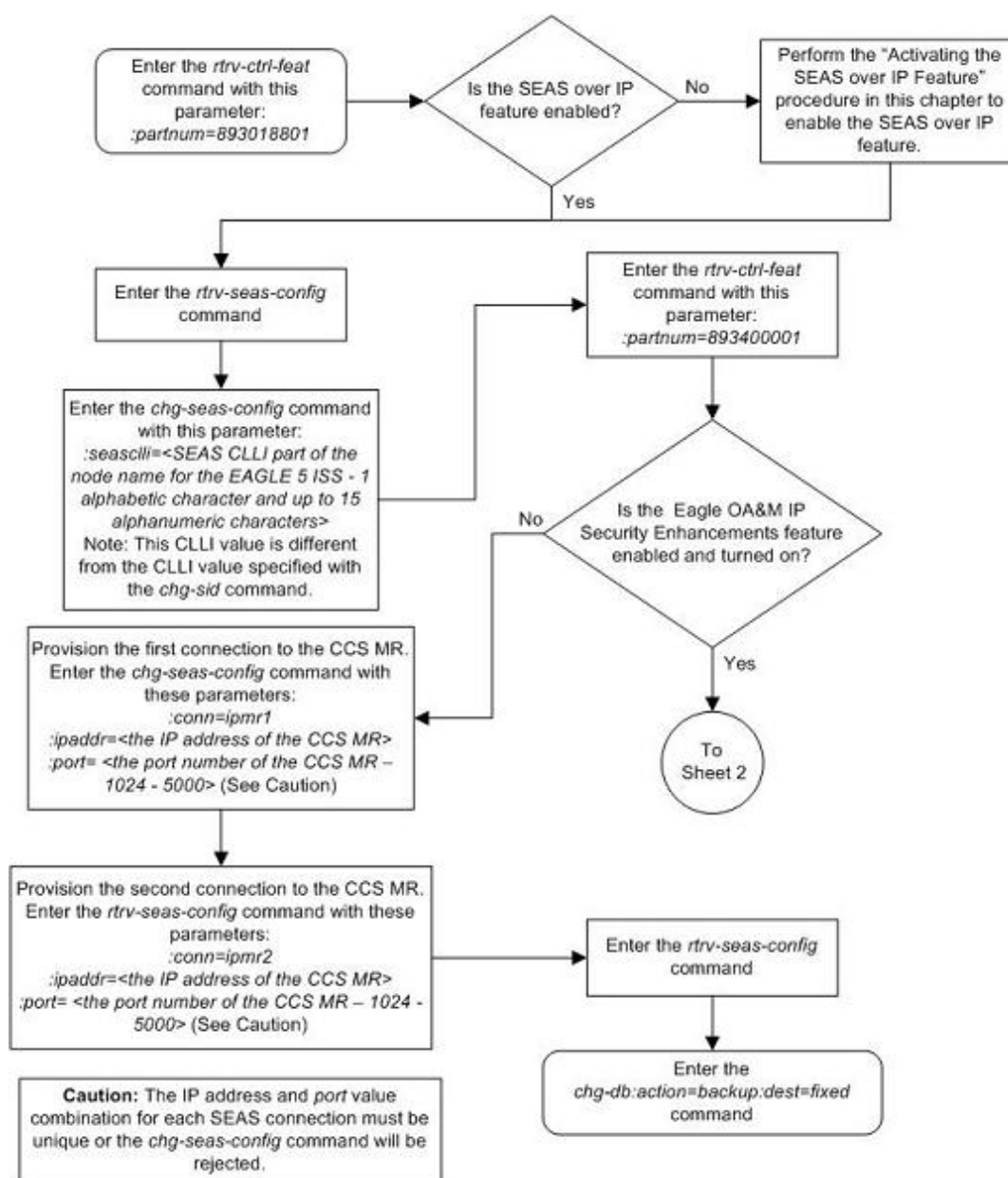
TERMINAL      CONNECTION  IPADDR      PORT  LOGIN  HNAME
-----
18            IPMR1      198.168.25.10  2500  root   abaco-a
27            IPMR2      198.168.25.20  2600  root   abaco-b
```

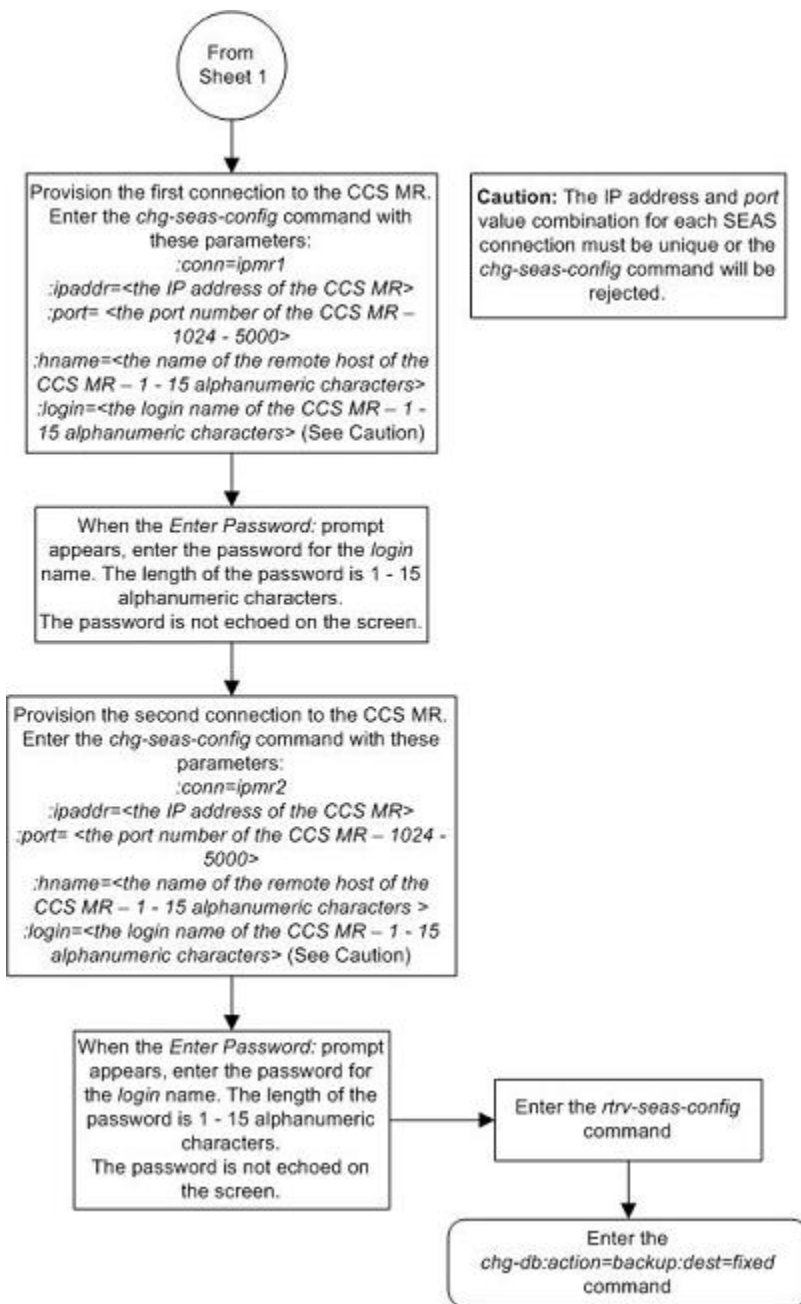
8. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

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.
```


Flowchart 5-2. 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](#) 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](#) 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>

Procedure

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](#) 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](#) procedure in this chapter. After the [Performing the Initial SEAS Configuration](#) 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 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-O-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	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

```

```

      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 NO
11   NO  NO 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 NO NO
13   NO  NO 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 NO NO
15   NO  NO 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 NO NO
17   NO  NO 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 NO NO
19   NO  NO 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 NO NO
21   NO  NO 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 NO NO
23   NO  NO 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 NO NO
25   NO  NO 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 NO NO
27   NO  NO 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 NO NO
29   NO  NO 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 NO NO
31   NO  NO 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 NO NO
33   NO  NO 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 NO NO
35   NO  NO 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 NO NO
37   NO  NO 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 NO NO
39   NO  NO 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 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](#) 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.

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  DCM      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  DCM      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](#) 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 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  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   SEAS      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
```

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.

```
tekelecstp 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
```

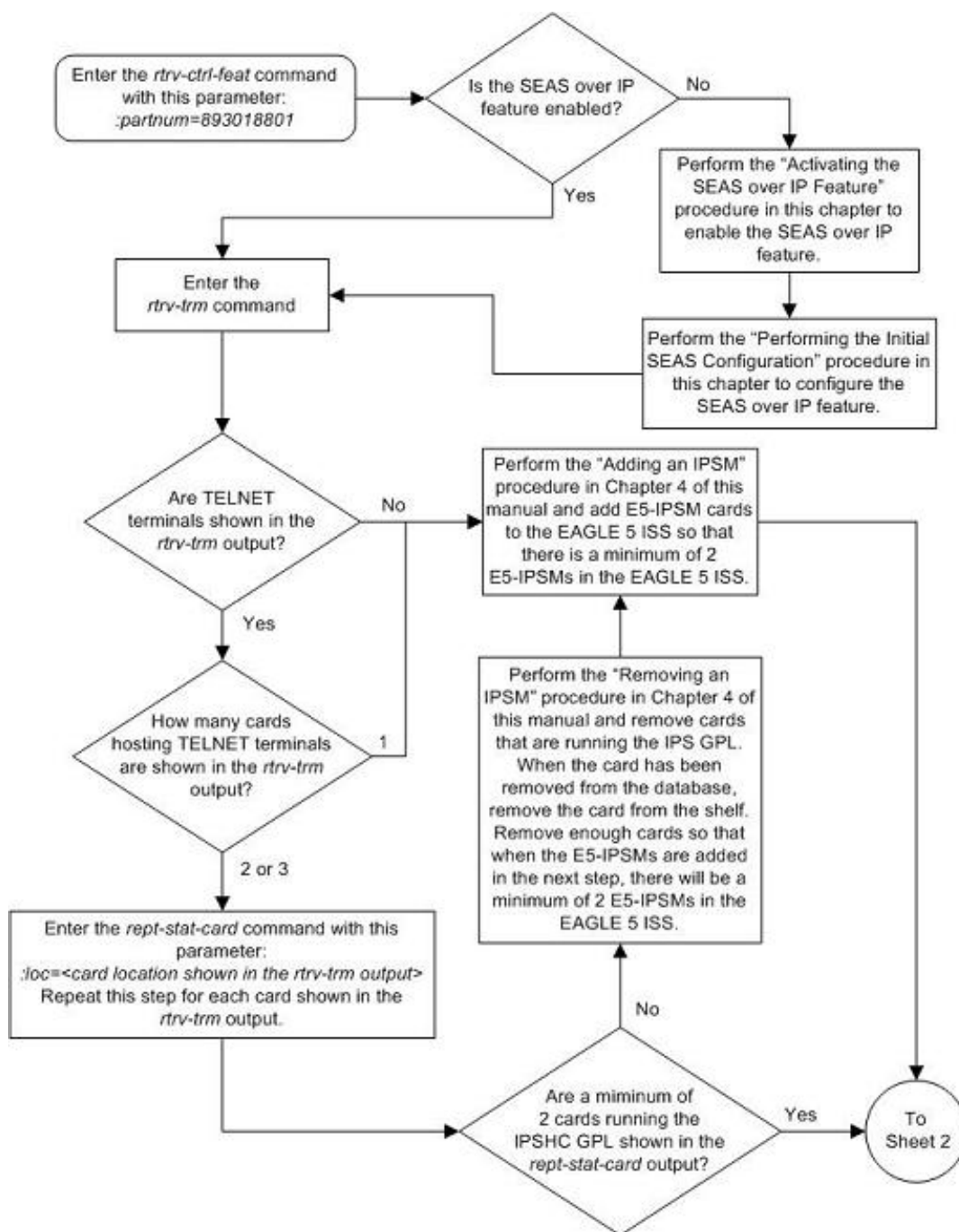
```
rlghncxa03w 04-01-07 11:11:28 EST EAGLE 31.3.0
1062.0046      TERMINAL      27      Terminal Enabled
```

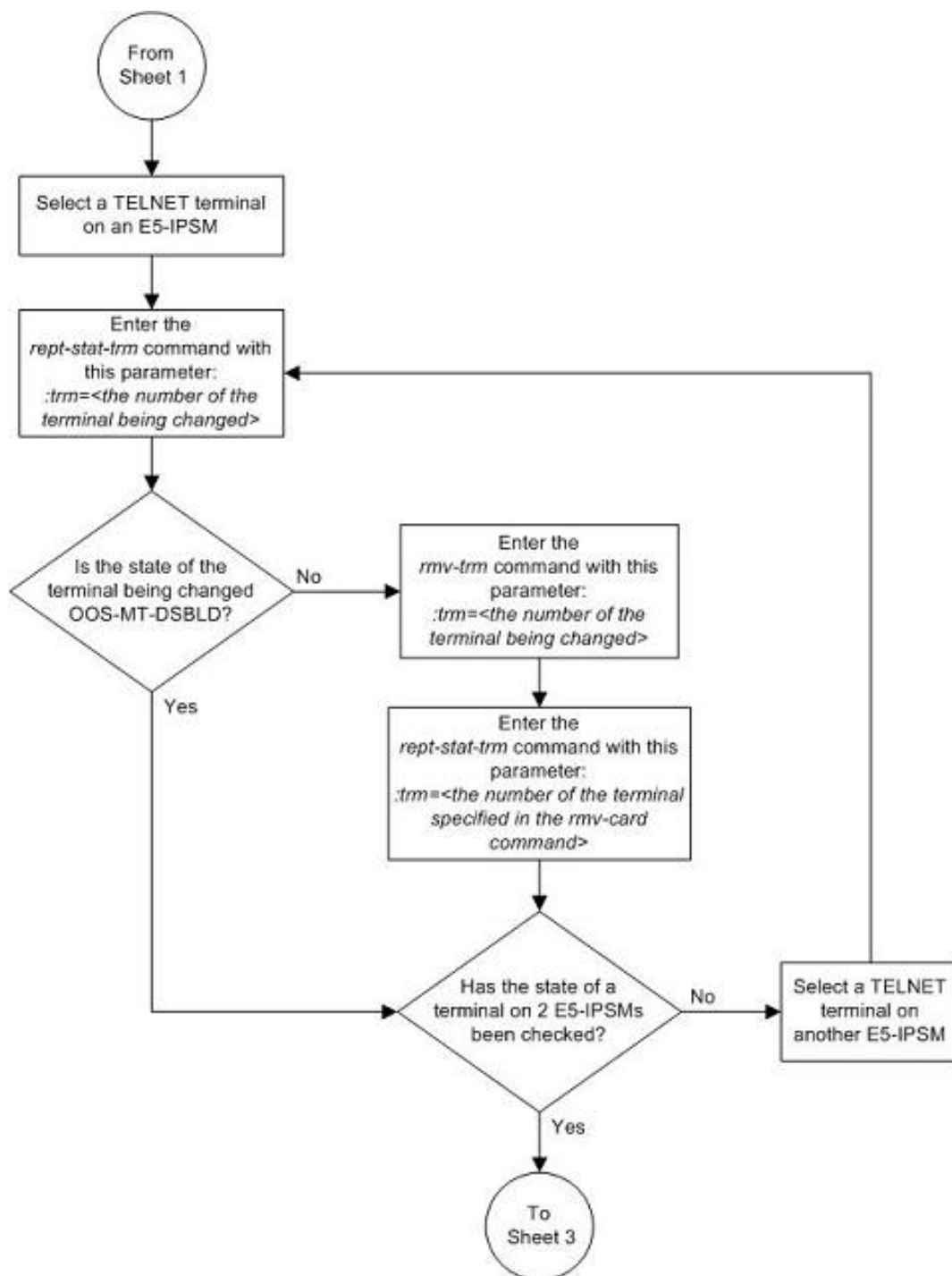
12. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

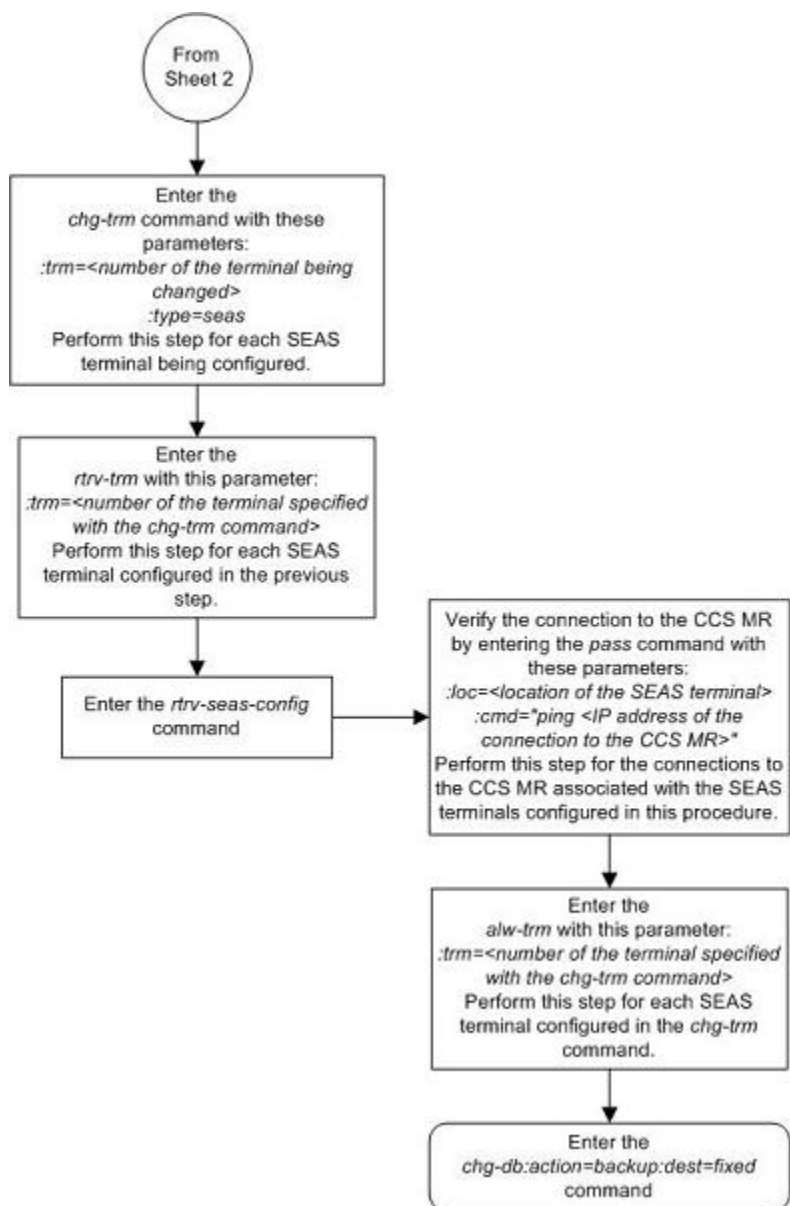
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
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.
```

Flowchart 5-3. 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: The IP address and port value combination for each SEAS connection must be unique or the **chg-seas-config** command will be rejected.

Procedure

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 step1.

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 **seascli** parameter. For this example, enter this command.

chg-seas-config:seascli=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: 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](#) 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  YES NO
```

8. 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 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:trm=18** 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
```

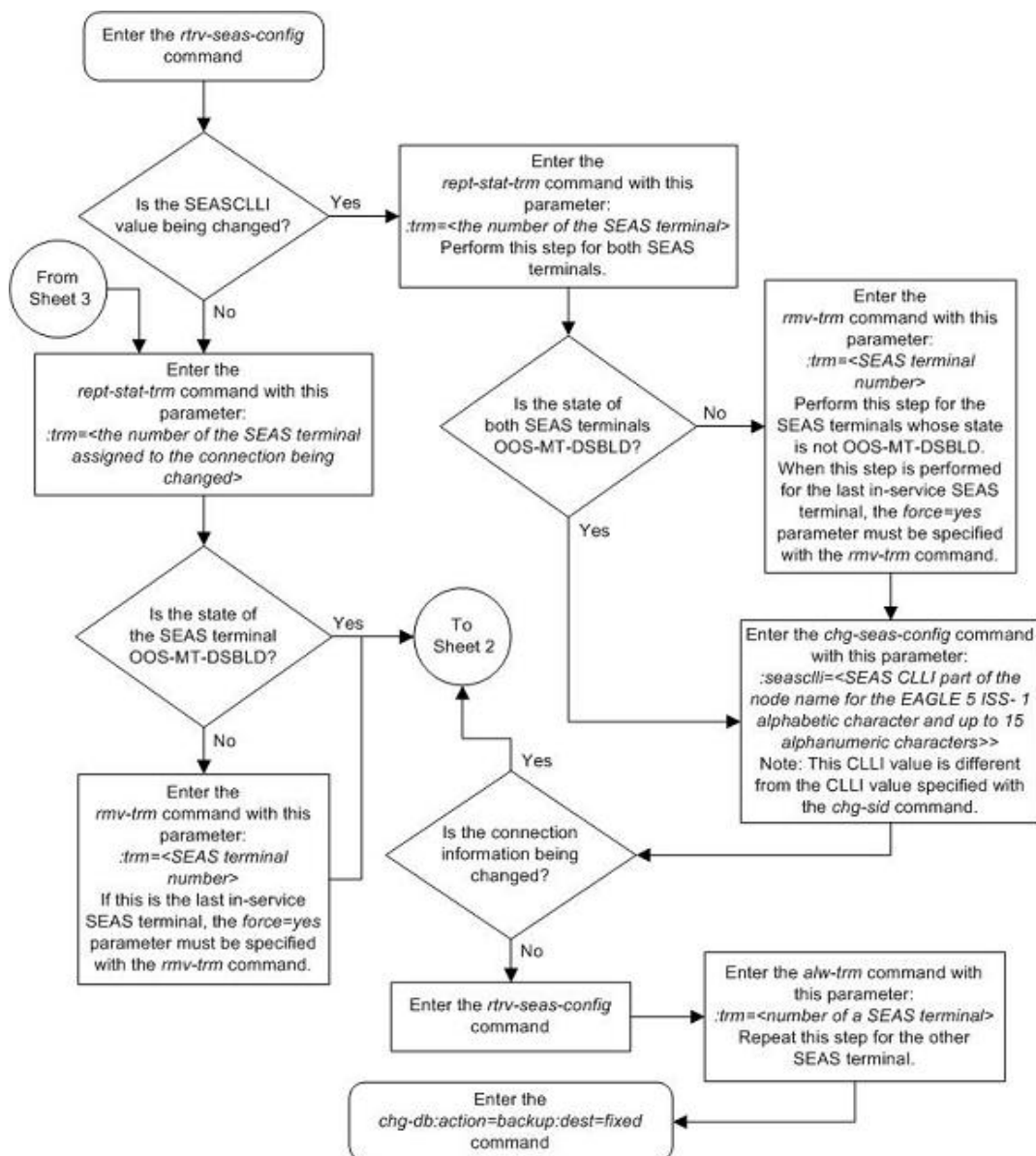
rlghncxa03w 04-01-07 11:11:28 EST EAGLE 31.3.0
1062.0046 TERMINAL 27 Terminal Enabled

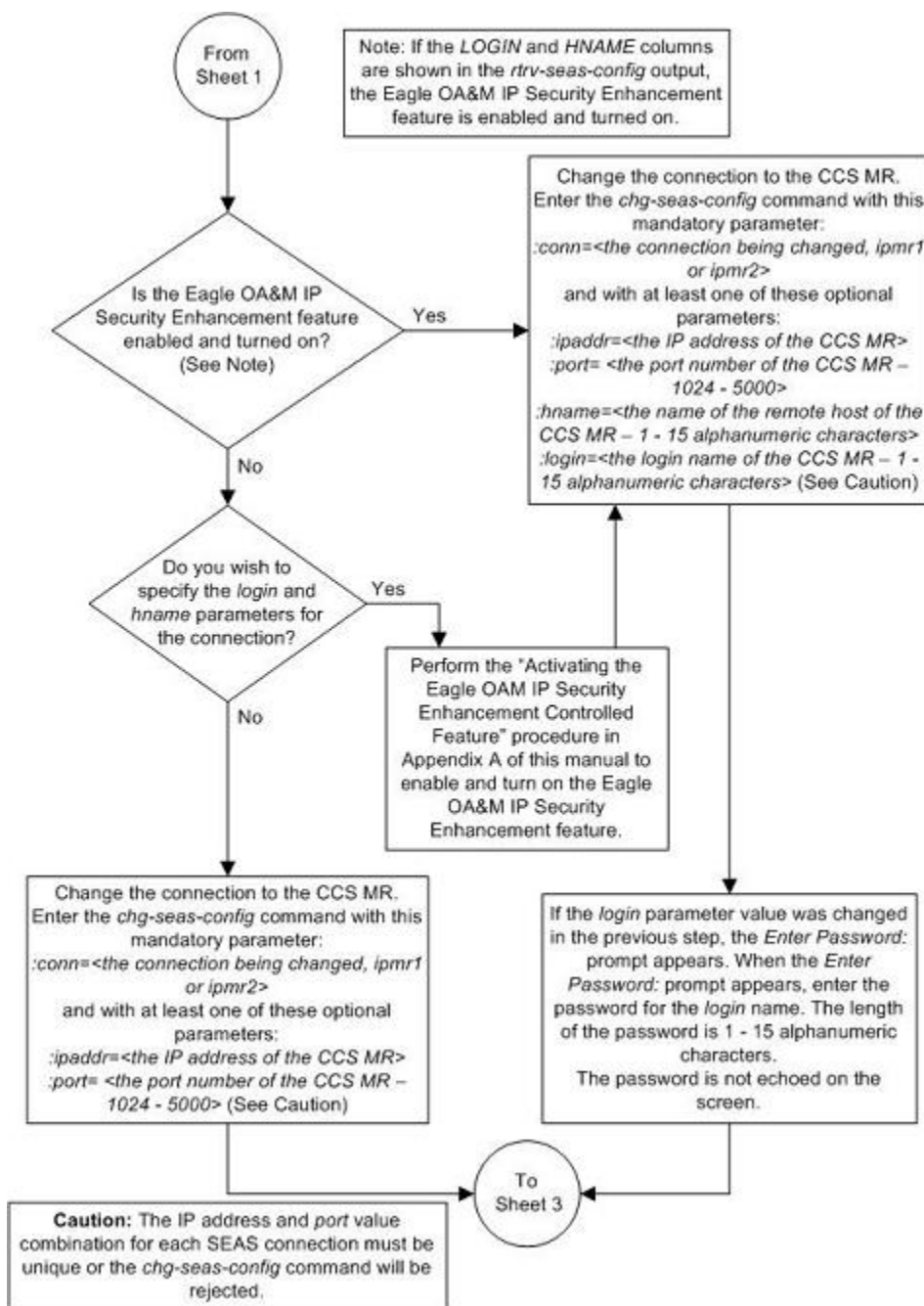
10. Back up the new changes using the **chg-db:action=backup:dest=fixed** command.

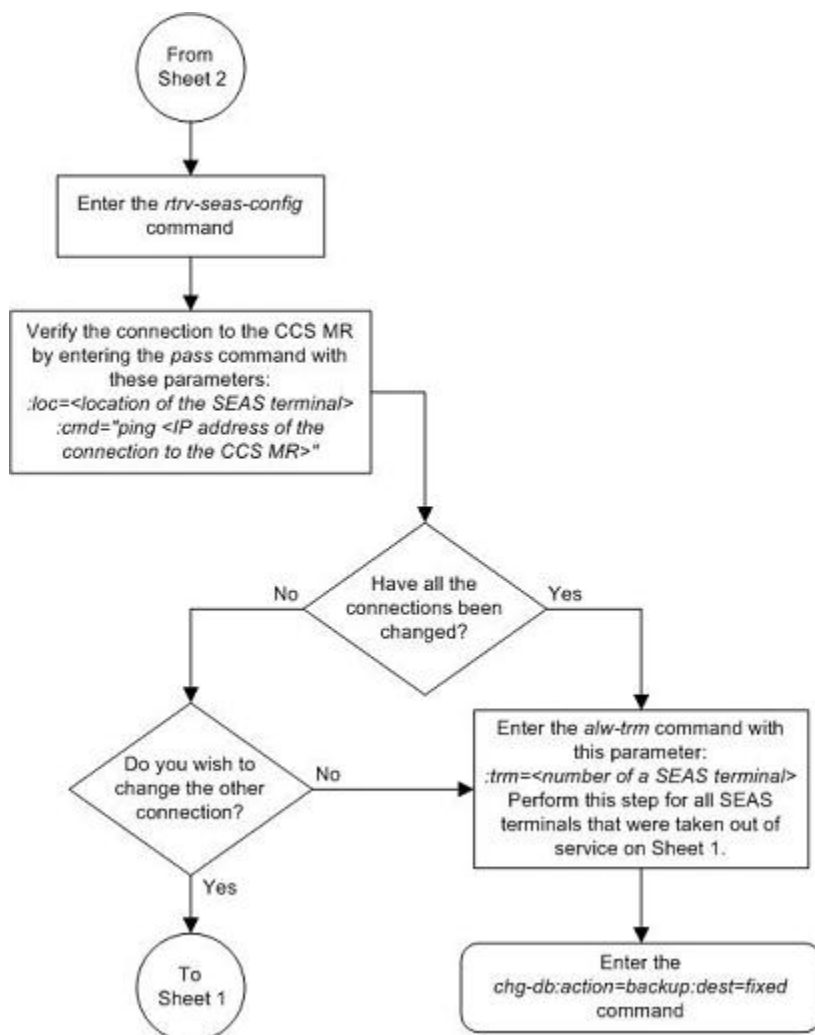
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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.

Flowchart 5-4. 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 **rtrv-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.

Procedure

1. Display the status of the SEAS over IP feature by entering the `rtrv-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** 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  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
```

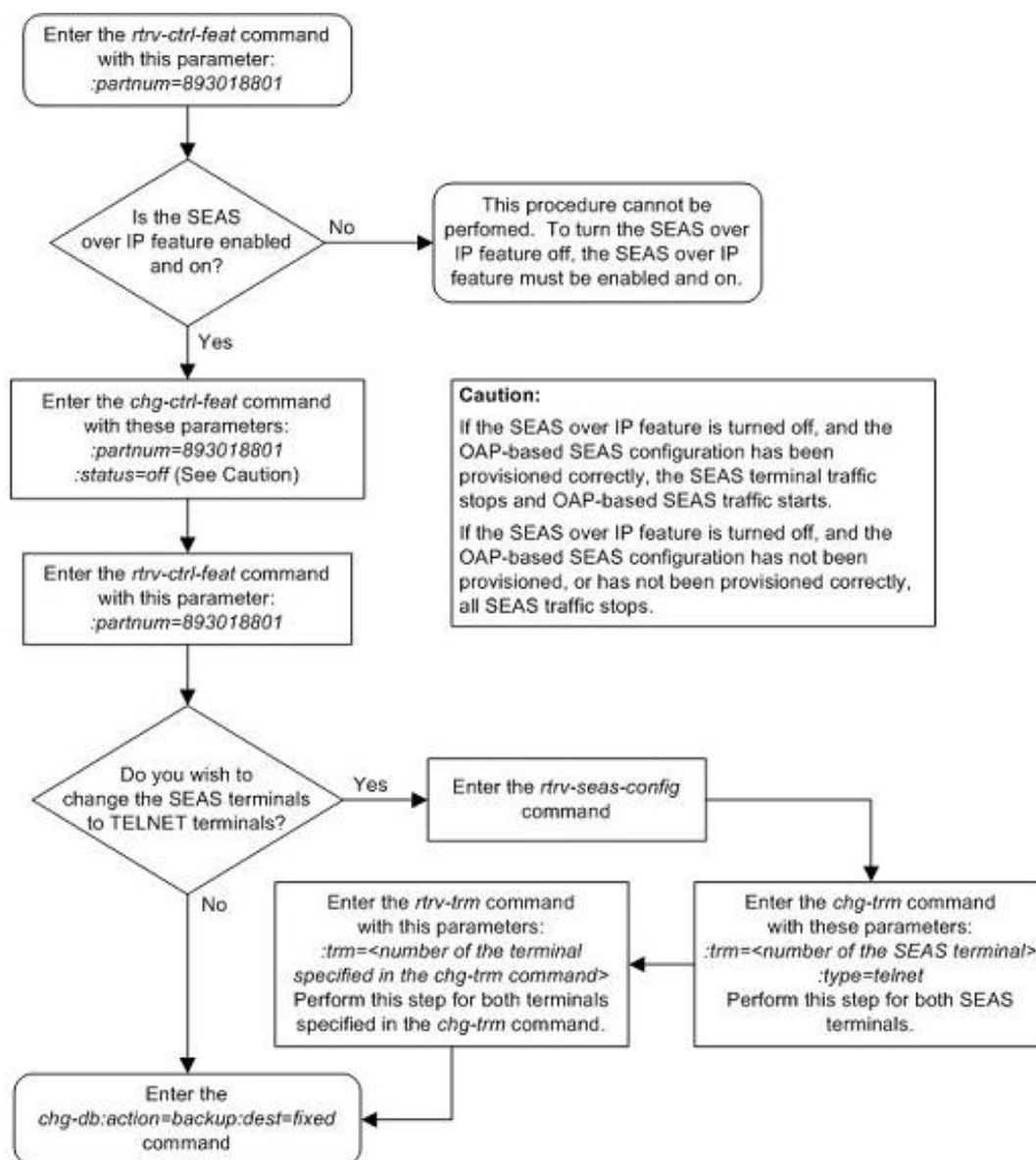
```
TRM  SERV  SS  CARD  CLK  DBG  GTT  GWS  MEAS  MON  MPS  SEAS  SLAN
27   NO   NO   NO   NO   NO   NO   NO   NO   NO   NO   NO   YES  NO
```

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.
```

Flowchart 5-5. Turning the SEAS Over IP Feature Off



Controlled Feature Activation Procedures

Introduction	A-1
Activating Controlled Features	A-2
Activating the Eagle OA&M IP Security Enhancement Controlled Feature	A-9
Activating the 15 Minute Measurements Controlled Feature	A-22
Clearing a Temporary FAK Alarm	A-30
Deactivating Controlled Features	A-32

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

Procedure

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
IPGWx Signaling TPS	893012814	on	20000
ISUP Normalization	893000201	on	----
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.

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](#) 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=xxxxxxxxxxxxxx
```

```
enable-ctrl-feat:partnum=893005701:fak=xxxxxxxxxxxxxx
```

```
enable-ctrl-feat:partnum=893009101:fak=xxxxxxxxxxxxxx
```

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
```

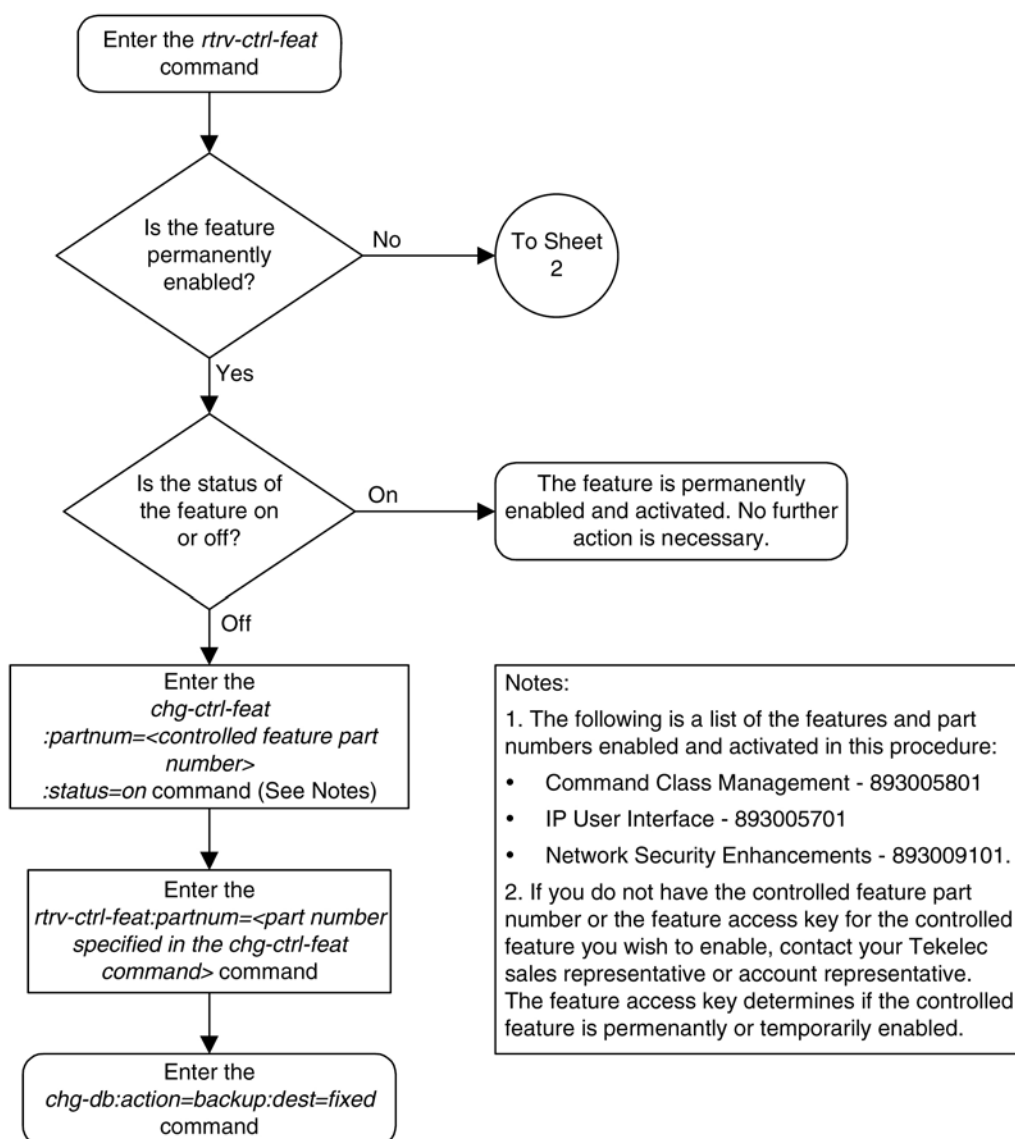
The following is an example of the possible output.

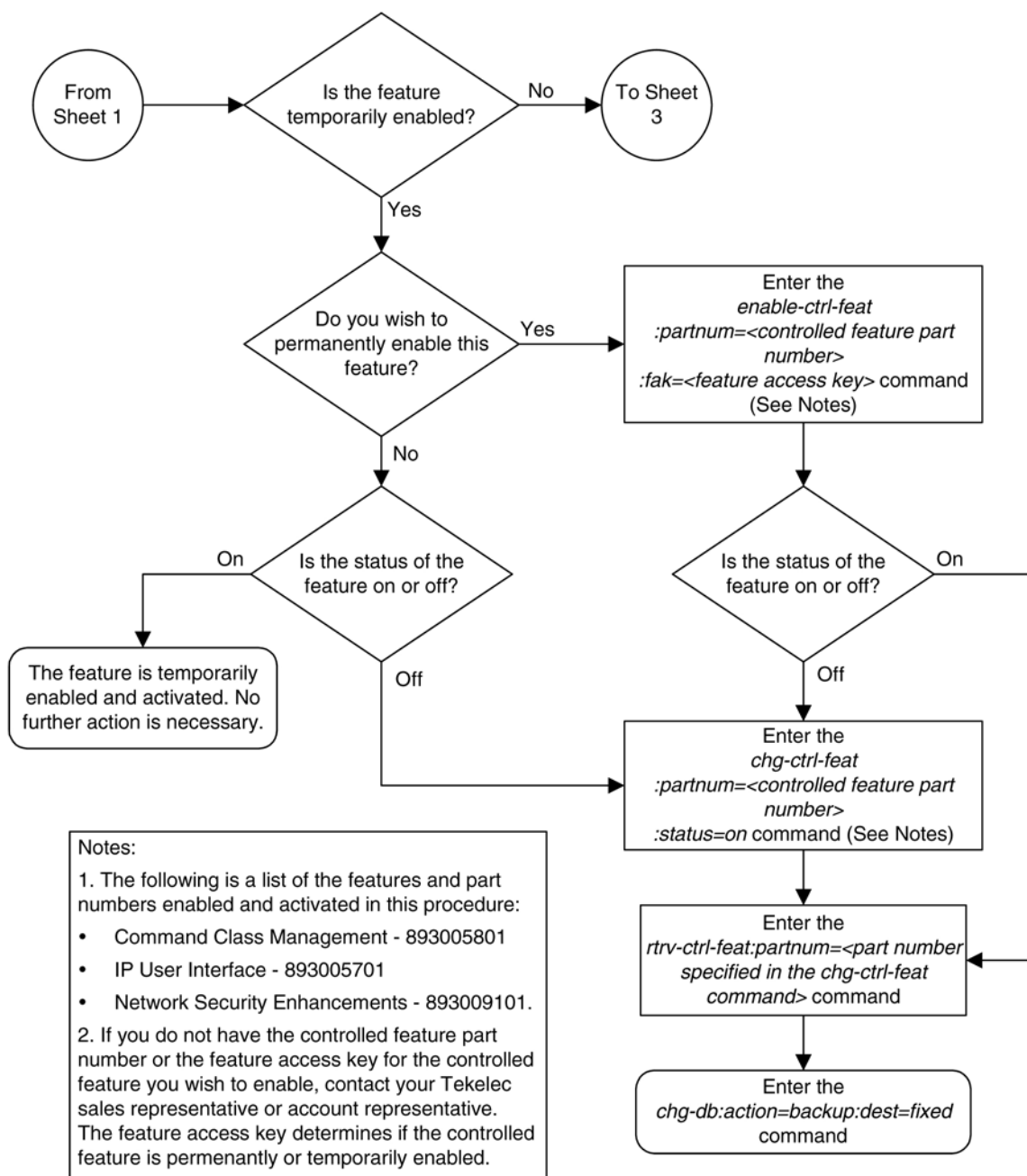
```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
Feature Name      Partnum      Status      Quantity
Network Security Enhance  893009101  on          ----
```

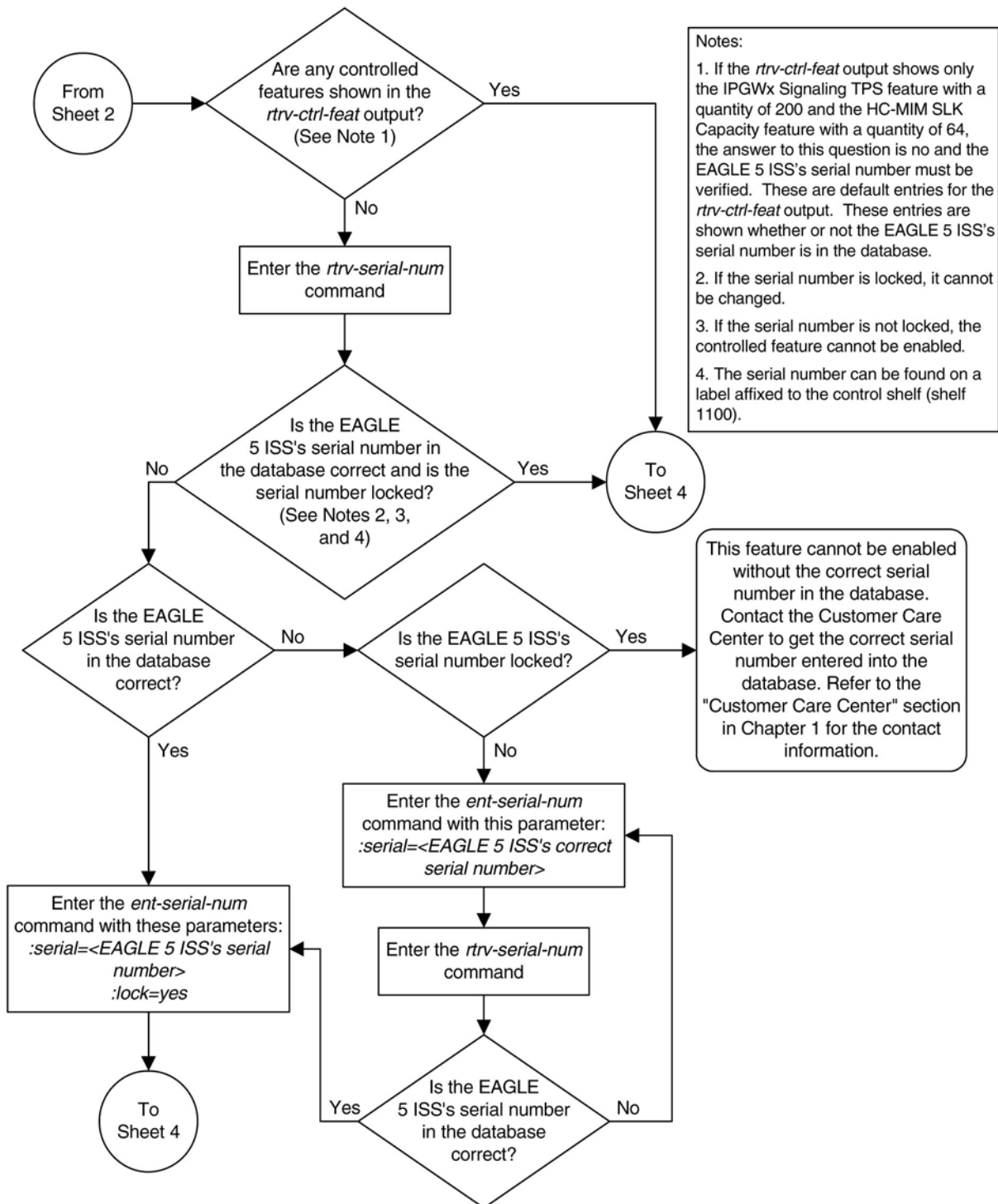
9. Backup the new changes using the **chg-db:action=backup:dest=fixed** command.

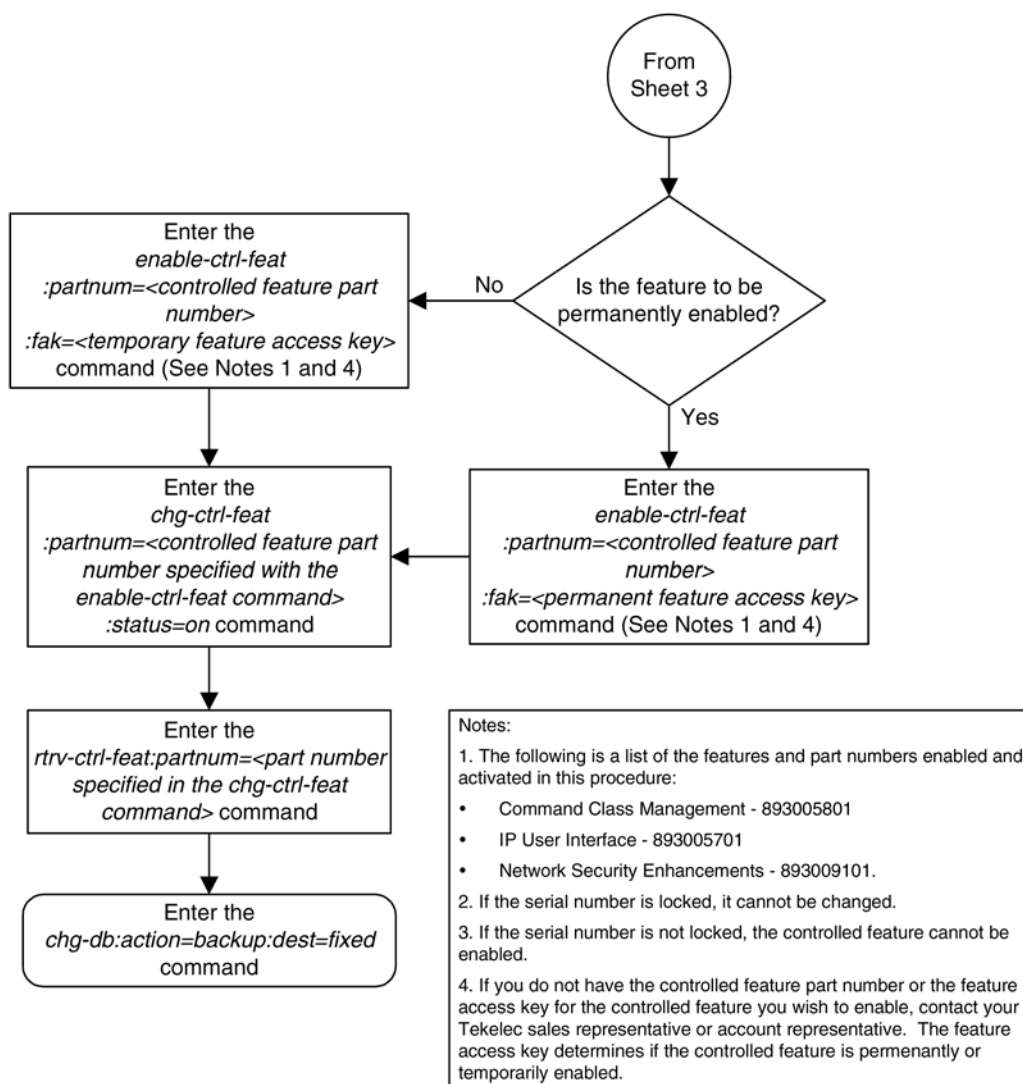
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
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.
```

Flowchart A-1. 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](#) 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](#) procedure, or the *Commands Manual*.

Procedure

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
IPGWx Signaling TPS	893012814	on	20000
ISUP Normalization	893000201	on	----
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.

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 = ntxxxxxxxxxxxx
```

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](#) 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.

- 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 IPSMs 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 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-O-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-O-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	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
      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  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      APPL      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      APPL      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      APPL      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 **OOS-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 **OOS-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*

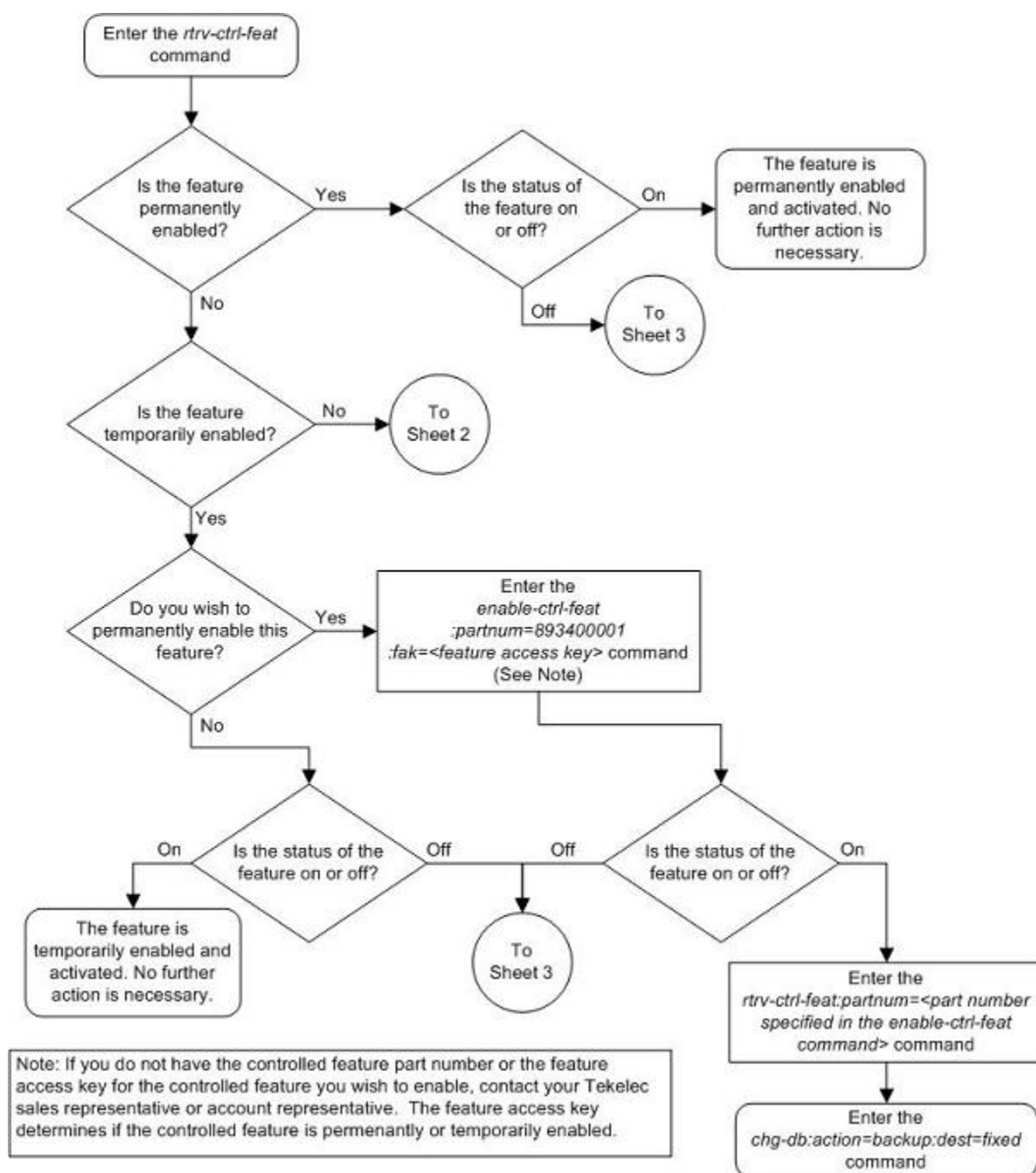
16. Backup the new changes using the **chg-db:action=backup:dest=fixed** command.

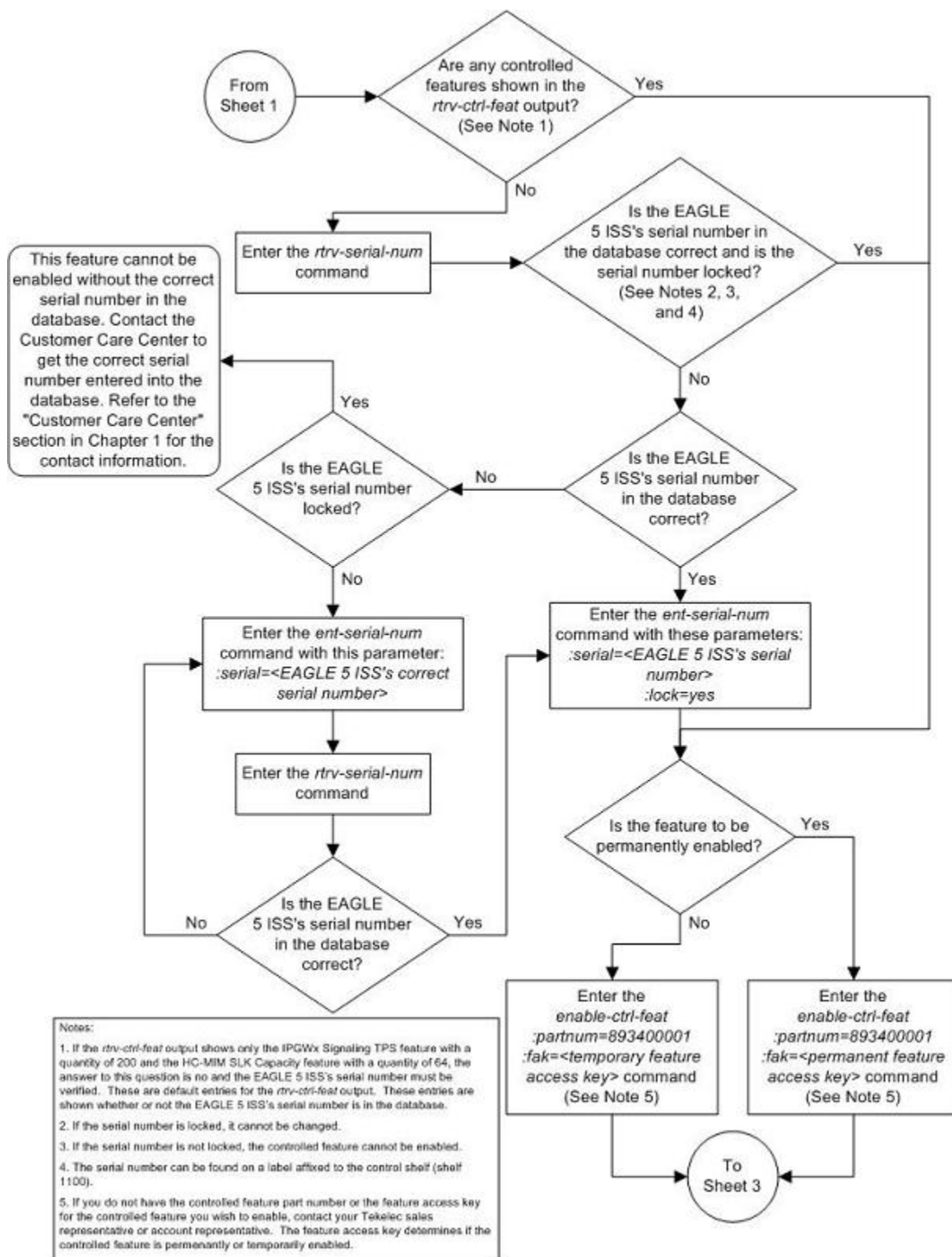
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first

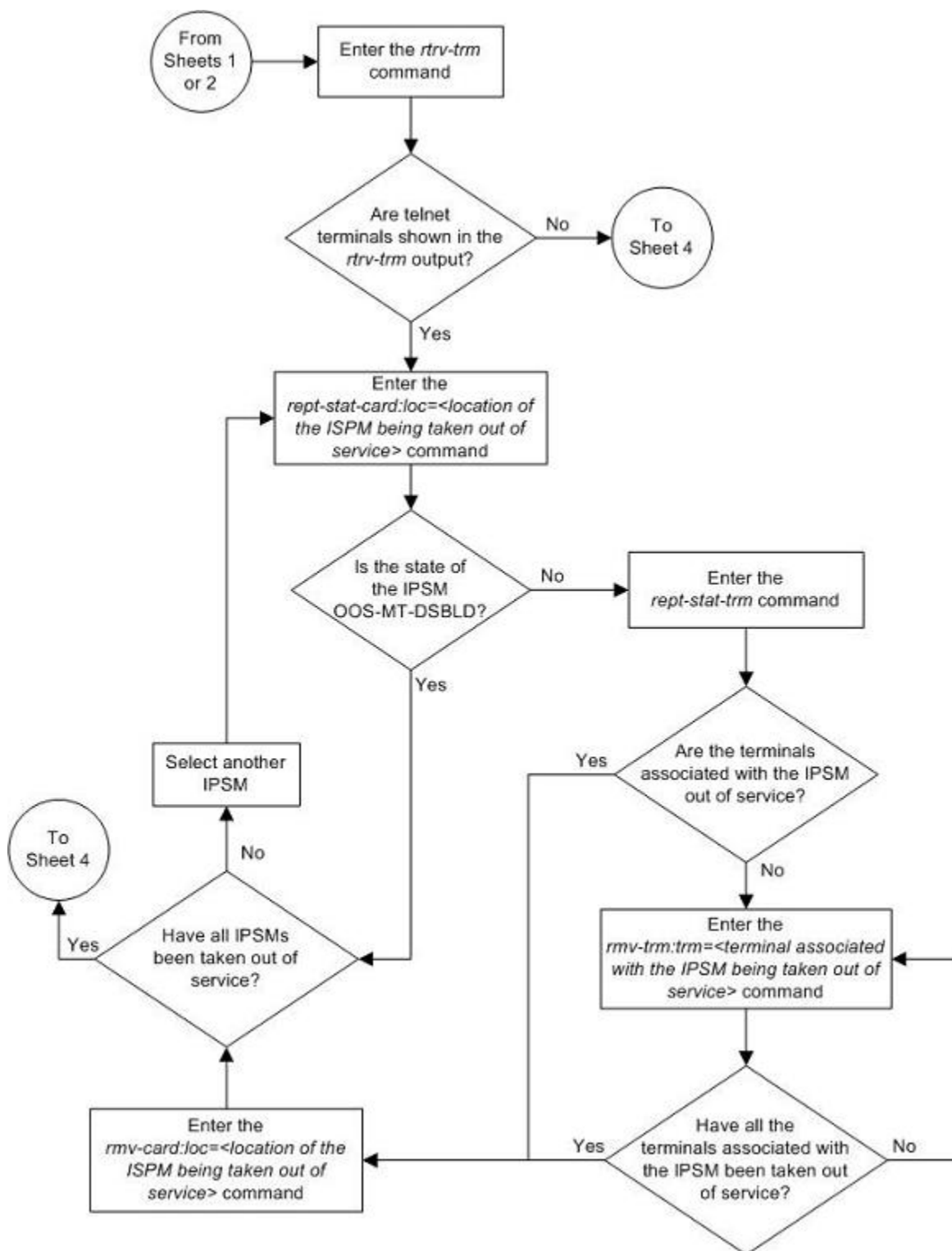
.

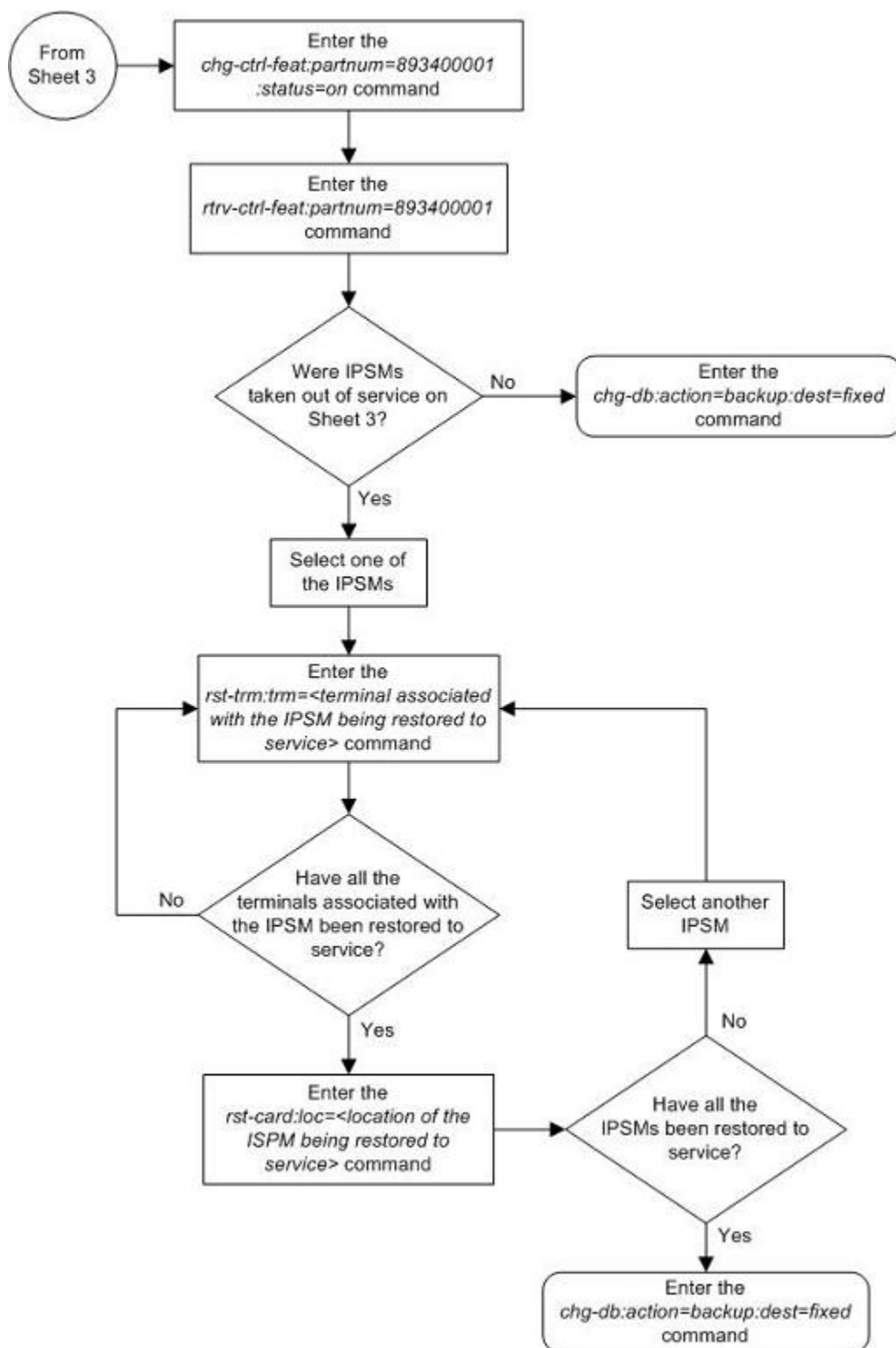
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.  
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.  
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.  
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

Flowchart A-2. 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](#) 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.

Procedure

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
IPGWx Signaling TPS	893012814	on	20000
ISUP Normalization	893000201	on	----
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.

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 = ntxxxxxxxxxxxx
```

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](#) 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](#) 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](#) 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](#) 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 06-10-01 16:43:42 GMT EAGLE5 36.0.0

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

CARD  VERSION      TYPE      PST          SST          AST
2107 P 101-9-000    MCPM      IS-NR      Active      -----
      IP Link A      IS-NR      Active      Available
2108 101-9-000    MCPM      IS-NR      Active      -----
      IP Link A      IS-NR      Active      Available
2111 101-9-000    MCPM      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

```

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](#) 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

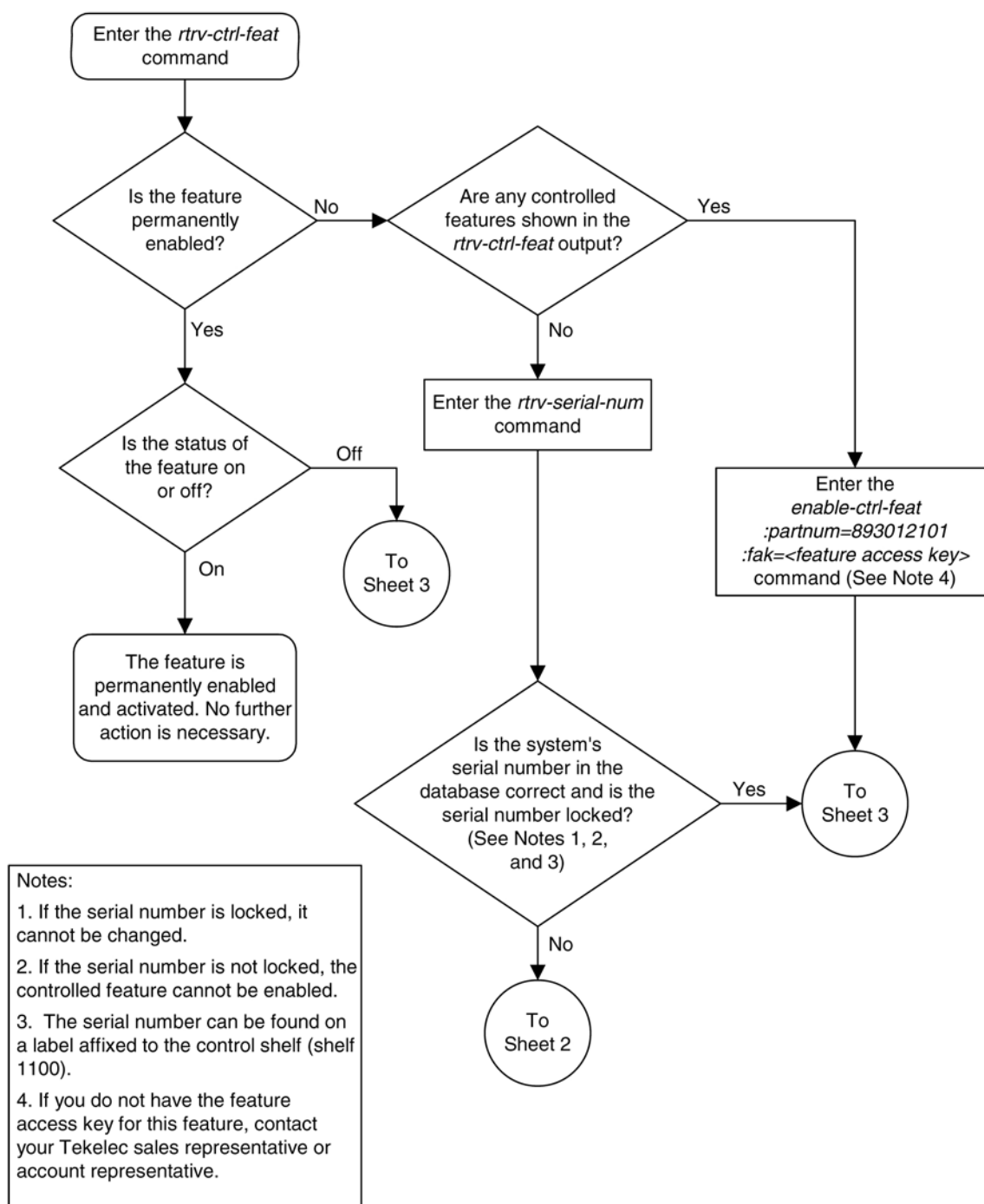
NOTE: The **rtrv-measopts** command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the **rtrv-measopts** command, see the **rtrv-measopts** command description in the *Commands Manual*.

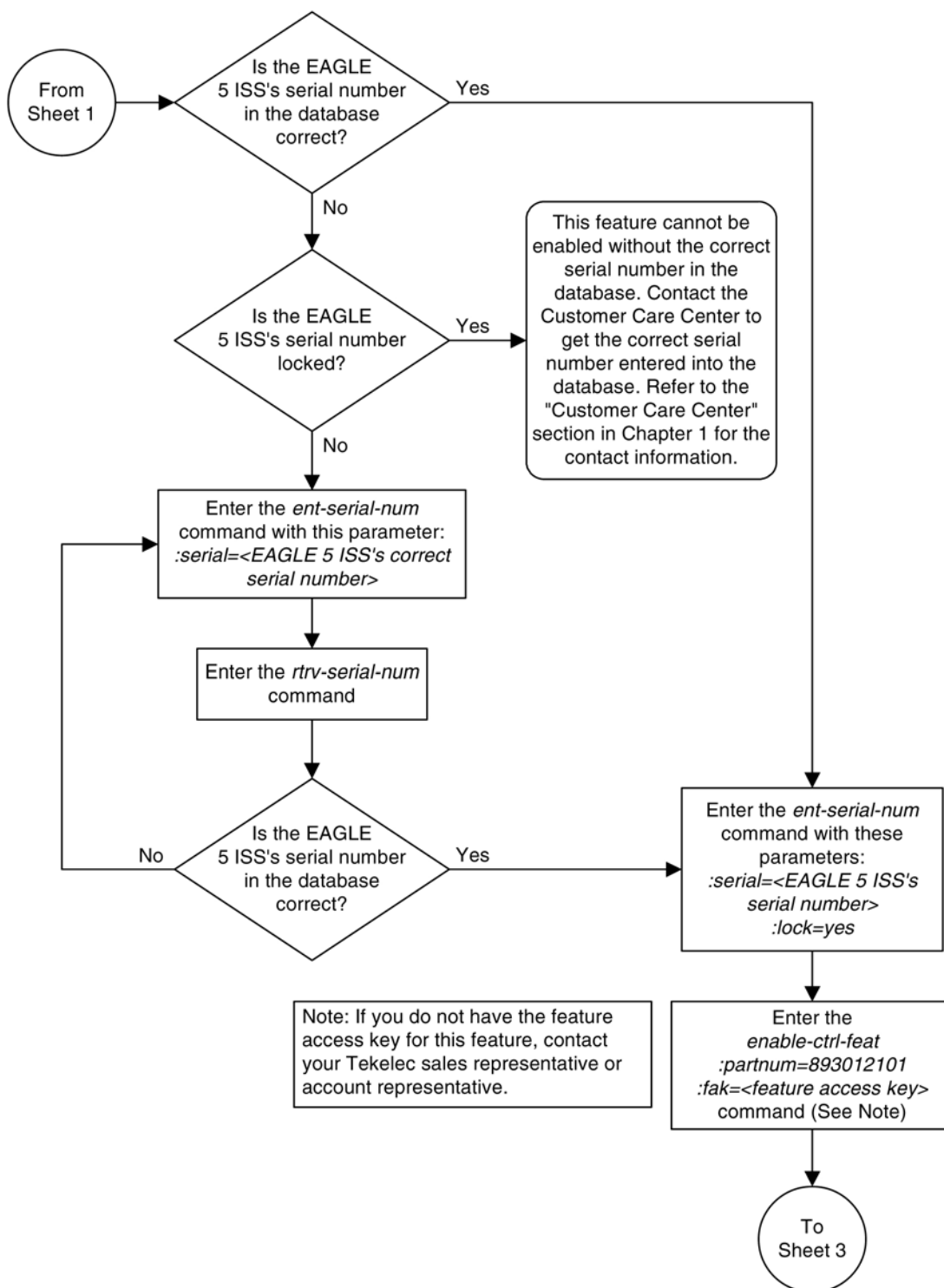
14. Backup the new changes using the **chg-db:action=backup:dest=fixed** command.

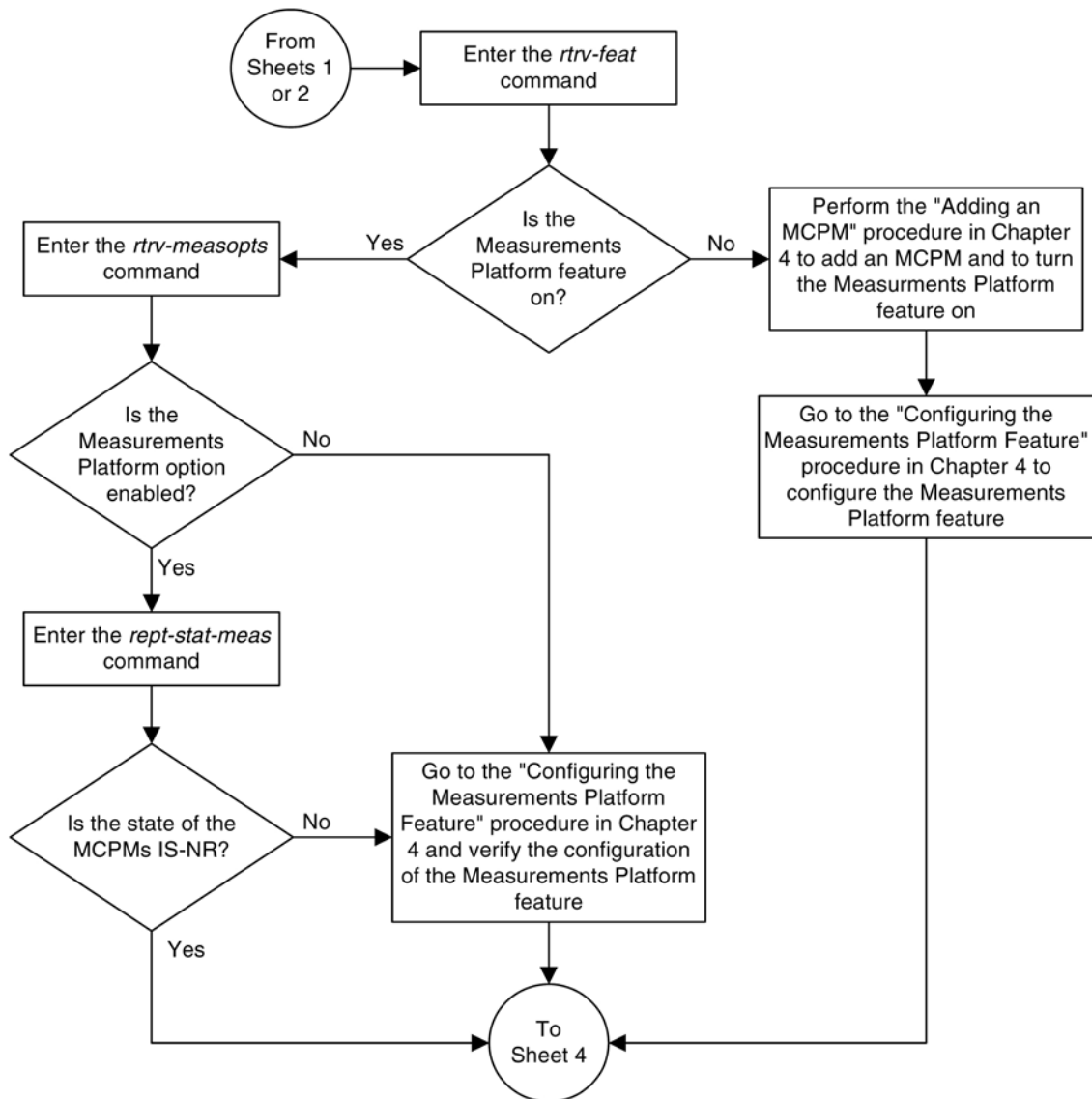
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

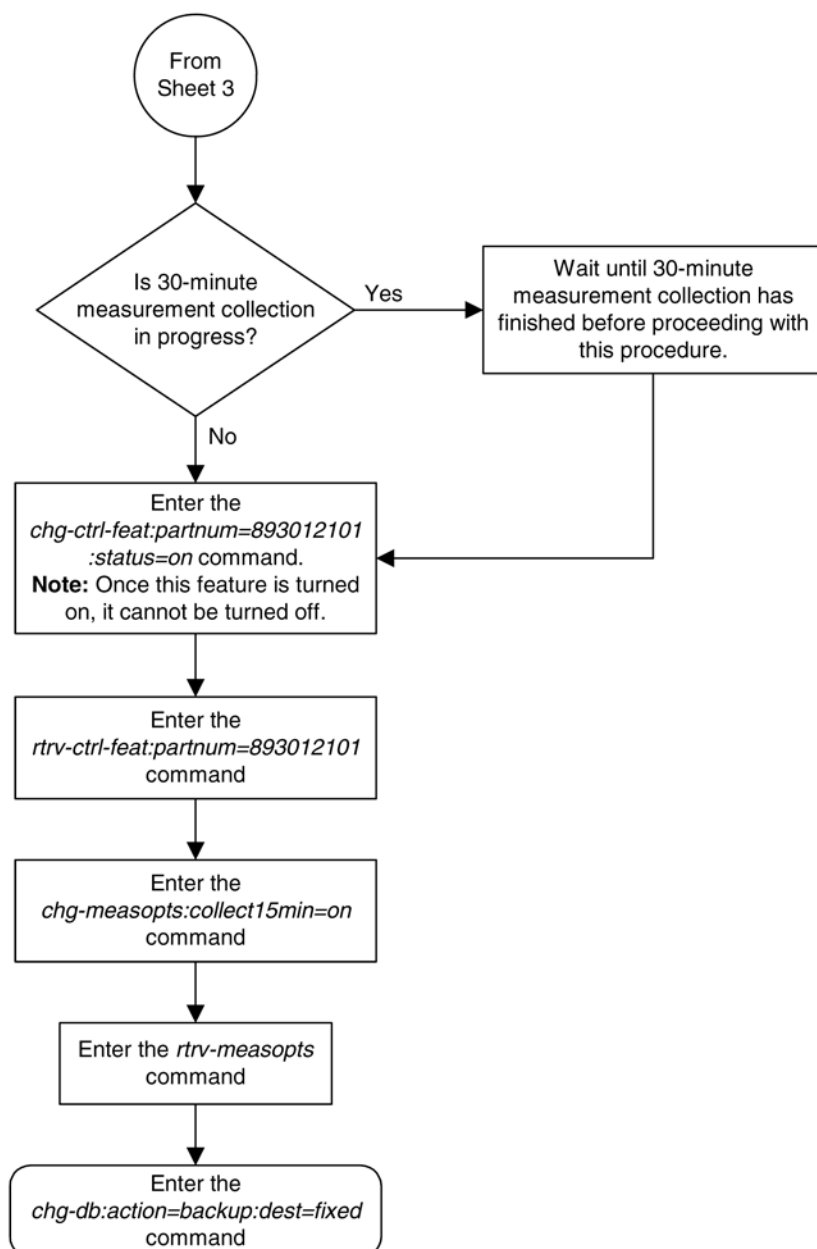
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.

Flowchart A-3. 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.

Procedure

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.

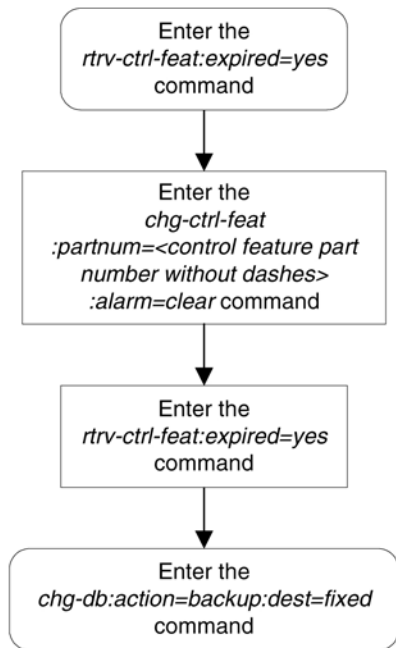
```
rlghncxa03w 06-10-01 21:16:37 GMT EAGLE5 36.0.0
0367.0181 * SYSTEM      Temp Key(s) expiration alarm cleared.
```

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.
```

Flowchart A-4. 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: 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: 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.

Procedure

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
IPGWx Signaling TPS	893012814	on	20000
ISUP Normalization	893000201	on	----
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](#) procedure to turn the SEAS over IP feature off. After the SEAS over IP feature has been turned off, go to step 2.

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
```

3. 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:

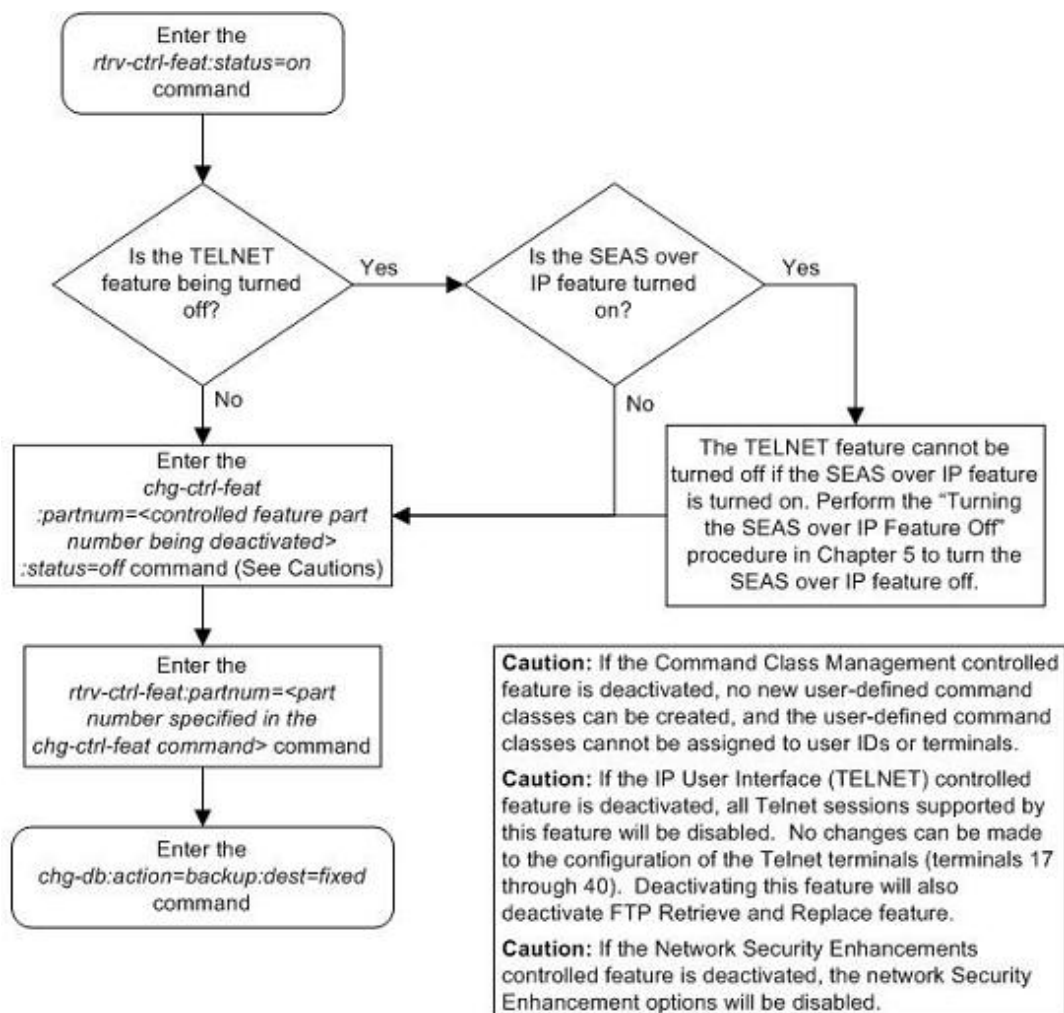
Feature Name	Partnum
Zero entries found.	

4. Backup the new changes using the **chg-db:action=backup:dest=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.
```

Flowchart A-5. Deactivating Controlled Features



B

Setting Up a Secure Telnet Connection to the EAGLE 5 ISS using PuTTY

Setting Up a Secure Telnet Connection to the EAGLE 5 ISS using PuTTY B-1

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>

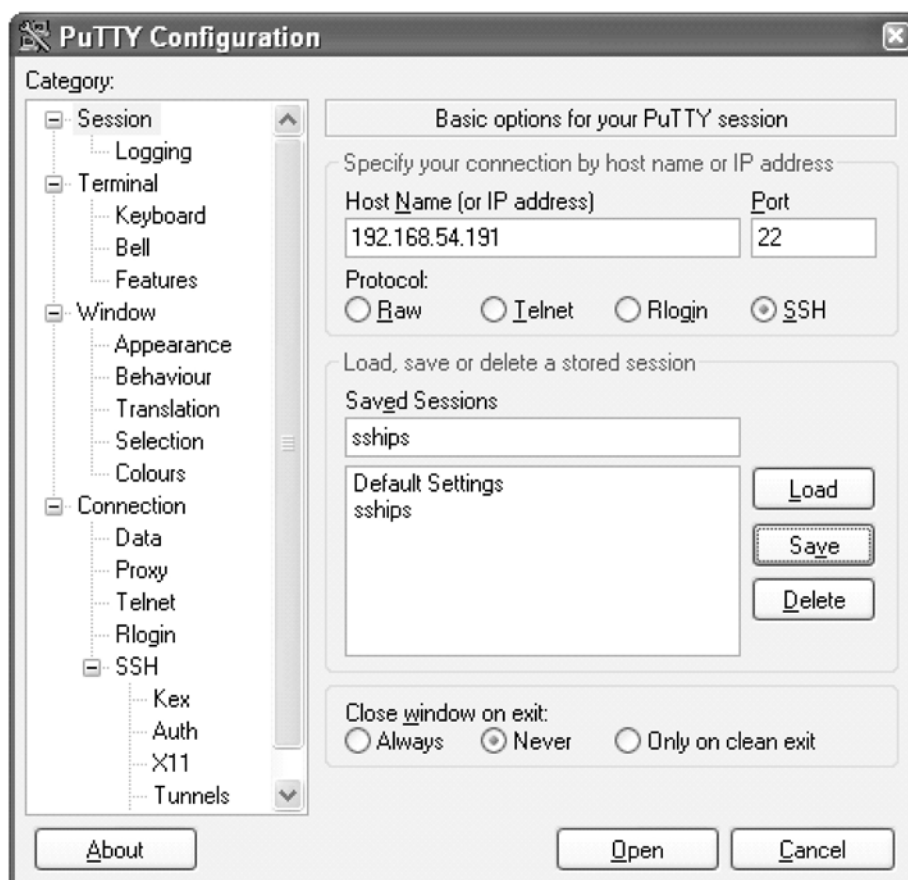
NOTE: The examples shown in this procedure are based on version 0.58 of the PuTTY client program.

Procedure

1. Start the PuTTY client program by double clicking the PuTTY icon on the desktop.

The **PuTTY Configuration Window** is displayed. See [Figure B-1](#) .

Figure B-1. 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.

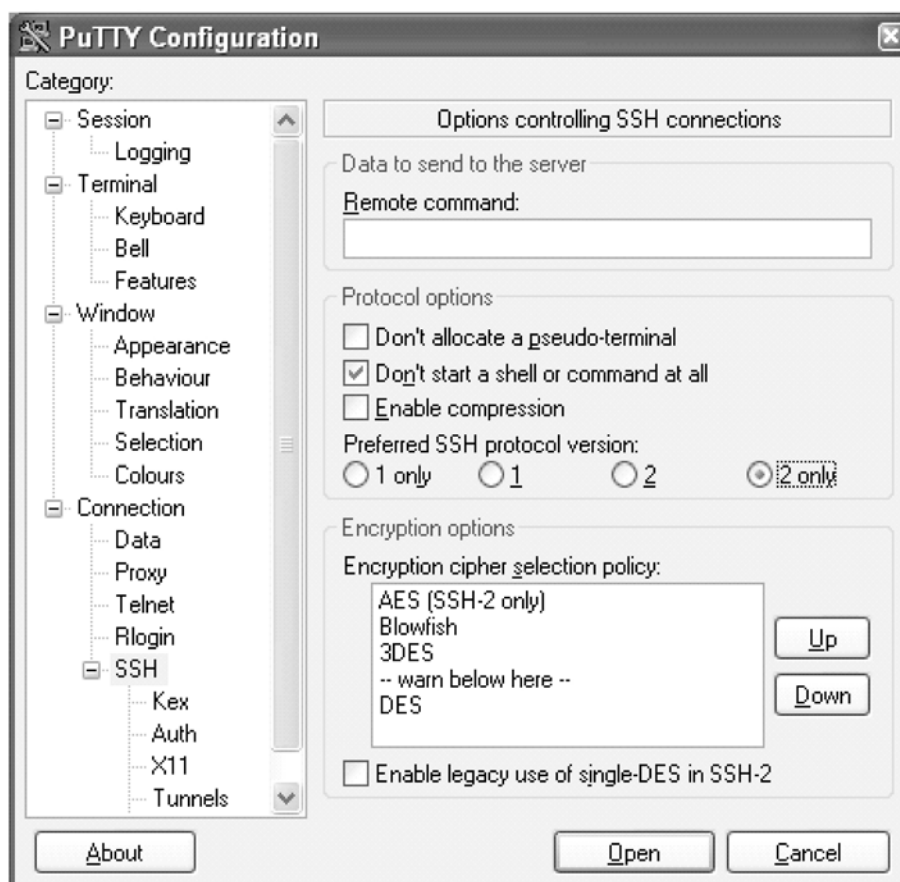
Enter **22** in the **Port** box.

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 B-2](#) .

Figure B-2. PuTTY Configuration Window - SSH Connection Setup

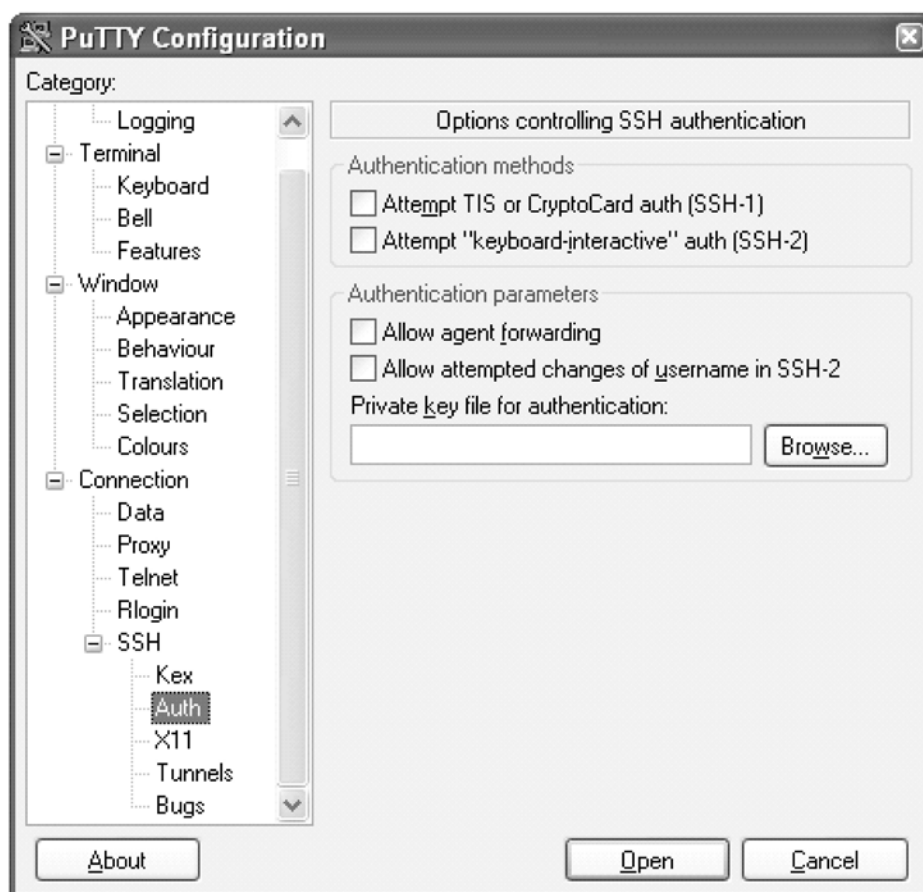
9. Click the **2 only** radio button in the **Preferred SSH protocol version:** section of the **PuTTY Configuration** window.

Click the **Don't start a shell or command at all** checkbox in the Protocol options section of the **PuTTY Configuration** window. See [Figure B-2](#) .

10. Select **Connection > SSH > Auth.**

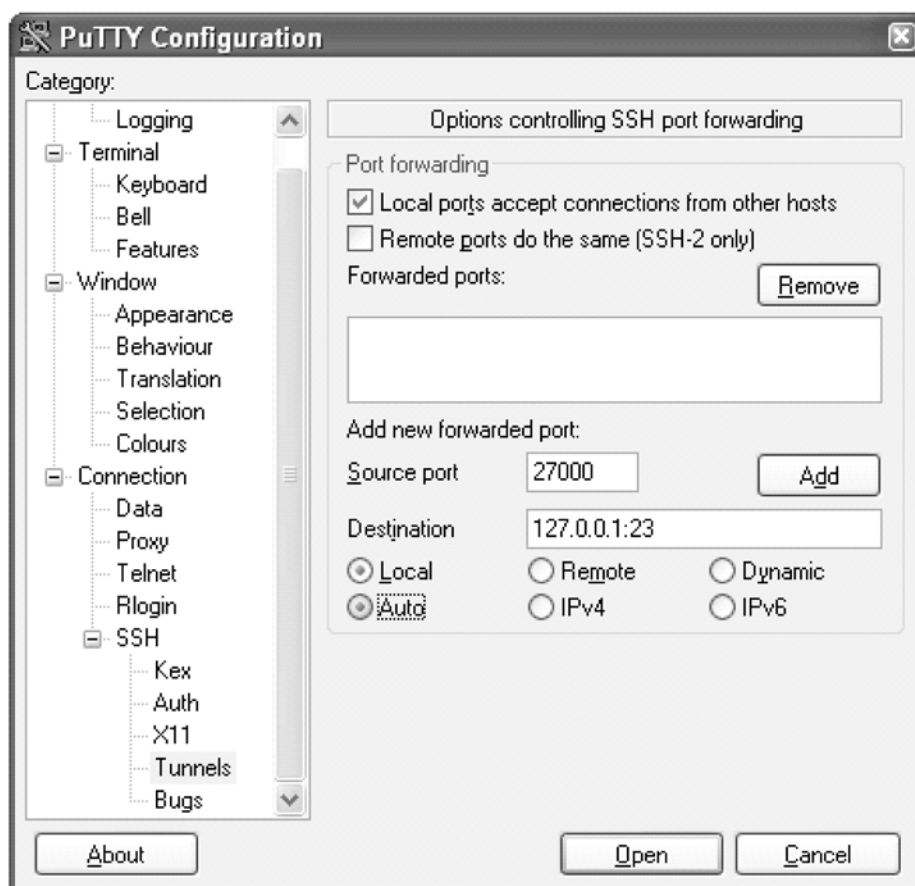
Verify that the checkboxes are not checked. Verify that the **Private key file for authentication** text box is empty. See [Figure B-3](#) .

Figure B-3. 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 B-4](#)), to accept connections from other hosts.

Figure B-4. PuTTY Configuration Window - SSH Tunnel/Port Forwarding Setup

12. In the **Add new forwarded port** section of the **PuTTY Configuration** window ([Figure B-4](#)), 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.

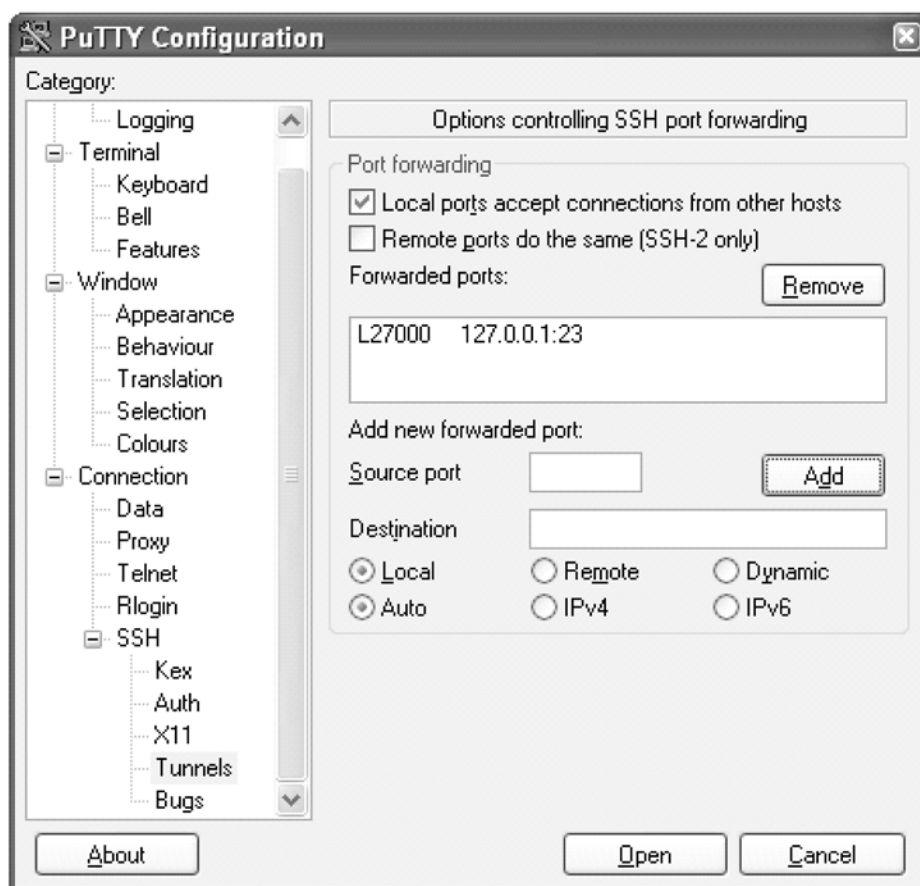
13. The **Destination** box in the **Add new forwarded port** section of the **PuTTY Configuration** window ([Figure B-4](#)) contains the IP address and port of the remote machine.

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 B-5](#) .

Figure B-5. PuTTY Configuration Window - SSH Tunnel/Port Forwarding Completion



15. Select **Session** in the **Category** list window in the **PuTTY Configuration** window.
See [Figure B-1](#) . Click the **Save** button.
16. Click the **Open** button in the **PuTTY Configuration** window.
The dialog box shown in [Figure B-6](#) appears. Click the **Yes** button.

Figure B-6. Key Acceptance Dialog Box

The **Login** window is displayed. See [Figure B-7](#) .

Figure B-7. PuTTY Login Window

17. Press the **Enter** key.

Verify that the screen is displayed as shown in [Figure B-8](#) .

Figure B-8. 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 B-5](#)).

At the prompt, enter the **telnet** command with the IP address and Source port value shown in [Figure B-5](#) . 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 B-9](#) . Press the **Enter** key.

Figure B-9. 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.

Glossary

A

A	Ampere
ACMENET	<i>Application Communications Module</i> Ethernet
AINF	Application Interface Appliqué
ALM	Alarm Card
ANSI	American National Standards Institute
A-Port	ANSI-41 Mobile Number Portability
AST	Associated State The associated state of an entity.
ATM	Asynchronous Transfer Mode
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
BLM	Bulk Load Module
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).
BPMPLT	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
CCS7ITU	The generic program load and application for the ITU SS7 signaling links that is used with card types limds0 , limch , limocu , limv35 , lime1 , and limt1 .
CET	Customer Environment Test
CLLI	Common Language Location Identifier
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 commands that are assigned to a user or to a terminal port. Command classes are assigned to a user with the chg-user or ent-user commands to control the commands that user can execute. Command classes are assigned to a terminal port with the chg-secu-trm command to control the commands that can be executed on a particular terminal.
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
CSR	Customer Service Request

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
DB	Daughter Board
DB	Documentation Bulletin
DBG	Debugger
DCM	Database Communication Module 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.

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-ENET	EPM-based Ethernet card A high capacity single-slot IP signaling card (EPM card plus Gig Ethernet PMC cards).
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.

EBDABLM	The application used by the TSM or DSM to store the LNP database downloaded from the LSMS for the Enhanced Bulk Download function. This GPL does not support 24-bit ITU-N point codes.
EBDADCM	The application used by the DCM to transmit the LSMS LNP database at high speed over an Ethernet connection for the Enhanced Bulk Download function. This GPL does not support 24-bit ITU-N point codes.
EILA	Enhanced Integrated LIM Appliqué
EIR	Equipment Identity Register
ELAP	EAGLE LNP Application Processor
EMSALM	Element Management System Alarm Monitor
EOAM	Enhanced Operation, Administration, and Maintenance
	The application used by the GPSM-II card for enhanced OAM functions.
EOAP	Embedded Operation Support System Applications Processor
	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
FD	File Descriptor
FD	File Duplicator
FD	Fixed Disk
FTA	File Transfer Area.
FTP	Feature Test Plan
FTP	File Transfer Protocol.
FTRA	FTP-based Table Retrieve Application

An 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
G-Flex	GSM Flexible numbering
	A feature that allows the operator to flexibly assign individual subscribers to HLRs and route signaling messages, based on subscriber numbering, accordingly.
GLS	Generic Loading Services
	An application that is used by the TSM cards for downloading gateway screening to LIM cards.
GMT	Greenwich Mean Time
GPL	Generic Program Load
G-Port	GSM Mobile Number Portability

	A feature that provides mobile subscribers the ability to change the GSM subscription network within a portability cluster, while retaining their original MSISDN(s).
GPSM-II	General Purpose Service Module
H	
HIPR	High-Speed IMT Packet Router
HMUX	High-Speed Multiplexer
I	
ID	Identity
ID	Identity, identifier
IMT	Inter-Module-Transport
	The communication software that operates the inter-module-transport bus on all cards except the LIMATM, DCM, DSM, and HMUX.
IMT Bus	Interprocessor Message Transport Bus
IMTPCI	IMT to PCI interconnection
IN	Intelligent Network
INP	INAP-based Number Portability
INP	Intelligent Network (IN) Portability
INP	INAP-based Number Portability
IP	Intelligent Peripheral
IP	Internet Protocol
IP ⁷	Tekelec's Internet Protocol to SS7 Interface
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 DCM/SSEDCM card for IP point-to-multipoint 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.
IPLIM	The application used by the DCM/SSEDCM card for IP point-to-point connectivity for ANSI point codes.
IPLIMI	The application used by the DCM/SSEDCM card for IP point-to-point connectivity for ITU point codes.
IPS	Internet Protocol Services
IPSM	IP Services Module
	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, consisting of a number length and number type.
KSR	Keyboard Send/Receive Mode

L

LCA	Logic Cell Array
LED	Light Emitting Diode
LIM	Link Interface Module
LIM-AINF	A link interface module (LIM) with the AINF interface.
LIM-ATM	A link interface module (LIM) with the ATM interface.
LIM-DS0	A link interface module (LIM) with the DS0A Appliqué.
LIM-E1	A link interface module (LIM) with the E1 Appliqué.
LIM-OCU	A link interface module (LIM) with the OCU Appliqué.
LIM-OCU	LIM-Office Channel Unit Applique
LIM-T1	A link interface module (LIM) with the T1 Appliqué.
Link	Signaling Link
LNP	Local Number Portability
LSMS	Local Service Management System

M

MASP	Maintenance and Administration Subsystem Processor
MCP	Measurement Collection Processor
	This application is used by the MCPM card for the Measurements Platform feature.
MCPM	Measurement Collection and Polling Module
MDAL	Maintenance Disk and Alarm Card
MIM	Multi-Channel Interface Module
MPL	Multi-port LIM
MPS	Multi-Purpose Server
MTP	Message Transfer Part
MTP	Module Test Plan

O

OAM	Operations, Administration, and Maintenance
OAP	The application running on the OAP used for the SEAS and LNP features. The LNP feature can be enabled only for a quantity of 2 to 12 million numbers. This GPL does not support 24-bit ITU-N point codes. See also Operations Support System Application Processor.
OOS-MT	Out of Service - Maintenance
OOS-MT-DSBLD	Out of Service - Maintenance Disabled
OPC	Originating Point Code
OS	Operating System
OS	Operations Systems

P

PDB	Provisioning Database
PM	Processing Module
PPSMS	Prepaid Short Message Service
PPSMS	Prepaid Short Message Service Intercept
PST	Primary State

R

RD	Receive Data
RD	Removable Disk
ROM	Read Only Memory
RS	Requirement Specification
RTDB	DSM 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.
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 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.
SLAN	STP LAN
SLAN	Signaling Transfer Point Local Area Network.
SNR	Subsystem Normal Routing
SOG	Subsystem Out-of-Service Grant
SOR	Support of Optimal Routing
SOR	System Out of Service Request
SRT	Subsystem Routing Status Test
SS7	Signaling System #7
SS7ANSI	SS7 ANSI
	An application used by the LIM cards and the E1/T1 MIM card for the MTP functionality.
SS7GX25	X.25/SS7 Gateway

	An application used by the LIM cards for the X.25/SS7 gateway feature. This GPL does not support 24-bit ITU-N point codes.
SS7IPGW	SS7 IP Gateway 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.
SSH	Secure Shell
SSP	Subsystem Prohibited network management message. Subsystem Prohibited SCCP (SCMG) management message. (CER) Service Switching Point (SS7 Network)
SST	Secondary State Subsystem Status Test network management message. Subsystem Status Test SCCP (SCMG) management message. (CER)
SST	Subsystem Status Test
STC	Sentinel Transport Card
STC	Signaling Transport Card.
STP	Signal Transfer Point.
STPLAN	Signaling Transfer Point Local Area Network The generic program load and application used by the ACM 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-Cluster-Prohibited
TCP	Transfer Control Protocol
TCP	Transmission Control Protocol
TCP/IP	Transmission Control Protocol/Internet Protocol
TDM	Terminal Disk Module.
Trial GPL	A generic program load that is downloaded to a card from the removable cartridge.
TSM	Translation Service Module
TRM	Termination Response Mode
TSM	Translation Services Module

U

UAM	Unsolicited Alarm Message.
UID	User ID
UIM	Unsolicited Information Message
UTILITY	The application that is used by the factory for testing. This application has no use in the field.

V

V.35	ITU Interface Recommendation, V.35 The interface used with the LIMV35 card.
VSCCP	VxWorks Signaling Connection Control Part The application used by the DSM card to support the G-Flex, G-Port, INP, EIR, and LNP features. If the G-Flex, G-Port, INP, or LNP feature is not turned on, and a DSM card is present, the VSCCP GPL processes normal GTT traffic.
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.

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